Agile Product Lifecycle Management for Process

Global Specification Management User Guide

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February 2012

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CONTENTS

About This Manual

Agile Product Lifecycle Management for Process Documentation xvii
TTY Access to Oracle Support Services xvii
Agile Training Aids xvii
Accessibility of Code Examples in Documentation xvii
Accessibility of Links to External Web Sites in Documentation xvii
Audience xviii
Variability of Installations xviii
Where to Find Information xviii
Document Conventions xix

Chapter 1 Introduction

The Global Specification Management Application 1-1
Overview 1-1
Formulation and Compliance Tools 1-1
Key Global Specification Management Capabilities 1-2
Touch Points with Other Applications 1-3
Computer Aided Compliance Screening 1-3
eQuestionnaire 1-3
Document Reference Library 1-3
New Product Development 1-3
Nutrition Surveillance Management 1-3
Product Quality Scorecard 1-3
Reporting 1-3
Supply Chain Relationship Management 1-4
Supplier Portal 1-4
Finding Agile Data 1-4
Understanding the Search Form 1-4
Search Field Definitions 1-5
Key Field List 1-5
Key Field Lists by Specification Type 1-6
Operator List 1-7
Search Term Field 1-9
Entering Search Terms by Typing 1-9
Entering Search Terms by Prepopulated List 1-10
Using the Subsearch Tool 1-14
Searching for Field Types That Do Not Use the Search Terms Field 1-16
Adding More Criteria 1-16
Searching Custom Data 1-17
Understanding the Category Tab 1-17

Chapter 2 Working with Specifications

Creating Specifications 2-1
Creating a New Specification 2-1
Creating a Copy of an Existing Specification 2-1
Item History 2-3
Managing Specifications 2-4
Action Items 2-4
Accessing Your Action Items 2-4
Understanding the Action Items Page 2-4

Resolving Workflows 2-6
Transitioning a Workflow 2-7
Selecting Workflow Participants 2-8
Working with Signature Documents 2-8
Temporary Signature Authority 2-9
Approval/Audit Trail Tab 2-11
Current Status Section 2-11
Event History Section 2-11
Signature Document Section 2-11
Lineage/History Section 2-12
Comparing Ingredient Specifications 2-13
Printing Specifications 2-13
Printing Trade Specifications 2-13
Documentation Format Section 2-14
Packaging Hierarchy 2-16
Title Specification 2-16
Related Trade Specifications 2-16
Additional Related Items 2-17
Printing Other Specifications 2-19
Documentation Format 2-19
Specification Listing 2-20
Specification Type 2-20
Sections 2-21
Attachments 2-21
Optional Objects to Print Through the Print Dialog Box 2-23

Chapter 3 Commonly Used Sections

Overview 3-1
Summary Tab 3-1
Summary Information Section 3-2
Cross References Section 3-3
Available UOM 3-4
UOM Conversions 3-4
Approved for Use In Section 3-5
Compliance Tab 3-6
Compliance Information Section 3-6
Adding Compliance Items 3-6
Removing Compliance Items 3-6
Additives, Allergens, and Intolerances Sections 3-7
Adding Additives 3-8
Removing Additives 3-8
Related Specs Tab 3-9
Associated Specifications Section 3-9
Master Specifications Section 3-9
CSS Tab 3-10
Supporting Documents Tab 3-12
Supporting Documents Section 3-12
Overview 3-12
Creating a Supporting Document 3-12
Managing Supporting Documents 3-13
Document Types 3-14
Attachments/Procedures Document Type 3-14
URL 3-15
Rich Text Document Type 3-16
Product Fact Sheets 3-16

Nutrient Composition 3-16
View Thumbnails 3-18
DRL Documents Section 3-18
Viewing DRL Catalogs and Documents 3-18
Viewing a Catalog Reference 3-18
Viewing a Document Reference 3-19
Description Section 3-19
Version/Revision Section 3-20
Attachments Section 3-20
Adding DRL Catalog and Document References 3-20
Testing Protocols Section 3-21
Attachments Section 3-22
% Breakdown (Formula) Section 3-22
Formula Detail 3-22
Publish Settings Section 3-23
Related Sourcing Approval Section 3-24
Formula Section 3-24
References Tab 3-25
Activities Section 3-25
Suppliers Section 3-25
Specification Dependencies Section 3-27
Related Documents Section 3-27
Custom Data 3-28
Extended Attributes Section 3-29
Custom Sections 3-29
Calculated Attributes 3-29
Adding a Custom Section 3-30
Editing a Custom Section 3-31
Deleting a Custom Section 3-33

Chapter 4 Trade Specifications

Overview 4-1
Page-Level Functions 4-2
Summary Tab 4-3
Summary Information Section 4-3
Product Identification Section 4-3
Next Lower Level Items Section 4-5
Parent Items (Calculated) Section 4-5
Brand Information Section 4-6
Product Classification Section 4-7
Packaging Tab 4-8
Packaging Attributes (Consumer Unit) Section 4-8
Packaging Attributes (Traded Unit) Section 4-10
Stacking Height Section 4-11
Storage Requirements Section 4-11
Shelf Life Section 4-11
Packaging Materials Section 4-12
Alternate Packaging Section 4-12
Environmental Waste (per item sold) Section 4-13
Compliance Tab 4-13
Label Claims Section 4-13
Label Claims Determination 4-14
Related Specs Tab 4-17
Ingredient Specification Section 4-17
CSS Tab 4-17

Supporting Documents Tab 4-18
Nutrient Profile Section 4-18
Regulatory/Legislation Section 4-19
Regulatory/Legislation Detail Page 4-19
Cover Page Tab 4-19
Application Summary Section 4-20
[Application Type] Cover Page Section 4-20
Product Formula Tab 4-22
Product Formula Section 4-22
Processing Procedures Tab 4-23
Comments Tab 4-23
Attachments Tab 4-24
Related Specifications Section 4-24
Attachments Section 4-24
References Tab 4-25
Approval/Audit Trail Tab 4-25

Chapter 5 Process Specifications

Process Specification Integration into Formulation Specification Feature 5-1

Chapter 6 Formulation Specifications

Overview 6-1
Concepts and Definitions 6-2
Outputs 6-2
Output Types/Sub-Types 6-3
Theoretical Ingredient Verses Output Ingredient 6-4
“Designable” Workflow Status 6-4
Remaining Concepts and Definitions 6-5
Page-Level Functions 6-6
Summary Tab 6-9
Formulation Attributes Section 6-9
Facility Information Section 6-10
Formulation Tab 6-10
Inputs Section 6-11
Adding Materials To The Inputs Grid 6-11
Adding Materials 6-11
Adding Rows and Then Materials 6-13
Additional Notes Regarding Adding Materials To The Inputs Grid 6-14
Establishing Quantities Within The Inputs Grid 6-15
Material Quantity Fields Defined 6-15
Entering Material Quantity Data Using BOM Calculation Paths 6-15
Working With Cost In The Inputs Grid 6-18
Additional Tools Found in the Input Grid 6-19
Outputs Section 6-20
Steps Section 6-22
Process Tab 6-23
Steps Section 6-23
Interacting With Process Navigation 6-23
Interacting With The Step Details Section 6-24
Bill Of Materials Sub-Tab 6-26
Input Items Sub-Section 6-27
Alternate Input Items Sub-Section 6-29
Output Items Sub-Section 6-30
Alternate Output Items Sub-Section 6-36

Packaging Sub-Tab 6-36
Input Items Sub-Section 6-37
Ext Data Tab 6-40
Related Specs Tab 6-40
Trade Specifications Section 6-40
CSS Tab 6-40
Supporting Documents Tab 6-41
References Tab 6-41
Approval/Audit Trail Tab 6-41
Additional Tools 6-41
Overview of Basis 6-41
Basis dialog box 6-42
Specification Attributes Tab 6-43
Combined Ingredient Statement Section 6-43
Ingredient Attributes Section 6-44
Reconstitution/Equivalency Section 6-44
% Breakdown Tab 6-44
Component % Breakdowns Section 6-45
Nutrition Tab 6-45
Nutrient Composition Section 6-46
Compliance Tab 6-46
Adding Complies With Information 6-48
Output Dialog Box 6-49
Summary Tab 6-50
Summary Information Section 6-50
Composition Map Section 6-52
Packaging Composition Map Section 6-52
Yield Tab 6-53
Packaging Configuration Section 6-53
Approximate Yield Section 6-54
Design Attributes Section 6-56
Composition Tab 6-56
Regulatory BOM Section 6-57
Theoretical Breakdown Section 6-58
Regulatory Breakdown Section 6-58
Nutrition Tab 6-59
Nutrient Composition Section 6-59
Compliance Tab 6-61
Ext Data Tab 6-62
Custom Sections Section 6-64
Snapshots 6-64
Optimization 6-65
Target Specification Section 6-66
Constraints Section 6-67
Ingredient Cost 6-70
Nutrient Content 6-71
Extended Attribute 6-72
Ordering 6-72
Guidelines Section 6-73
Optimization Method Section 6-74
Formulation Column 6-74
Constraints Column 6-74
Distribution Column 6-74
Optimization Action Buttons 6-77

Chapter 7 Menu Item Specifications

Overview . . . 7-1
Page-Level Functions . . . 7-2
Summary Tab . . . 7-3
Menu Item Description Section . . . 7-3
Build Tab . . . 7-4
Menu Item Build Section . . . 7-4
Alternate Products/Menu Items Section . . . 7-4
Packaging Tab . . . 7-5
Packaging Materials Section . . . 7-5
Alternate Packaging Section . . . 7-5
Compliance Tab . . . 7-6
Label Claims Section . . . 7-6
Label Claims Determination . . . 7-7
Related Specs Tab . . . 7-10
Global/Regional Standard Section . . . 7-10
Alternate Standards Section . . . 7-10
Supporting Documents Tab . . . 7-11
Nutrient Profile Section . . . 7-11
References Tab . . . 7-11
Approval/Audit Trail Tab . . . 7-11

Chapter 8 Nutrient Profiles

Overview . . . 8-1
Page-Level Functions . . . 8-2
Summary Tab . . . 8-2
Weight/Volume/Serving Information Section . . . 8-3
Ingredient Statements Section . . . 8-4
Nutrition Panel Tab . . . 8-4
Nutrient Profile Section . . . 8-4
Label Claims . . . 8-10
Label Composition Tab . . . 8-13
Ext Data Tab . . . 8-13
Related Specs Tab . . . 8-13
Supporting Documents Tab . . . 8-14
References Tab . . . 8-14
Approval/Audit Trail Tab . . . 8-14

Chapter 9 Product Specifications

Overview . . . 9-1
Page-Level Functions . . . 9-2
Summary Tab . . . 9-3
Product Attributes Section . . . 9-3
Design Attributes Section . . . 9-3
Formulation Tab . . . 9-4
Ingredient Statements Section . . . 9-4
Compliance Tab . . . 9-4
Related Specs Tab . . . 9-5
Global/Regional Standard Section . . . 9-5
Alternate Standards Section . . . 9-5
Packing Configurations Specifications Section . . . 9-5
Supporting Documents Tab . . . 9-6

References Tab 9-6
Approval/Audit Trail Tab 9-6

Chapter 10 Ingredient Specifications

Overview 10-1
Page-Level Functions 10-2
Summary Tab 10-3
Ingredient Attributes Section 10-3
Shelf Life Section 10-4
Design Attributes Section 10-5
Formulation Tab 10-5
Ingredient Statements Section 10-5
Compliance Tab 10-6
Related Specs Tab 10-6
Produced By Section 10-6
Trade Specifications Section 10-7
Packing Configurations Specifications Section 10-7
CSS Tab 10-7
Supporting Documents Tab 10-8
References Tab 10-8
Substitute Materials Section 10-8
Approval/Audit Trail Tab 10-9

Chapter 11 Packaging Material Specifications

Overview 11-1
Page-Level Functions 11-2
Summary Tab 11-3
Packaging Attributes Section 11-3
Tare Weight Section 11-3
Compliance Tab 11-4
Environmental Waste Section 11-5
Printed Packaging Material Tab 11-5
Printed Packaging Material Section 11-5
Related Specs Tab 11-5
Sub Components Section 11-5
Packing Configuration Specifications Section 11-6
Equipment Specifications Section 11-6
CSS Tab 11-7
Supporting Documents Tab 11-7
References Tab 11-7
Substitute Materials Section 11-7
Approval/Audit Trail Tab 11-8

Chapter 12 Equipment Specifications

Overview 12-1
Page-Level Functions 12-2
Summary Tab 12-2
Equipment Identification Section 12-3
Compliance Tab 12-3
Environmental Waste (per item sold) Section 12-3
Related Specs Tab 12-3
Packaging Specifications Section 12-4

Supporting Documents Tab 12-4
References Tab 12-4
Approval/Audit Trail Tab 12-4

Chapter 13 Printed Packaging Specifications

Overview 13-1
Page-Level Functions 13-2
Summary Tab 13-3
Label Information Section 13-3
Tare Weight Section 13-3
Compliance Tab 13-4
Related Specs Tab 13-4
Parent Packaging Material Section 13-5
CSS Tab 13-5
Supporting Documents Tab 13-5
References Tab 13-6
Substitute Materials Section 13-6
Approval/Audit Trail Tab 13-6

Chapter 14 Delivered Material Packing Specifications

Overview 14-1
Page-Level Functions 14-2
Summary Tab 14-2
Packing Description Section 14-2
Compliance Tab 14-3
Environmental Waste Section 14-3
Related Specs Tab 14-3
Labeling Specifications Section 14-3
Supporting Documents Tab 14-3
References Tab 14-4
Approval/Audit Trail Tab 14-4

Chapter 15 Packing Configuration Specifications

Overview 15-1
Page-Level Functions 15-2
Summary Tab 15-2
Packing Description Section 15-2
Packing Tab 15-3
Packing Attribute (Inner Pack) Section 15-3
Packing Attribute (Master Case) Section 15-3
Related Specs Tab 15-4
Inner-Delivered Packing Specifications Section 15-4
Intermediate-Delivered Material Packing Specifications Section 15-5
Outer-Delivered Material Packing Specification Section 15-5
Supporting Documents Tab 15-5
References Tab 15-6
Approval/Audit Trail Tab 15-6

Chapter 16 Labeling Specifications

Overview . . . 16-1
Page-Level Functions . . . 16-2
Summary Tab . . . 16-3
Labeling Description Section . . . 16-3
Compliance Tab . . . 16-4
Related Specs Tab . . . 16-4
Delivered Material Packing Specifications That Rely on This Specification Section . . . 16-4
Supporting Documents Tab . . . 16-4
References Tab . . . 16-4
Approval/Audit Trail Tab . . . 16-4

Chapter 17 Master Specifications

Overview . . . 17-1
Page-Level Functions . . . 17-2
Summary Tab . . . 17-2
Master Description Section . . . 17-2
Applies To Tab . . . 17-3
Specification Categories Section . . . 17-3
Supporting Documents Tab . . . 17-5
Ext Data Tab . . . 17-5
References Tab . . . 17-5
Approval/Audit Trail Tab . . . 17-5

Chapter 18 LIO Profiles

Overview . . . 18-1
Page-Level Functions . . . 18-2
Summary Tab . . . 18-2
LIO Profile Section . . . 18-2
Output Material Selection Section . . . 18-2
Nutrient Profile Section . . . 18-3
LIO Construction Tab . . . 18-3
LIO Construction Section . . . 18-3
Restrictions . . . 18-4
Format . . . 18-4
Inactive Rows . . . 18-5
Using the LIO Tree . . . 18-5
Declaration Options and Actions . . . 18-8
Right Menu Actions . . . 18-10
View . . . 18-10
Add New Group . . . 18-10
Refer to FIC . . . 18-10
Recon/Equiv . . . 18-11
Delete Group . . . 18-12
Annotate . . . 18-12
Audit History . . . 18-13
Divide . . . 18-14
Declaration Descriptions . . . 18-15
Ingredient Statement . . . 18-15
List... x, y . . . 18-15
List... i (x, y) . . . 18-15
List... i (x%, y%) . . . 18-15
Do NOT Declare . . . 18-15

LIO Operations . . . 18-16
Refresh Operation . . . 18-16
Preview Operation . . . 18-16
Alias/FIC Operation . . . 18-17
Grouping Operation . . . 18-17
Audit Operation . . . 18-18
Final Statement Tab . . . 18-19
Ingredient Statement Options Section . . . 18-19
Format Field . . . 18-19
Style Field . . . 18-19
Final Ingredient Statement Section . . . 18-20
Label Composition Tab . . . 18-20

Chapter 19 Testing Protocol Library
Overview . . . 19-1
Page-Level Functions . . . 19-2
Testing Protocol Detail . . . 19-2
Testing Protocol (Header) Section . . . 19-2
Facility Information Section . . . 19-3
Sections Section . . . 19-3
Extended Attributes Section . . . 19-4
Testing Protocol (Detail) Section . . . 19-4

Chapter 20 Activities
Overview . . . 20-1
Creating an Activity . . . 20-2
Creating a Primary Relationship from a Specification . . . 20-2
Creating an Activity That Is Independent of Specifications . . . 20-3
Searching for an Activity . . . 20-3
Summary Tab . . . 20-4
Activity Summary Section . . . 20-4
Primary Action Item Section . . . 20-5
Related Items Section . . . 20-6
Supporting Documents Tab . . . 20-7
Ext Data Tab . . . 20-7
References Tab . . . 20-7
Approval/Audit Trail Tab . . . 20-7

Chapter 21 Using Change Management Features
Overview . . . 21-1
Global Succession Tool . . . 21-1
Accessing the Global Succession Tool . . . 21-3
Finding the Specifications to Supersede . . . 21-3
Performing the Global Succession . . . 21-6
Verifying the Succession . . . 21-7
Smart Issue Tool . . . 21-8
Accessing the Smart Issue Tool . . . 21-9
Defining the Smart Issue Request . . . 21-11
Finding the Specifications to Version . . . 21-13
Replace Specification . . . 21-13
Replace Specification Given Parent . . . 21-13
Version Hierarchy Only . . . 21-14
Exporting the Affected Specifications . . . 21-21
Exporting the Action List . . . 21-21

Performing the Smart Issue 21-21
Verifying the Smart Issue 21-22
Exporting the Results 21-23
Failed Requests 21-23
Exporting Failed Results 21-23
Workflowing Specifications 21-24
Checking the Status of the Smart Issue 21-25

Chapter 22 Component Catalog

Component Catalog 22-1
Integration with Other Applications 22-1
Creating a New Component Catalog Term 22-2
Catalog Term Section 22-4
Aliases Section 22-4
LIO Disclosure Section 22-5
LIO Groupings 22-6
Reconstitution/Equivalency Section 22-7
Approved Usages Section 22-7
Using Component Catalog Terms 22-8

Appendix A Key Search Fields

Searchable Fields A-1

About This Manual

Agile Product Lifecycle Management for Process Documentation

The Agile Product Lifecycle Management (PLM) for Process documentation set includes Adobe® Acrobat™ PDF files. The Oracle Technology Network (OTN) Web site: http://www.oracle.com/technetwork/documentation/agile-085940.html contains the latest versions of the Agile PLM for Process PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM for Process Documentation folder available on your network from which you can access the Agile PLM for Process documentation (PDF) files.

Note To read the PDF files, you must use the free Adobe Reader™ version 7.0 or later. This program can be downloaded from the Adobe Web site: http://www.adobe.com/.

If you need additional assistance or information, please go to http://metalink.oracle.com or phone 1.800.233.1711 for assistance.

Before calling Oracle Support about a problem with an Agile PLM for Process manual, please have the full part number, which is located on the title page.

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Audience

This guide is intended for end users who are responsible for creating and managing information in Agile Product Lifecycle Management for Process. Information about administering the system resides in the *Agile Product Lifecycle Management for Process Administrator User Guide.*

Variability of Installations

Descriptions and illustrations of the Agile PLM for Process user interface included in this manual may not match your installation. The user interface of Agile PLM for Process applications and the features included can vary greatly depending on such variables as:

- Which applications your organization has purchased and installed
- Configuration settings that may turn features off or on
- Customization specific to your organization
- Security settings as they apply to the system and your user account

Where to Find Information

Consult the table below to find specific information from the relevant Agile PLM for Process information source.

Table 1: Agile PLM for Process documentation topics, by source

Information type	GSM User Guide	Admin. User Guide	Release Notes	Agile training	Help Desk	Agile sales rep
Administering Agile PLM for Process		●		●		
Cache management		●				
Compliance	●					
Core data management		●				
Creating specifications	●			●		
Custom data management		●				
Custom sections	●	●		●		
Extended attributes	●	●		●		
Feature requests					●	●
Group management		●				
Installing Agile PLM for Process				●		●
Known issues			●			
Managing specifications	●			●		
New in this release			●	●		●
Printing	●			●		
Resolved issues			●			
System-based roles		●				
Technical support					●	

Table 1: Agile PLM for Process documentation topics, by source (continued)

Information type	GSM User Guide	Admin. User Guide	Release Notes	Agile training	Help Desk	Agile sales rep
User management		●				
Using the GSM application	●			●		
Workflow management		●				

Document Conventions

The following formatting elements appear in Agile Product Lifecycle Management for Process documentation.

Element	Meaning
Helvetica Condensed, 9 pt. bold type	A user interface (UI) element that a procedure is instructing you to click, select, or type into. For example, buttons or text entry fields.
`9 pt. monospace font`	Code samples
`10 pt. monospace font`	File names or directory names
Blue italic font	The linked portion of a cross-reference. Click it to go to the referenced heading, table, or figure.
Minion Typeface, Title Case	A named UI element that a procedure is describing but not instructing you to click, select, or type into.
Note Minion 11.5 pt, with faint blue bar over & under	Alerts you to supplemental information.
Caution! Minion 11.5 pt, with faint red bar over & under	Alerts you to possible data loss, breaches of security, or other more serious problems.
Important Minion 11.5 pt, with thick red bar over & under	Alerts you to supplementary information that is essential to the completion of a task.

CHAPTER 1

Introduction

This chapter presents an overview of Global Specification Management and describes a few basic features. Topics in this chapter include:

- *The Global Specification Management Application*
- *Touch Points with Other Applications*
- *Finding Agile Data*

The Global Specification Management Application

Global Specifications Management (GSM) provides your company with a collaborative business process for managing data creation, localization, taxonomy, and workflow for all levels included in the product genealogy—across the enterprise and with value chain partners

Overview

GSM is the solution:

- In which your company's products are created and modified
- From which the product data are syndicated to other enterprise systems

GSM enables your company to create "one version of the truth" of your entire product record, from finished products and manufacturing processes to your ingredients and packaging materials. The entire product genealogy is connected, enabling your company to build an integrated view of the interrelationships among all specifications.

GSM is a critical part of the larger Agile Product Lifecycle Management for Process suite. For general information about the Agile PLM for Process suite and available solution packages, please see the *Agile Product Lifecycle Management for Process Getting Started Guide*.

Formulation and Compliance Tools

The following features included in this guide are available only through the Formulation and Compliance solution package of Agile Product Lifecycle Management for Process:

- Label Claims Determination
- Regulatory Filings

- Listed Ingredient Order (LIO) tool
- Formula Optimization tool
- Computer-Aided Compliance Screening (CACS)
- Nutrition Surveillance Management (NSM)
- Product Quality Scorecard (PQS)

Key Global Specification Management Capabilities

- **Trade specifications** — Contain all the attributes required to describe the finished products sold by your company.
- **Process specifications** — Replaced by formulation specifications.
- **Formulation specifications** — Describe the manufacturing and packaging processes that your company uses to produce your products.
- **Menu item specifications** — Describe products or menu items that make up a menu item.
- **Nutrient profiles** — Contain the nutrient data related to process and trade specifications.
- **Product specifications** — Contain the data related to product specifications.
- **Ingredient specifications** — Enable your company to manage all attributes related to ingredients that it purchases for use in the bill of materials contained in the formulation specifications.
- **Packaging material specifications** — Contain the data related to the packaging materials used to package trade specifications.
- **Equipment specifications** — Contain the data related to equipment specifications.
- **Printed packaging specifications** — Describe the printed packaging to be used in trade specifications.
- **Delivered material packing specifications** — Contain the data related to the inbound packing materials specified for incoming goods (ingredients and packaging materials). GSM then pulls these specifications together into packing configuration specifications, which fully describe the conditioning of incoming goods.
- **Packing configuration specifications** — Describe the inbound packing configurations required by your company for incoming goods (ingredients and packaging materials).
- **Labeling specifications** — Contain the labeling and coding requirements that suppliers need to affix on delivered material packing specifications for incoming goods (ingredients and packaging materials).
- **Master specifications** — Represent generic specifications, such as general terms and conditions, company programs and directions, regulatory guidelines, and so on. You can use such a specification to capture high-level organizational standards for related traded products, formulations, ingredients, or packaging. Using master specifications can increase flexibility and improve document control.

Touch Points with Other Applications

Computer Aided Compliance Screening

Computer Aided Compliance Screening (CACS) enables you to screen products through rules and regulations to ensure their compliance with customer, market, nutritional, and regulatory constraints. For more information, refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide.*

eQuestionnaire

eQuestionnaire (eQ) is a tool that you can use to obtain specification data from suppliers and manage their disposition in GSM. For more information, refer to the *Agile Product Lifecycle Management for Process eQuestionnaire User Guide.*

Document Reference Library

You can associate Document Reference Library (DRL) documents to many Agile business objects within Agile PLM for Process applications, such as GSM specifications, New Product Development projects, and eQuestionnaire questionnaires. For more information, refer to the *Agile Product Lifecycle Management for Process Document Reference Library User Guide*.

New Product Development

Use the activities feature in New Product Development (NPD) to tie specifications created in GSM to projects. For more information, refer to the *Agile Product Lifecycle Management for Process New Product Development User Guide*.

Nutrition Surveillance Management

Import nutrient values from nutrient analyses or nutrient composites created in the Nutrient Surveillance Management (NSM) application. For more information, refer to the *Agile Product Lifecycle Management for Process Nutrition Surveillance Management User Guide*.

Product Quality Scorecard

You can syndicate GSM core data to other Agile Product Lifecycle for Process applications as well as to other systems in your company. Product Quality Scorecard (PQS) uses testing protocols, which must be configured in GSM. For more information, see the *Agile Product Lifecycle Management for Process Product Quality Scorecard User Guide*.

Reporting

The Reporting application provides reporting capability for data in GSM. For more information, see the *Agile Product Lifecycle Management for Process Reporting User Guide*.

Supply Chain Relationship Management

GSM specifications are syndicated to Supply Chain Relationship Management (SCRM), where sourcing approvals are created. Refer to the *Agile Product Lifecycle Management for Process Supply Chain Relationship Management User Guide* for more information.

Supplier Portal

Suppliers can view specifications created in GSM using Supplier Portal. For more information, see the *Agile Product Lifecycle Management for Process Supplier Portal User Guide*.

Finding Agile Data

There are two basic ways of locating information in Agile Product Lifecycle Management for Process:

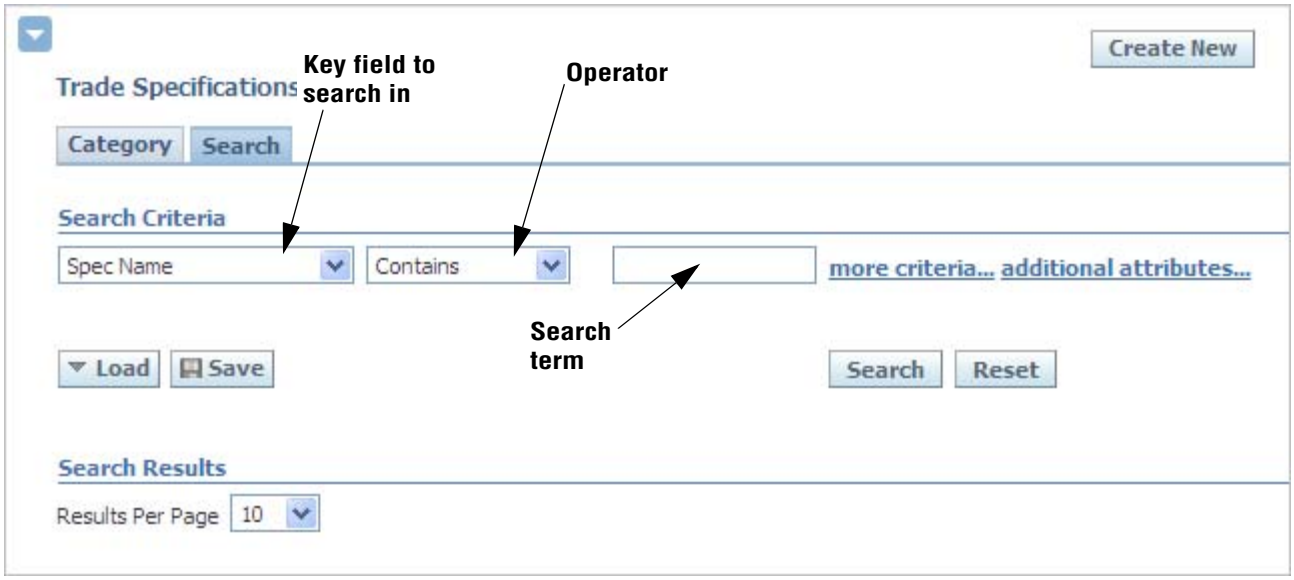
- By searching
- By category

This section explores the first method. For guidance on using the category method, see *Understanding the Category Tab* on page 1-17.

Understanding the Search Form

The initial screen in most applications and sections of Agile Product Lifecycle Management for Process consists of a search form. The search form (or query tool) has a basic structure but can vary greatly based on application or other factors. See figure 1-1 for an illustration of the basic search form:

Figure 1-1: The basic GSM search form



The search form resides on the Search tab, one of two tabs on the initial screen, the other being Category (see *Understanding the Category Tab* on page 1-17). To find a specification using the search form, set search criteria using a combination of three basic fields in the Search Criteria section. As shown in figure 1-1, these fields are:

- Key field
- Operator
- Search term

The main search form includes the following buttons, as shown in figure 1-1 above:

Search—Displays your search results

Reset—Clears all search criteria fields

Save Search—Saves search criteria in a reusable library. Use this option if you use certain search criteria often (see *Understanding the Category Tab* on page 1-17).

Load Search—Loads a saved search

In Agile Product Lifecycle Management for Process the first two search criteria fields contain a default value, in the case of a trade specification, Spec Name (as shown in figure 1-1, on page 1-4). The top few choices in the drop-down list are the most frequently used fields.

Search Field Definitions

See table 1-1 for a description of search fields that appear on the main search form.

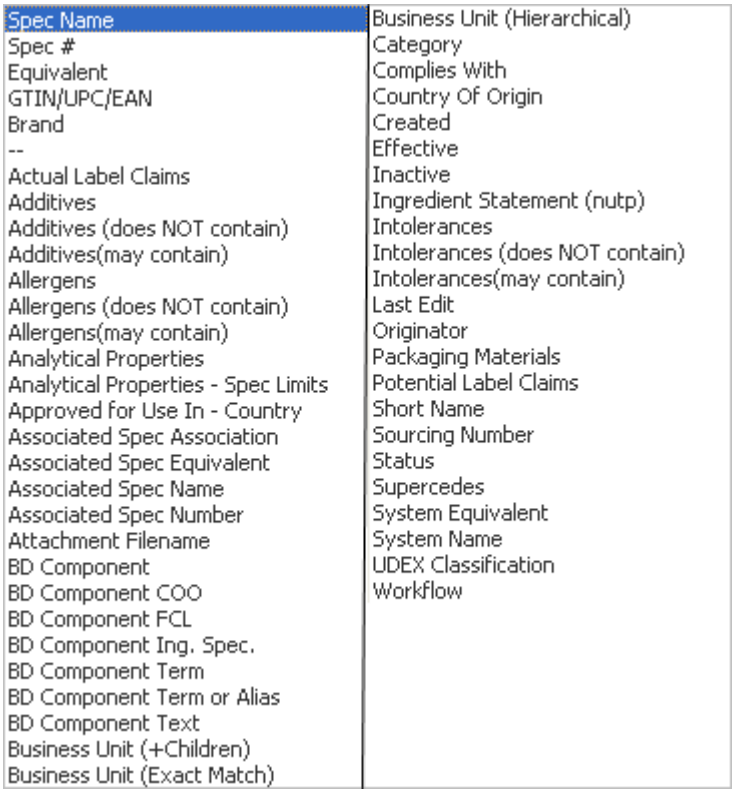
Table 1-1: Fields on the main search form

Field	Description
Key field list	Select from a list of search criteria based on the GSM menu search option that you chose.
Operator	Select from a list of operators based on the criteria that you chose in the key field list. A few examples include Equals, Not Equals, Contains, and Starts With.
Search term	The actual word or words that you are looking for. If this field is preceded by an add data icon (), click it to view a dialog box with available choices. You can also enter a percent sign (%) to perform a wildcard search.
Results per page	Sets the number of search results to display at one time.

Key Field List

The first drop-down list in the search form, the Key Field list, consists of field names that specifications can include. See figure 1-2 below for a list of field names in this drop-down list (for a trade specification).

Figure 1-2: Choices in the key field drop-down list (for a trade specification search)



Most of these field names are self-explanatory. See table A-1, *Key field names of note in the search criteria key field list, described,* on page A-1 for descriptions of search fields of note.

Key Field Lists by Specification Type

Table 1-2 on page 1-7 is a partial list of possible fields. Note that the lists of key fields varies by specification type to some degree.

Operator List

The delimiter in the Operator field changes depending on which Key Field you have selected. These logical, or Boolean, operators dynamically adjust to a set of choices that make sense for the possible values of fields in the Key Field drop-down list. See table 1-2 for a sample list of the possible logical operator sets.

Table 1-2: Sample list of search tool fields, by field type and operator sets

Field type	Field(s)	Operator set
Free text	• Spec Name • Brand • Equivalent • Activity Title • Activity Type • Analytical Properties - Spec Limits • Associated Spec Association • Associated Spec Equivalent • Associated Spec Name • Attachment Filename • BD Component • BD Component FCL (Food Composition Library) • BD Component Ing. Spec. • BD Component Term • BD Component Text • Combined Statement • Description • Ingredient Statement (nutp) • NPD Project • Parent Formulation Spec # • Parent Formulation Spec Equivalent • Parent Formulation Spec Name • Primary Item Equivalent • Primary Item Spec Name • Related Item Equivalent • Related Item Spec Name • Related Trade Spec # • Related Trade Spec Equivalent • Related Trade Spec Name • Short Name • Sourcing Number • Special Notes • Status • Supercedes	Contains Equals Starts With

Table 1-2: Sample list of search tool fields, by field type and operator sets (continued)

Field type	Field(s) (continued)	Operator set
Multiple-select (+)*	• Actual Label Claims • Additives • Additives (does NOT contain) • Additives (may contain) • Allergens • Allergens (does NOT contain) • Allergens (may contain) • Breakdown Component COO (country of origin) • Breakdown Component Term or Alias • Classification • Complies With • Country of Origin • Input Item • Intolerances • Intolerances (does NOT contain) • Intolerances (may contain) • Material Type • Menu Item Build • Packaging Materials • Potential Label Claims • Standard	Contains All Contains One
	• Approved for Use In - Country	Contains One Equals
Number	• Activity # • Associated Spec Number • GTIN/UPC/EAN • Primary Item Spec # • Related Item Spec # • Spec # • System Equivalent	Equals Starts With
Number	• x/100g - Calories • x/100g - Carbohydrates • x/100g - Cholesterol • x/100g - Protein • x/100g - Sodium • x/100g - Total Fat • x/100g - Total Sugar • x/Serv - Calories • x/Serv - Carbohydrates • x/Serv - Cholesterol • x/Serv - Protein • x/Serv - Sodium • x/Serv - Total Fat • x/Serv - Total Sugar	Equals Greater Than Less Than

Table 1-2: Sample list of search tool fields, by field type and operator sets (continued)

Field type	Field(s) (continued)	Operator set
Single option (+)	• Analytical Properties • Business Unit (+Children) • Business Unit (Exact Match) • Business Unit (Hierarchical) • Category • Concept (Exact Match) • Concept (Hierarchical) • Concept (+Children) • System Name • UDEX Classification	Equals
Date (+)	• Effective • Inactive • Last Edit • Created	Equals Greater Than Less Than
Subsearch list [search- within-search dialog box] (+)	• Facility • Menu Item Class • Output Item • Receiving Facilities • Source Facility • Standard • Workflow	Contains One
Subsearch list [search- within-search dialog box] (+)	• Originator	Equals
Exists	Sourcing Approval	Is NULL
True or False	Supplier signed spec	Is FALSE Is TRUE

*Add data icon (+) opens a dialog box to further refine field entry

Search Term Field

The third main field is for entry of search terms. Depending on the type of field selected in the first drop-down list, the Key Field list, the search term field:

- Accepts data entry that you type
- Accepts data entry that you select from prepopulated forms
- Does not accept data

Entering Search Terms by Typing

You can type your search term directly into the search term field when searching for data in the following two field types:

- Free text fields
- Number fields

See table 1-2, *Sample list of search tool fields, by field type and operator sets,* on page 1-7 for a list of fields of this type.

Entering Search Terms by Prepopulated List

Several field types require that you choose your terms from prepopulated lists, as indicated by the add data icon ( ). Field types that require entry from a prepopulated list include:

- Multiple-select
- Single option
- Date
- Subsearch list (search within search field)

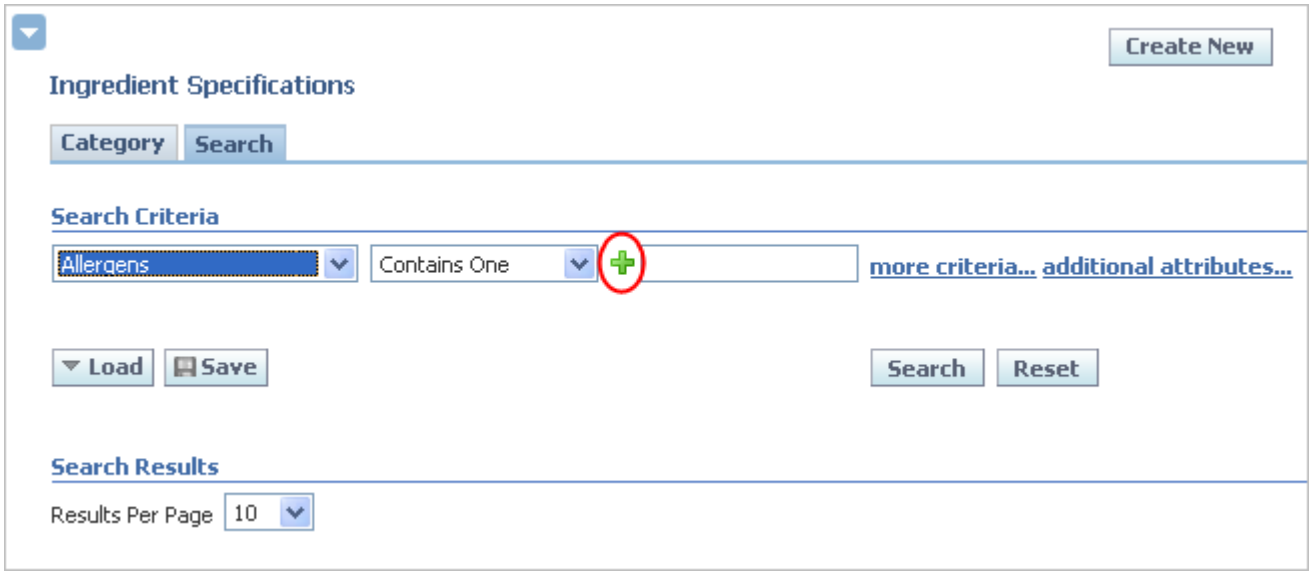
For a sample list of fields of these types, see table 1-2 on page 1-7.

The type of dialog box from which you select a search term can vary by field type and by individual key field. There are a large number of fields for every specification type. Because there are too many combinations to illustrate each one, see the following section for a sampling of dialog boxes.

To select data from a filtered prepopulated field:

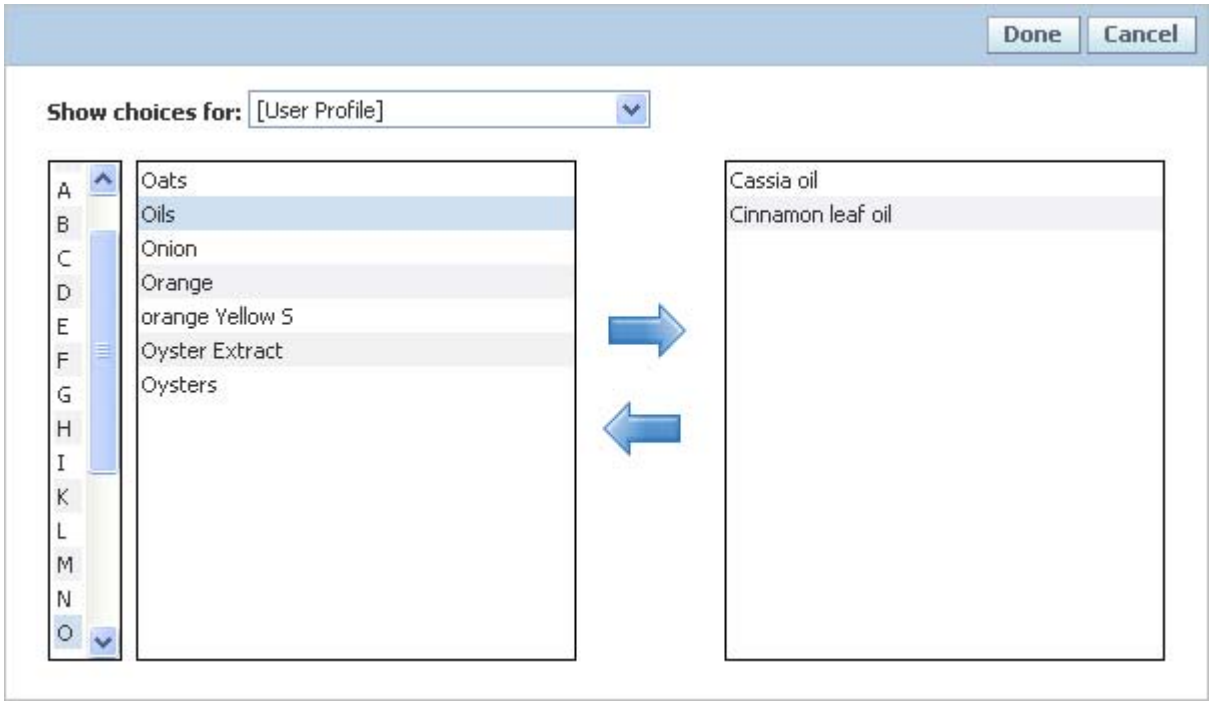
1 Click the add data icon ( ) to the left of the search term field, as shown in figure 1-3, below.

Figure 1-3: Add data icon



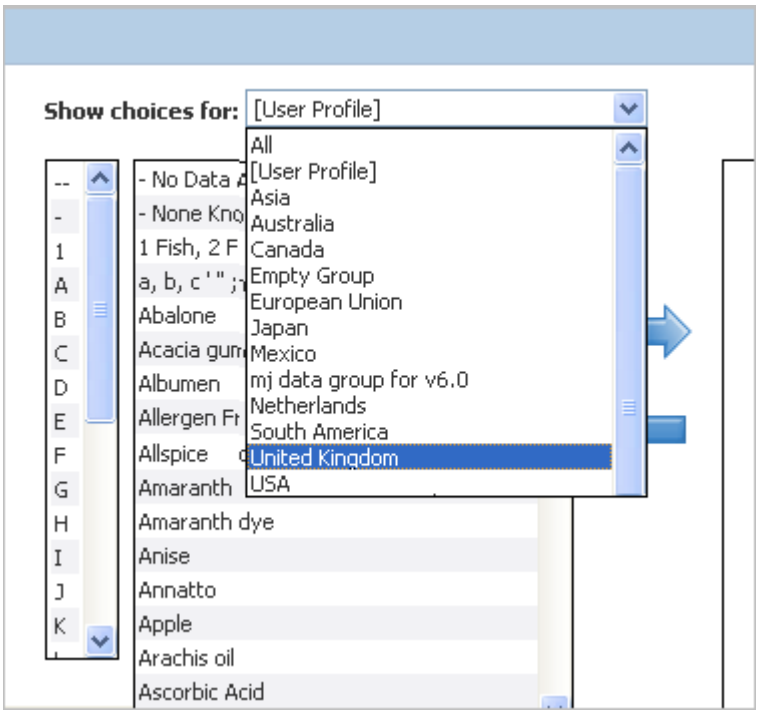
A multiple-select dialog box appears.

Figure 1-4: One variety of data entry dialog box



2 If desired, narrow down your choices by filtering them using the **Show choices for** drop-down list by selecting a grouping.

Figure 1-5: A **Show choices for** drop-down list, detail



The dialog box refreshes with a list of choices filtered based on your selected criteria.

3 To filter choices alphabetically, click a letter in the leftmost box. The contents of the second box reload with only those choices beginning with the letter that you have selected

4 To add an item listed in the second box, select the item and then click the add selected data icon ( ). The selected item moves over to the rightmost box.

> **Note** This screen supports multiple select (Control + mouse in Windows).

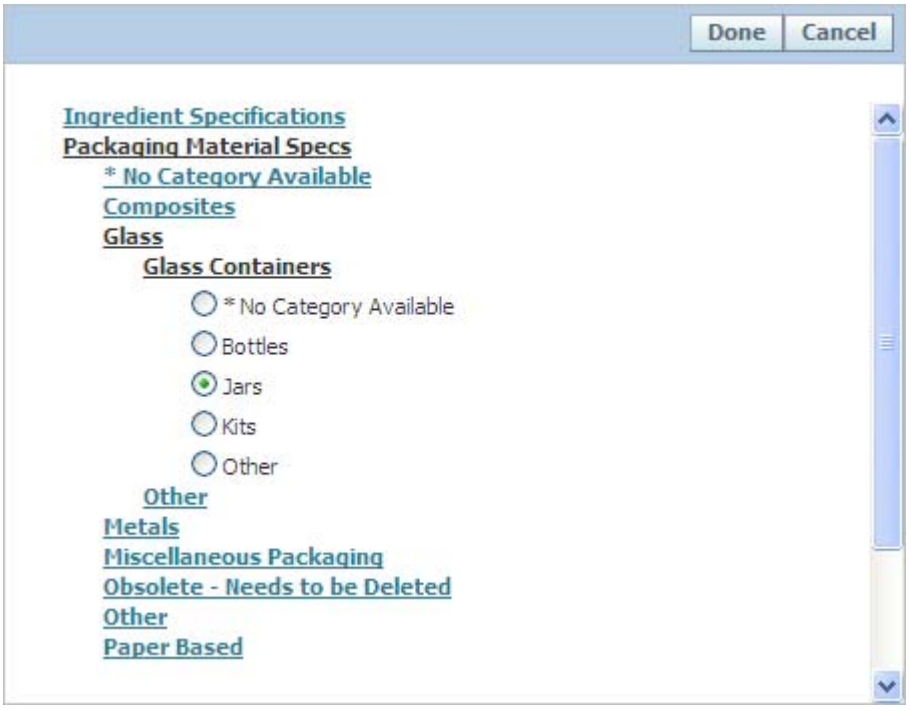
5 To remove one or more items from the rightmost box, select one or more items in the rightmost box and click the remove selected data icon ( ). The selected item(s) move to the leftmost box.

6 At the top right of the dialog box, click **Done.** The dialog box closes, and your revised set of fields appears listed in the search term field to the right of the add data icon ( ) in the search form.

There is a lot of variety in the dialog boxes that display when you click the add data icon ( ). The basic types of dialog boxes are:

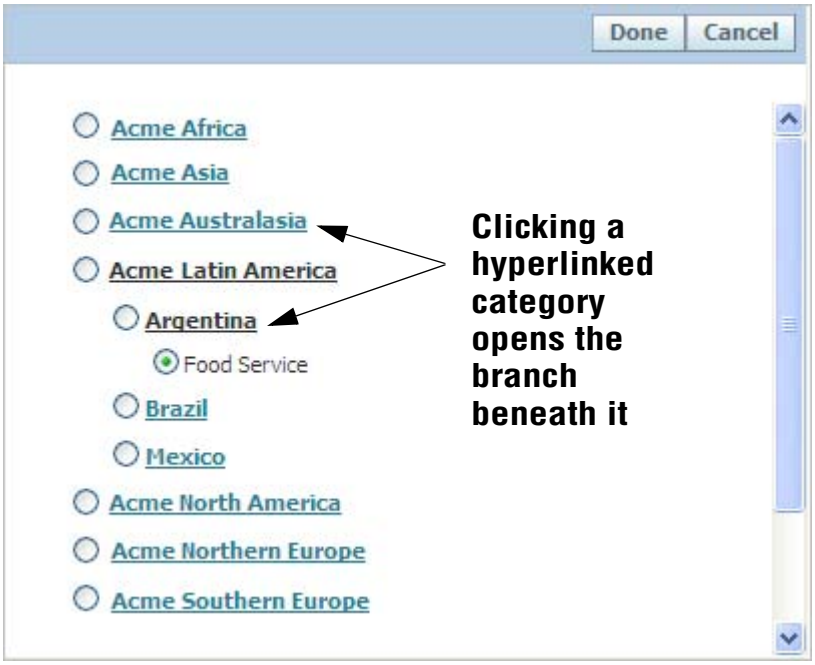
- Alphabetically filtered prefilled list dialog box, as shown in figure 21-5, *Group Filter dialog box,* on page 21-6
- Geographically and alphabetically filtered prefilled list dialog box, as shown in figure 1-4, *One variety of data entry dialog box,* on page 1-11
- Single-select tree of hyperlinked choices, as shown in figure 1-6 below

Figure 1-6: Single-select tree of hyperlinked choices



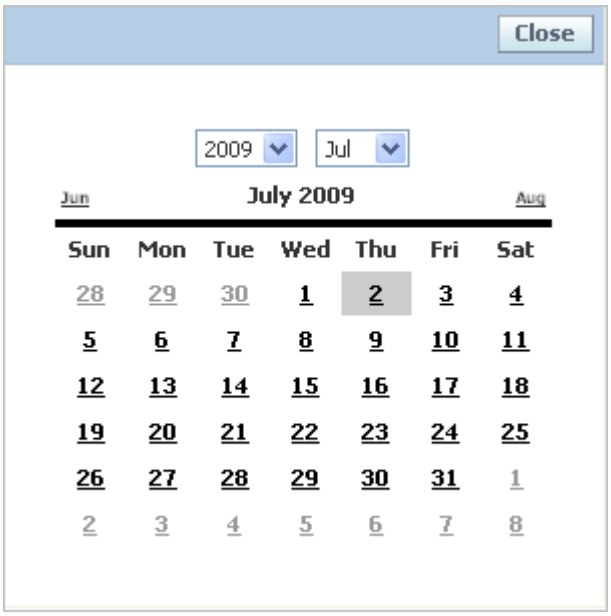
- Single-select tree of choices with option buttons, as shown in figure 1-7 below

Figure 1-7: Single-select tree of choices with options buttons



- Calendar dialog box, as shown in figure 1-8 below, used exclusively for date fields

Figure 1-8: Calendar dialog box



- Subsearch (search-within-search) dialog box, for use in narrowing down a large number of options, as described in *Using the Subsearch Tool* on page 1-14

Using the Subsearch Tool

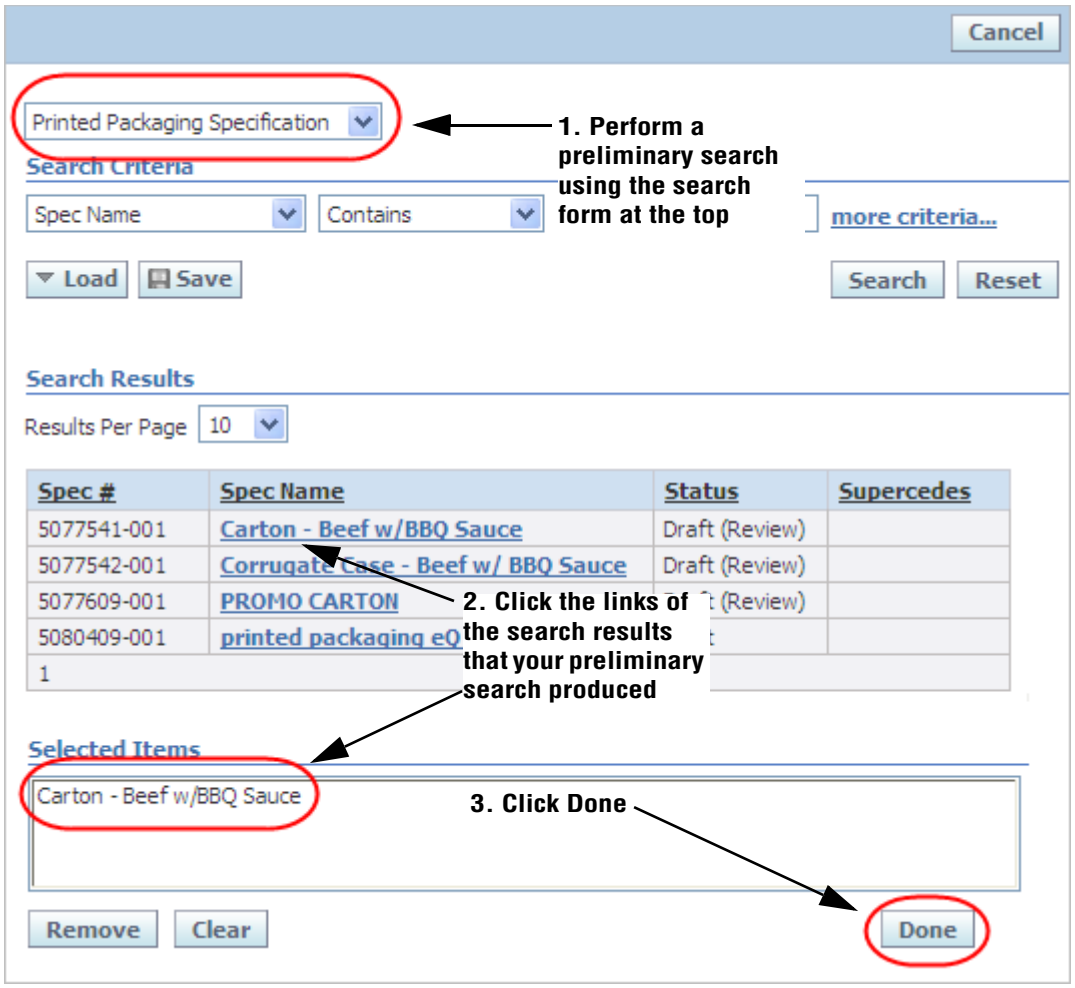
Possibly the most complex method of entering data in the search terms field is through use of the subsearch (search-within-search) dialog box. This dialog box enables you to do a "mini-search" with selected criteria in order to populate a large text field that you can then manually edit before sending its contents into the search terms field of the main search form. The fields displayed in the subsearch vary based on context, and there are a large number of possible combinations.

There are three basic steps to using the subsearch (or search-within-search) tool:

1. Search for your criteria using the search form at the top
2. Select one or more hyperlinked search results (which then appear in the Selected Items box)
3. Click **Done** to close the dialog box and send the contents of the Selected Items box to the search terms field of the main search window.

See figure 1-9 for an illustration of how to use the subsearch tool.

Figure 1-9: Using the subsearch tool



Because of the nested design of the subsearch tool, there are too many permutations to cover all of them in a user manual. Therefore you can consider the samples below (figure 1-10 and figure 1-11) as representative of the whole.

Figure 1-10: Subsearch tool when searching for facilities, blank

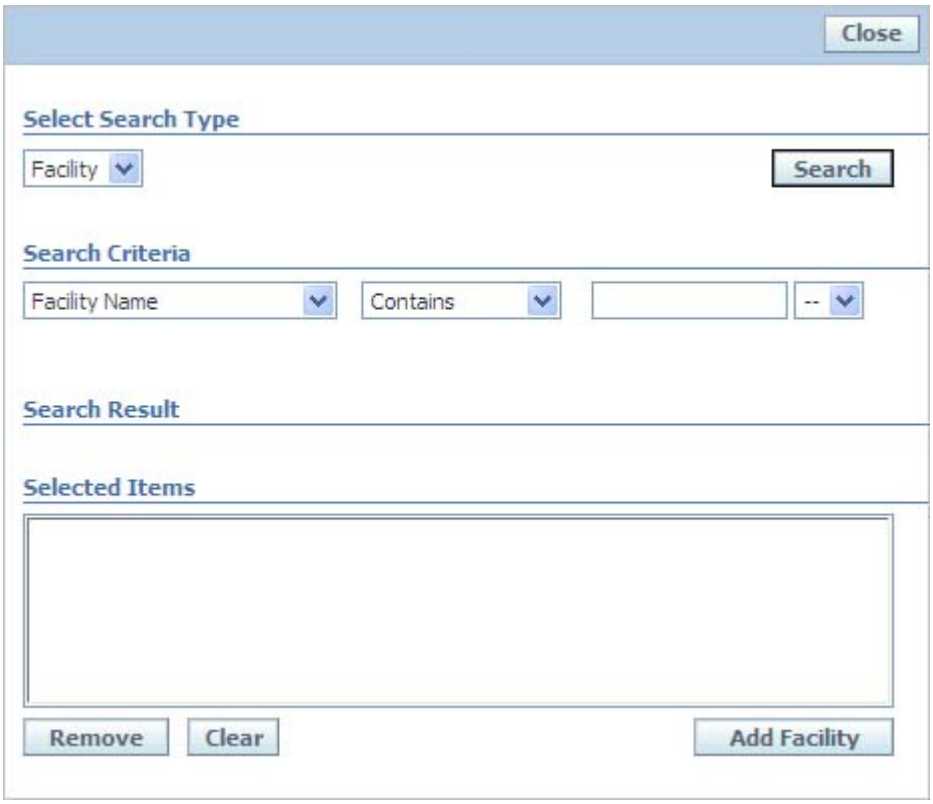
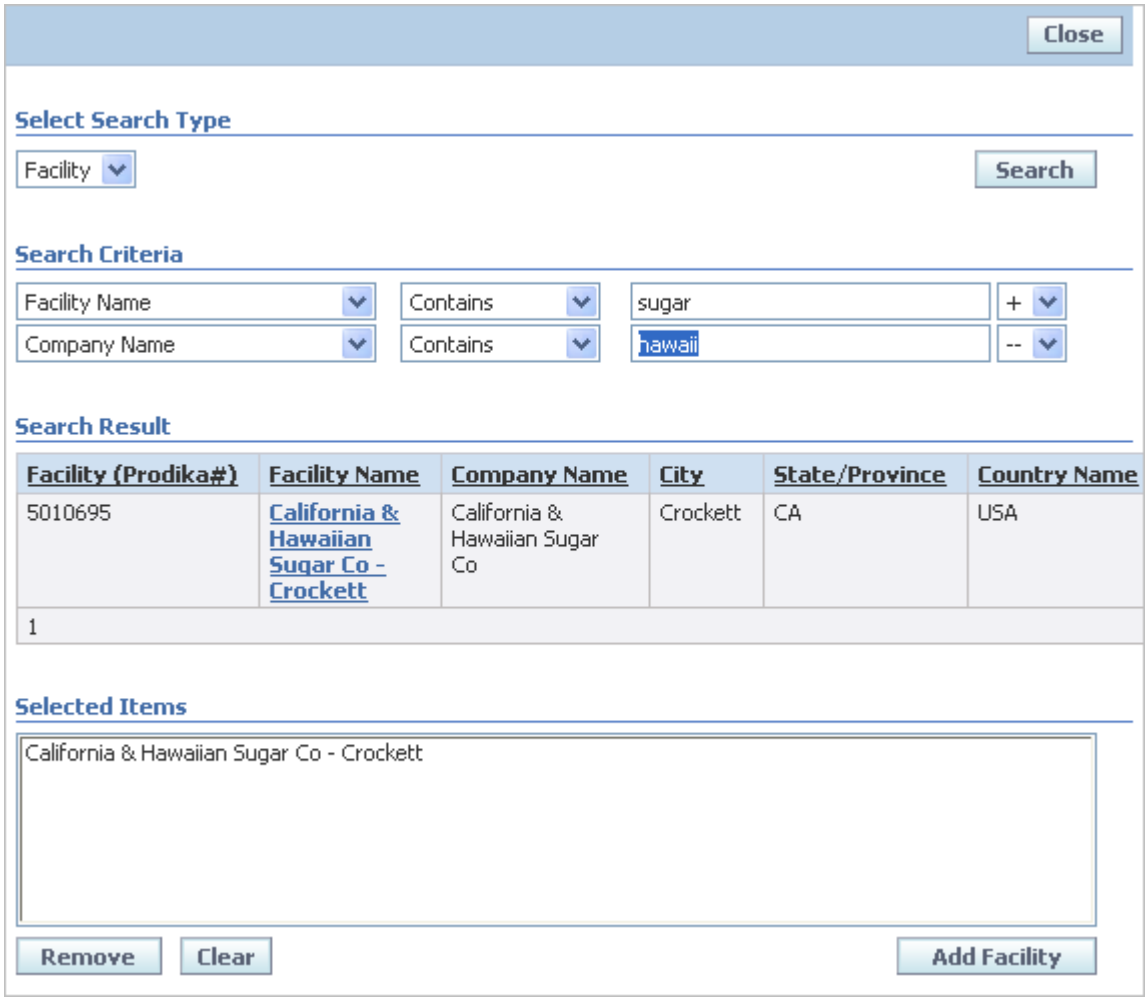


Figure 1-11: Facilities subsearch tool showing selected search results



Searching for Field Types That Do Not Use the Search Terms Field

The following two field types make use of logical, yes-or-no operators for which the search terms field is unnecessary:

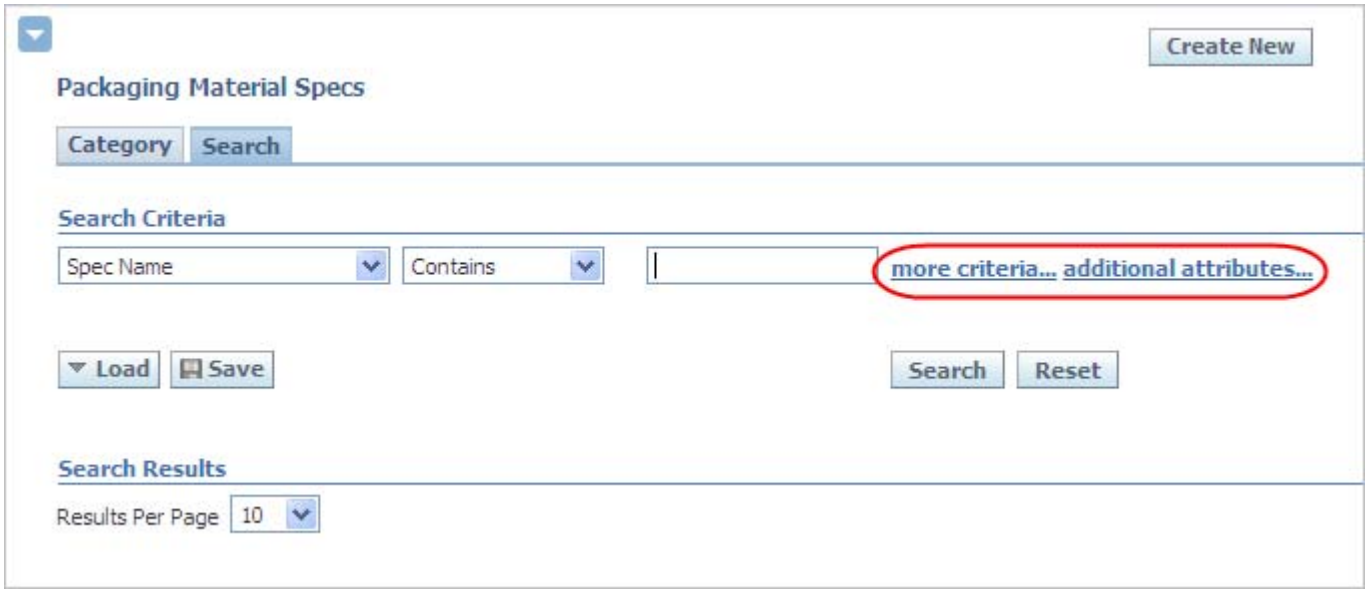
- Exists
- True or False

If the field in which you are searching is one of these types, for example, Sourcing Approval or Supplier signed spec, you complete the search criteria when you choose the operator (Is NULL, Is FALSE, Is TRUE).

Adding More Criteria

In addition to the basic entry fields on the search form—key field list, operator, and search term—two action links appear, **more criteria** and **additional attributes**, as shown in figure 1-12.

Figure 1-12: The More Criteria and Additional Attributes action links on the main search form



When clicked, the first of these action links, **more criteria**, creates a second row of the main three search fields. You can use additional rows to enter additional search parameters.

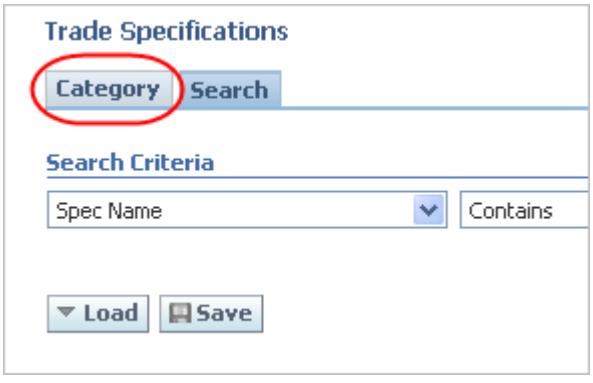
Searching Custom Data

You can use the second action link, **additional attributes**, to search for specification with existing extended attributes, custom sections, %breakdown, or BOM items. Refer to the *Agile Product Lifecycle Management for Process Getting Started Guide* for more information.

Understanding the Category Tab

The second method of finding data within Global Specification Management (GSM) is the Category tab, which resides on the same page as the main search form (see figure 1-13).

Figure 1-13: Category tab, as seen from the main search form tab



If you need to locate a specification from within a large database, the most efficient tool to use is the search form. We recommend that you use the Category tab if you would like to:

- Get a global view of what other specifications and categories exist
- Gain a better understanding of where your desired specification fits in within the larger hierarchy
- Get a quick view of how many specifications comprise a grouping
- Get a quick view of the type of specifications in a grouping

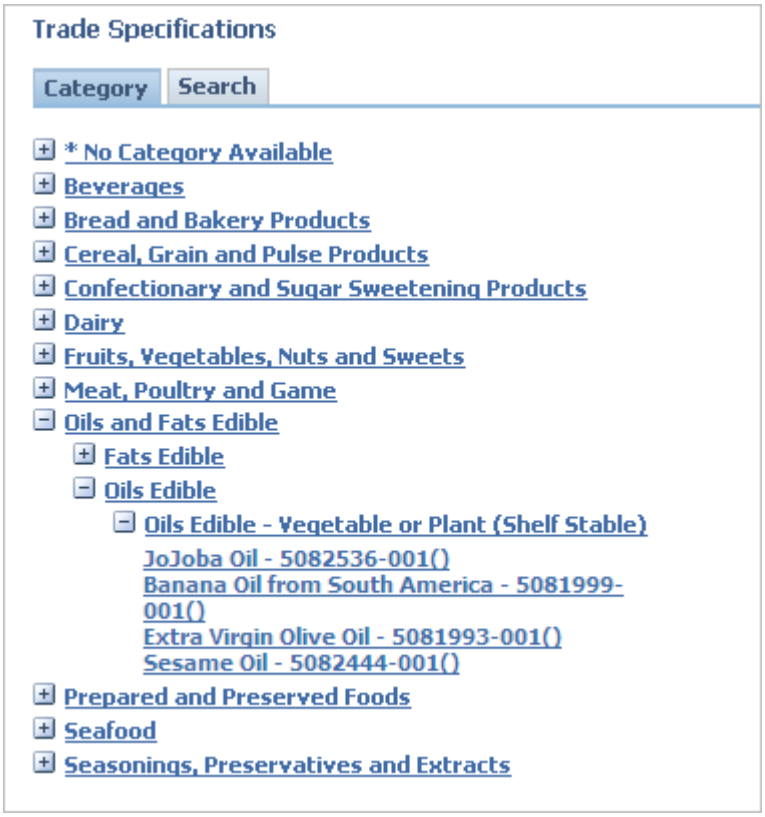
To locate a specification using the Category tab:

1. Open GSM and click any specification type in the left navigation panel. The main search form screen appears.
2. Click on the **Category** tab, as shown in figure 1-14, on page 1-18. The Category tab page displays, showing the first-level list of categories relevant to your selected specification type, as shown in figure 1-14 below.

Figure 1-14: Category tab, default, first-level view

3. Click the category of the specification that you are looking for. The category opens, displaying one or more second-level categories, as shown in figure 1-15.

Figure 1-15: Category tab showing second- and third-level categories



4 Continue clicking categories in the tree that you have opened until you reach your desired specification, which is at the level that shows no expand node icon (⊞) or collapse node icon (⊟) next to the hyperlink, as shown in figure 1-16. That level is the end level.

Figure 1-16: Category tab showing fully expanded branch

5 Click your hyperlinked specification. The specification opens the Summary tab of the full specification-specific information screen.

CHAPTER 2

Working with Specifications

This chapter presents guidance on using workflows and other common features of Global Specification Management. Topics in this chapter include:

- *Creating Specifications*
- *Managing Specifications*
- *Comparing Ingredient Specifications*
- *Printing Specifications*

Creating Specifications

Creating a New Specification

All specification types have the same creation process in Global Specification Management (GSM).

To create a specification:

1. On the left navigation panel, click the specification type. GSM displays the specification search page for that specification type.
2. Click **Create New** at the upper right of the page. A specification page opens with empty fields.
3. Follow the guidelines for your desired specification type as laid out in the chapter in this manual that specifically addresses that type of specification.

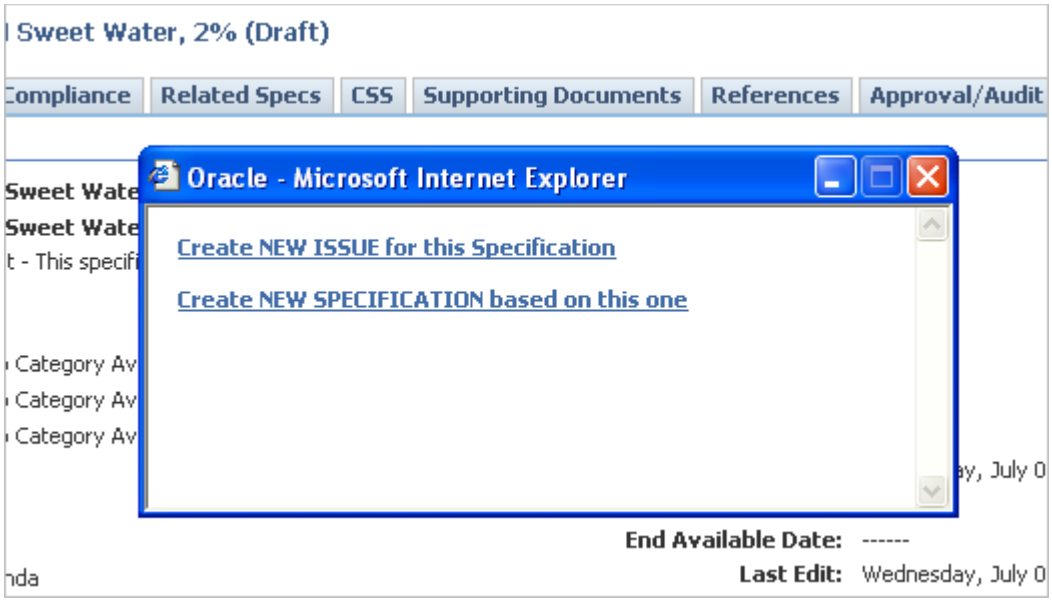
Creating a Copy of an Existing Specification

To create a copy of a specification, you will use the Create Copy button, which is visible only to those with the user role of [SPEC_COPIER] and the specification creator role for the specification type you are trying to copy. To create an issue of a specification, you must have the role [SPEC_ISSUER] and the specification creator role for the specification type you are trying to issue. For more information on user roles, please see the *Agile Product Lifecycle for Process Administrator User Guide.*

To create a copy of an existing specification:

1. Navigate to the specification to copy.
2. On the specification page, click **Create Copy** at the upper right of the page. GSM displays a dialog box, as shown in figure 2-1, below.

Figure 2-1: Create New Specification links



3. Click the **Create NEW ISSUE for this Specification** link to create another issue of the specification. This action duplicates most of the data on the specification, increasing the latest Issue # by 1 for the current specification number prefix.

> **Note** The action in this step is the method of choice when you want to issue the specification. GSM appends issue numbers to the end of the specification number when specifications are referenced. For example, in the specification # 5077456-001, the last 3 digits (001) represent the issue number. GSM tracks specification issues by using the item history feature. For more information, please see *Item History* on page 2-3.

4. Click the **Create NEW SPECIFICATION based on this one** link to create a copy of the specification. This action duplicates most data on the specification, assigning a new specification number. This method saves time when creating similar specifications.

> **Note** When a copy or issue of a specification is created, the resolved workflow and active workflow step will not follow the specification. The specification will re-resolve to a workflow when saved within GSM. For more on workflows, please see *Resolving Workflows* on page 2-6.

Item History

Specification issues are tracked using the item history feature. To access the item history of a specification, navigate to the specification and do one of the following:

- Click **Item History** at the upper right of the page. GSM opens the Spec History dialog box, as shown in figure 2-3, below.
- From formulation specifications, click the specification history icon ( ) in the Inputs table, as shown in figure 2-2 below. GSM displays the input's history.

Figure 2-2: BOM table in editable mode, showing specification history icon

Figure 2-3: Spec History dialog box

The Spec History table displays all issues of the specification that exist. Along with other identifying information, this table also displays the reason that the specification was changed. The value in the Reason for Change column appears in most specifications in a field in the Summary Information section of the Summary tab. This section is ordered from newest to oldest, highlighting the specification that you are on.

Managing Specifications

All GSM specifications are workflow enabled. A workflow is a business process, in whole or in part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules. In Agile Product Lifecycle Management for Process, workflows are managed using the Workflow Administration (WFA) application. For more information on WFA, please see the "Workflow Management for GSM" chapter in the *Agile Product Lifecycle Management for Process Administrator User Guide*.

Action Items

As a document moves through the workflow process, the system generates a to-do list, or "action items," for designated team members. When a specification, or business object, moves from one workflow status to another, GSM adds an entry to the Action Items list for the current owner of that object.

There are three types of action items:

- Specification
- Signature document
- Activity

Accessing Your Action Items

You can access the Action Items page in three different ways:

- Click **Applications > GSM > Action Items** on the Application menu in the top menu bar
- Click **GSM > Action Items** on the left navigation panel from the Portal
- From within GSM, click **Action Items** on the left navigation panel

Understanding the Action Items Page

As shown in figure 2-5, the Action Items page contains a table with the following sortable columns:

Spec #—The number of the specification

Title—The number and name of the specification

Type—The type of action item, hyperlinked to the actual object

NPD Project—The name of the New Product Development (NPD) project tied to the specification. Depending on your configuration, this column may not appear.

Status—The workflow step that the object is in (for example, draft, developmental, draft (review), requested for certification, and others)

RAG/SLA—A visual representation of the status of your action item (RAG = red, amber, and green dates) as shown below:

Figure 2-4: Red-amber-green (RAG) symbols

Note If the RAG status is **Late** ( ), the amber (approaching deadline) and red (deadline) dates appear immediately after the red "late" symbol.

Figure 2-5: The Action Items page

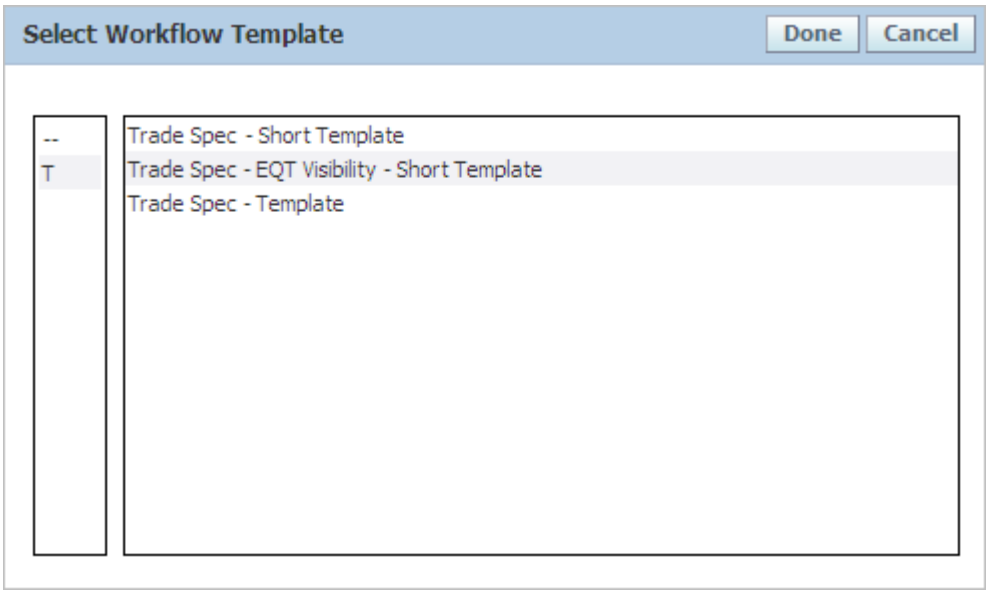
The RAG status is an indicator of compliance with the established service level agreement (SLA) timelines for that document type. SLAs for a specification are defined in that specification's workflow.

Resolving Workflows

When you first save a specification within GSM, the application associates a workflow with the specification. In some cases, when the specification resolves to multiple workflow templates, you will need to select the workflow template from the available options.

In such a situation, select a template for this specification from the Select Workflow Template dialog box, shown in figure 2-6, below, and then click **Done** at the top right corner of the dialog box.

Figure 2-6: Select Workflow Template dialog box



Important Once you have selected a workflow template, you will not be asked to define the workflow again. If your specification needs to be re-resolved, you will need to use the Resolve Workflow button, which is visible only to those with the user role of `[CAN_RERESOLVE_WORKFLOWS]`. For more information on user roles, please see the *Agile Product Lifecycle Management for Process Administrator User Guide*.

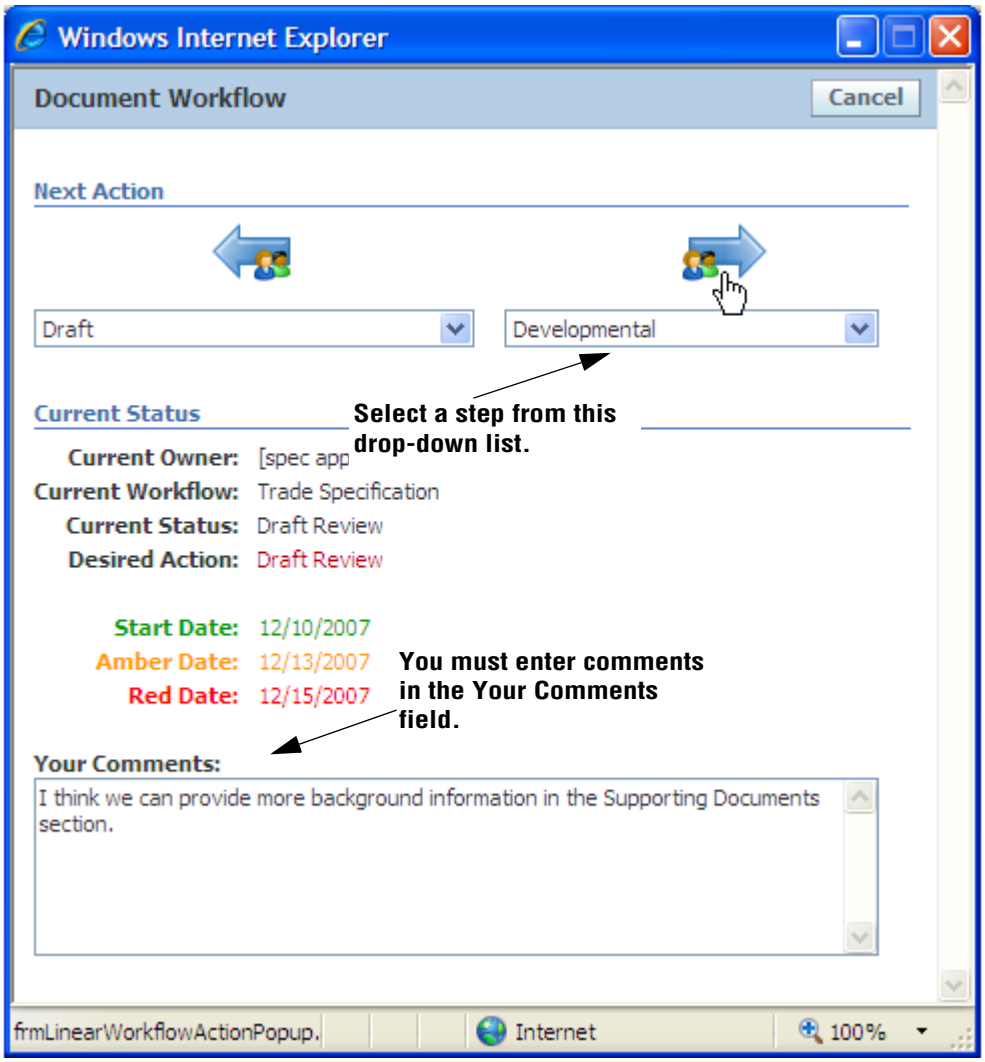
Transitioning a Workflow

Within a specification or signature document, use the workflow feature to move a document from one workflow step to another.

To move a document in a workflow:

1 Click **Workflow** at the top right of the page. The Document Workflow dialog box opens, as shown in figure . Remember that the buttons and fields that display vary based on the workflow and current workflow step.

Figure 2-7: Document Workflow dialog box



2 Enter comments in the **Your Comments** field (required).

3 Select a step from a drop-down list in the Next Action section.

4 Click the advance workflow icon ( ) to forward the specification or signature document to the next step in the approval process, or click the move back icon ( ) to return it to a prior step. The system updates the workflow status based on your selection.

Selecting Workflow Participants

If the workflow icon includes people ( ), in the next dialog box you may have to select workflow participants, such as one or more owners, persons being asked for a signature, or persons being notified. As figure 2-9, on page 2-8 shows, the dialog box may contain preselected data or may prompt you to select one or more participants. Refer to figure 2-8 through figure 2-10, on page 2-8 for an example of selecting workflow participants.

Figure 2-8: Single select example: Choose a single owner.

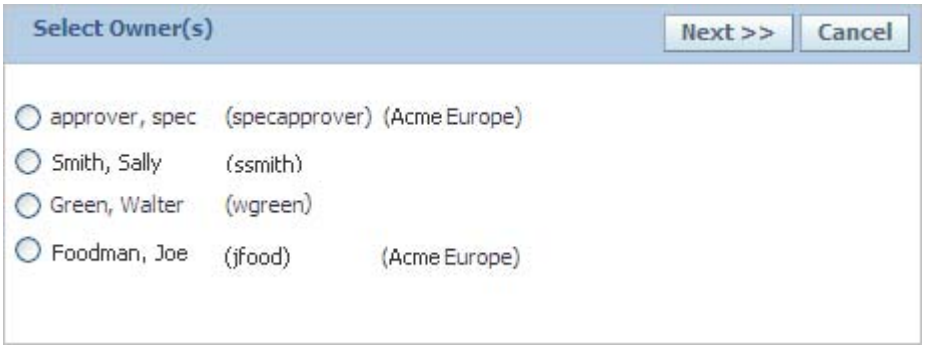
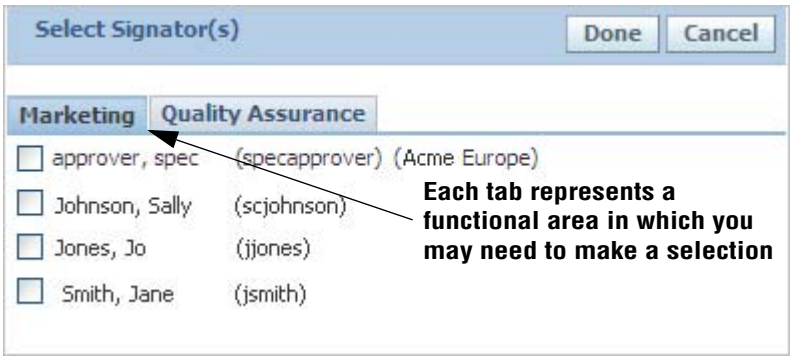


Figure 2-9: Pre-Selected Example: Notification recipient(s) have been preselected in the workflow template.

Figure 2-10: Multiple select example: Select one or more signatories from each tab .



Working with Signature Documents

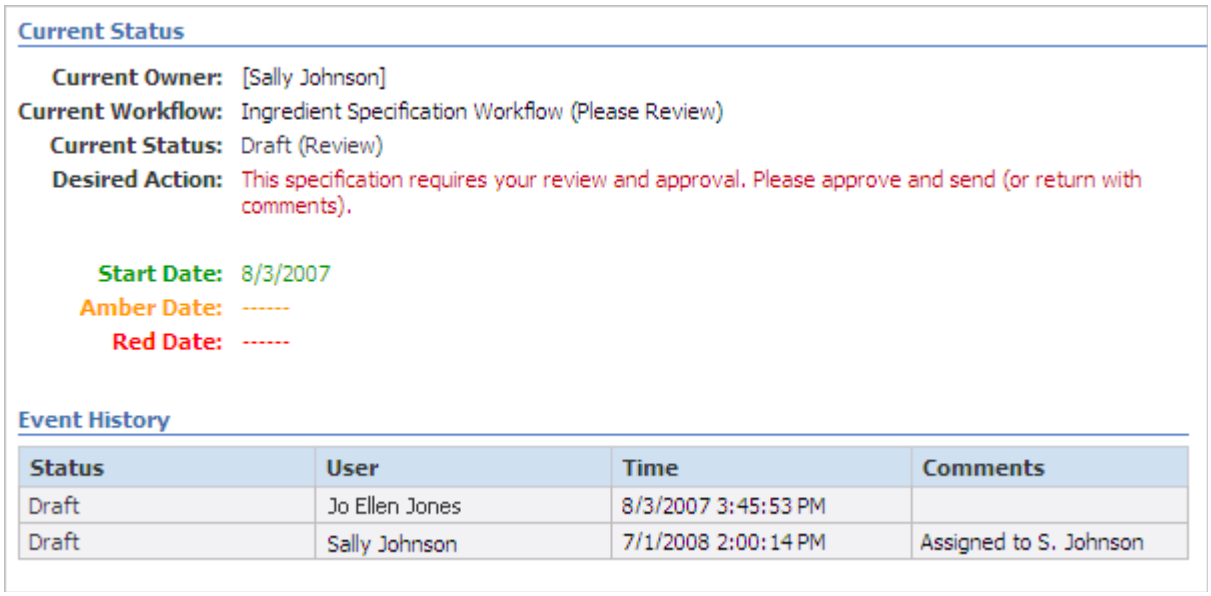
Use a signature document to solicit approval for a specification before the specification can move to the next step in the workflow. All requested signature documents must be moved to an approved state before the specification can move to the next workflow step. When you select a signature document—whether by action item or an email link—GSM displays the signature document page, as shown in figure 2-11 below:

Figure 2-11: Signature document page

The Summary tab shows the specification that you have been asked to review. You can follow the link to view the specification.

As figure 2-12 shows below, the Approval/Audit Trail tab shows the current status and owner of the signature document, the desired action, assigned dates, and the history of the signature document.

Figure 2-12: Signature Approval tab



Click **Workflow** at the top right of the page to take action on the signature document by changing its status to “approved” or “not approved.”

Temporary Signature Authority

Temporary signature authority enables a person who has been asked to provide a signature to assign that task to another user. A user with temporary authority can view and advance or move back all signature documents that are currently owned by the original signature authority. Tasks assigned to a user with temporary authority also appear in the Action Items list of that person.

Accessing Temporary Signature Authority

Access temporary signature authority from the left navigation panel, as shown in figure 2-13, below.

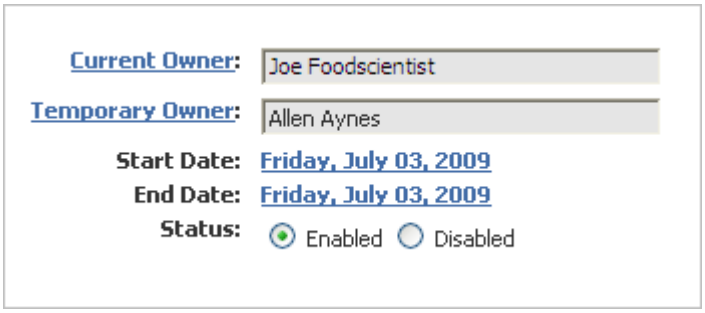
Figure 2-13: Temporary Signature Authority, from left navigation panel

You can search for existing signature authorities. For detailed guidance on searching, please see the *Agile Lifecycle Management for Process Getting Started Guide*.

Creating a Temporary Signature Authority

To create a new signature authority, click **Create New** at the upper right of the page. Figure 2-14 below shows the fields on this page.

Figure 2-14: Temporary Signature Authority fields



Temporary Owner—You can designate temporary signature authority by clicking the **Temporary Owner** link. GSM displays the user selection dialog box, which you can use to search for the desired user. Selecting the user name closes the dialog box and populates the Temporary Owner field.

Start Date and **End Date**—These fields represent when the temporary signature authority begins and ends. To change the dates listed, click the date. GSM displays a calendar popup window that you can use to select new dates.

Status—Using this field, you can enable and disable the signature authority.

Editing an Existing Temporary Signature Authority

You can edit existing signature authorities that you have created. Search and select the signature authority to edit and click **Edit** at the upper right of the page. When done editing, click **Save & Close Document**.

Approval/Audit Trail Tab

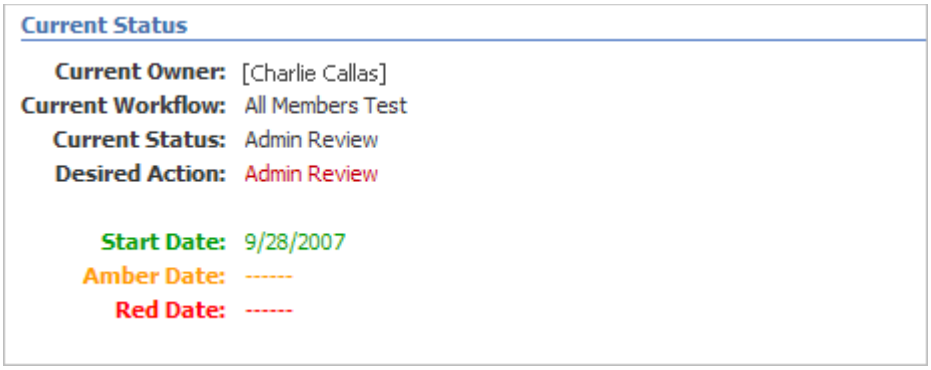
All workflow-enabled specifications contain an Approval/Audit Trail tab. This tab contains the data related to the workflow status and history of a specification. This page consists of the following system-defined sections:

- Current Status
- Event History
- Signature Document
- Lineage/History (appears only for nutrient profiles, trade, formulation, and ingredient specifications)

Current Status Section

The Current Status section contains the workflow data related to a specification.

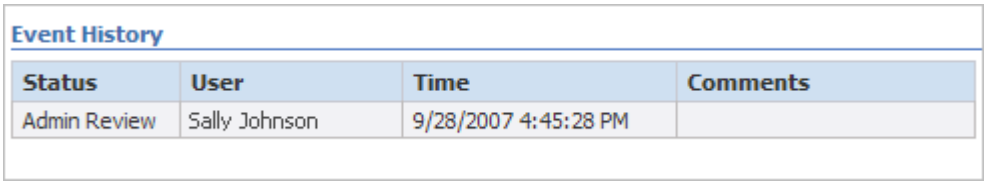
Figure 2-15: Current Status section



Event History Section

The Event History section contains the list of preceding workflow actions associated with the specification.

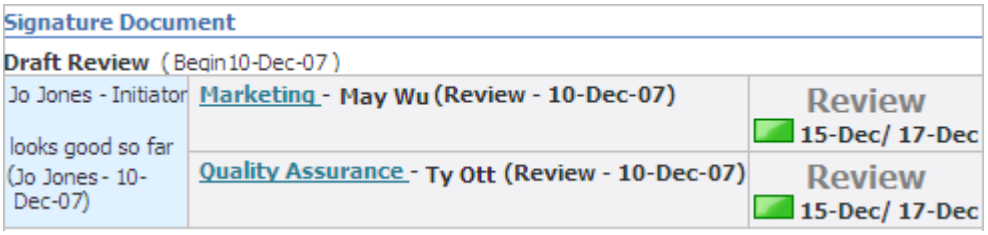
Figure 2-16: Event History section



Signature Document Section

The Signature Document section, shown in the figure below, contains the list of signature documents associated with that step of the workflow. All signature documents associated with a specification must be in the approved state before the specification can be moved forward in the workflow.

Figure 2-17: Signature Document section

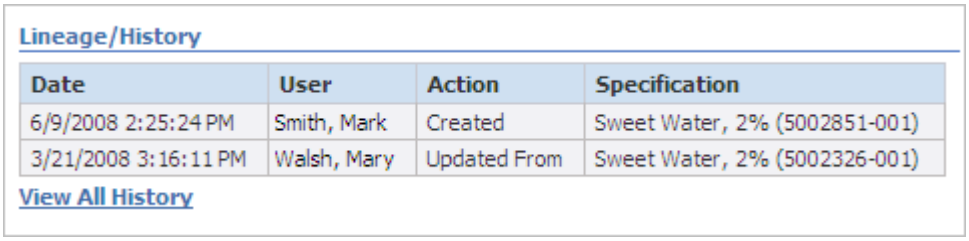


Clicking **View Historical Signature Documents** opens a view of signature documents completed prior to the current stage.

Lineage/History Section

The Lineage/History section, shown in the figure below, shows a history of where a nutrient profile or ingredient, trade, or formulation specification was created and updated from.

Figure 2-18: Lineage/History section



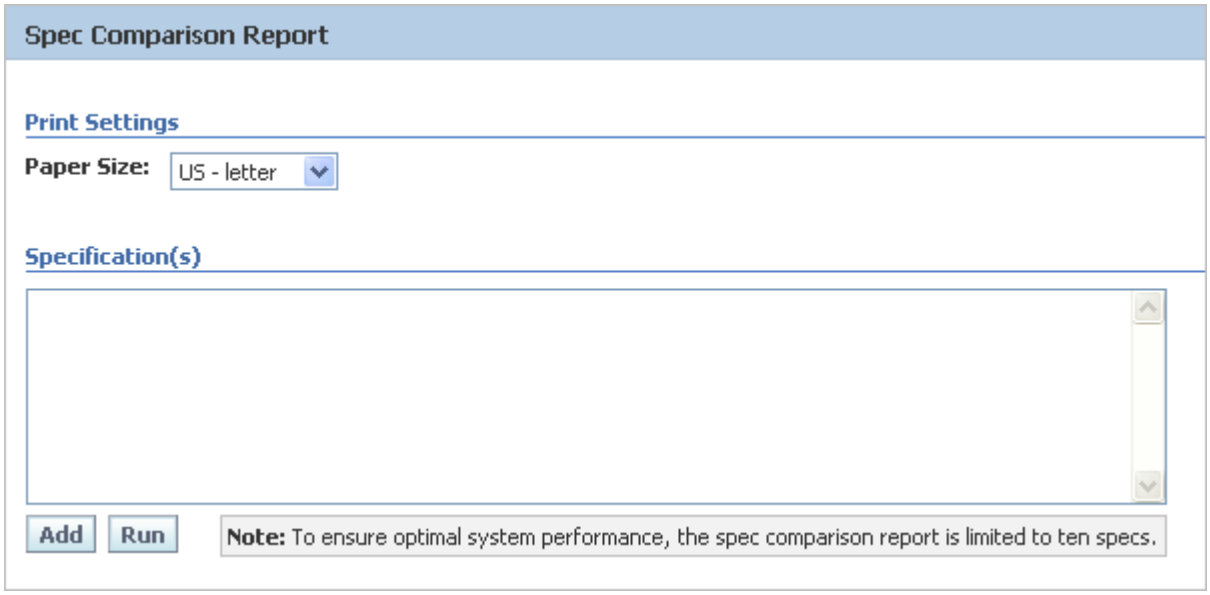
Comparing Ingredient Specifications

You can compare up to 10 ingredient specifications by using the specification comparison tool.

To access this tool:

1. Click **Spec Comparison** on the left navigation panel. GSM displays the Spec Comparison Report dialog box, as shown in figure 2-19, below.

Figure 2-19: Spec Comparison Report dialog box



2. Click **Add** to select the specifications to compare. GSM opens the specification search dialog box.
3. Find up to 10 specifications to compare and click **Add Specs.** The specifications search dialog box closes, and your selected specifications appear in the Specification(s) box.
4. Click **Run** to generate the report. GSM generates a Spec Comparison Report in Adobe Acrobat .PDF format.

Printing Specifications

Where available, you can print specifications by clicking **Print** at the upper right of the specification page, thereby opening the print dialog box. Options in the printing dialog box vary according to specification type, as discussed below.

Printing Trade Specifications

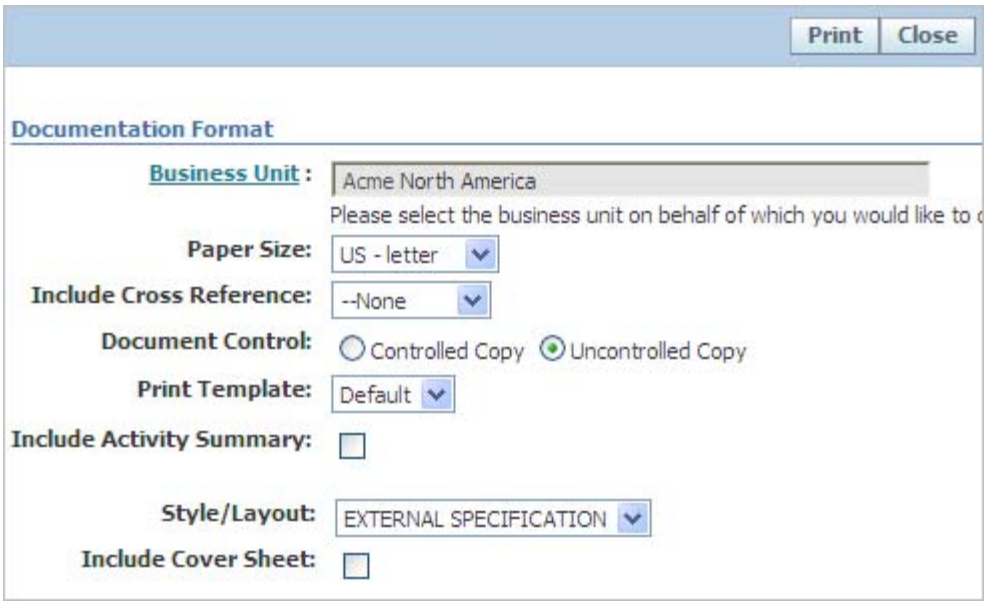
Trade specifications follow a unique printing method. The printing dialog box can contain many sections, depending on what items are related to that specification.

The sections include Documentation Format and Packaging Hierarchy. The print dialog box for trade specifications may contain sections for additional, related items.

Documentation Format Section

The Documentation Format section, shown in figure 2-20, contains fields that directly affect the format of the printed output.

Figure 2-20: Documentation Format section



Key fields include:

Business Unit—Controls which master specifications are available for printing. Changing this value changes the master specification listing.

Paper Size—Controls the page size.

Include Cross Reference—Includes the selected cross-reference inside the header of each printed page.

Document Control—Dictates which watermark to display ("CONTROLLED COPY" or "UNCONTROLLED COPY").

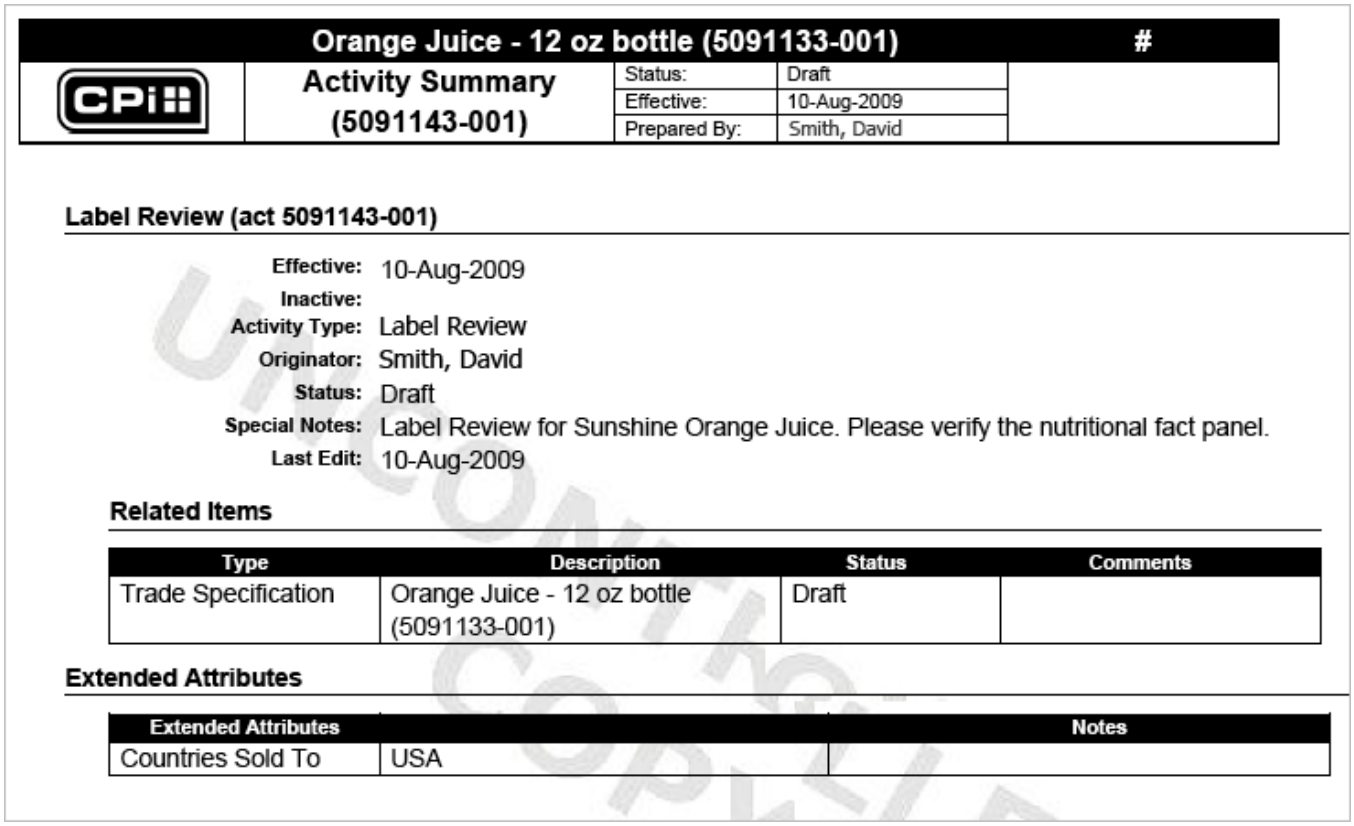
Print Template—Lists all format options for the specification type.

Include Activity Summary—Attaches a summarized printout of each activity that is attached to the specification, as shown in figure 2-21 below.

Style/Layout—Dictates the style and output of the specification.

Include Cover Sheet—Adds a cover sheet to the outgoing PDF, as shown in figure 2-22 below.

Figure 2-21: Trade specification activity summary sample



Orange Juice - 12 oz bottle (5091133-001) #

CPI

Activity Summary (5091143-001)

Status:	Draft
Effective:	10-Aug-2009
Prepared By:	Smith, David

Label Review (act 5091143-001)

Effective: 10-Aug-2009
Inactive:
Activity Type: Label Review
Originator: Smith, David
Status: Draft
Special Notes: Label Review for Sunshine Orange Juice. Please verify the nutritional fact panel.
Last Edit: 10-Aug-2009

Related Items

Type	Description	Status	Comments
Trade Specification	Orange Juice - 12 oz bottle (5091133-001)	Draft	

Extended Attributes

Extended Attributes		Notes
Countries Sold To	USA	

Figure 2-22: Trade specification cover sheet sample

1 / 11 100%

BBQ Beef and Vegetable Dinner - 11 oz (5077539-001) #

ACME

Cover Sheet

Status:	Packaging Engineering Review
Effective:	03-Oct-2004
Prepared By:	Jones, Sally

Summary Information

Spec Name: BBQ Beef and Vegetable Dinner - 11 oz
Short Name: BBQ Beef and Vegetable Dinner - 11 oz
Spec Status: Packaging Engineering Review - Please attach correct packaging BOM and unit load.
Category: Meat, Poultry and Game
Sub Category: Meat, Poultry and Game - Prepared and Processed
Group: Meat, Poultry and Game - Prepared and Processed (Frozen)
Originator: [redacted]
Supercedes: New Item
Reason for Change:

Spec #: 5077539
Issue #: 001
Effective: 03-Oct-2004
Inactive:
Last Edit: 28-Apr-2009

Documentation Version/Status

Dependent Specification(s)	Effective Date	Status
BBQ Beef and Vegetable Dinner - 11 oz (trd 5077539-001)	03-Oct-2004	Packaging Engineering Review

As shown in figure 2-22 above, the cover sheet includes the following information:

- Specification name and number
- Status of the specification and all dependent specifications
- Effective date of the specification and all dependent specifications
- Name of the preparer
- Name of the specification, if any, that this specification supersedes

Packaging Hierarchy

The Packaging Hierarchy section contains a list of all related trade specifications and their objects that are available for printing.

Title Specification

This drop-down list controls what specification will be displayed at the top of the hierarchy. Changing this value adjusts the related trade specification listing.

Related Trade Specifications

The trade specifications available for printing are organized by item type (TU=Traded Unit or CU=Consumer Unit). The active specification is shown in the row that is highlighted.

The printed output includes everything that you have selected in the Related Trade Items table. Those objects vary by specification but could include:

- Specification—Indicated by the specification name and item type.
- Supporting Documents—Indicated by the type or name of the document. Types of supporting documents are:

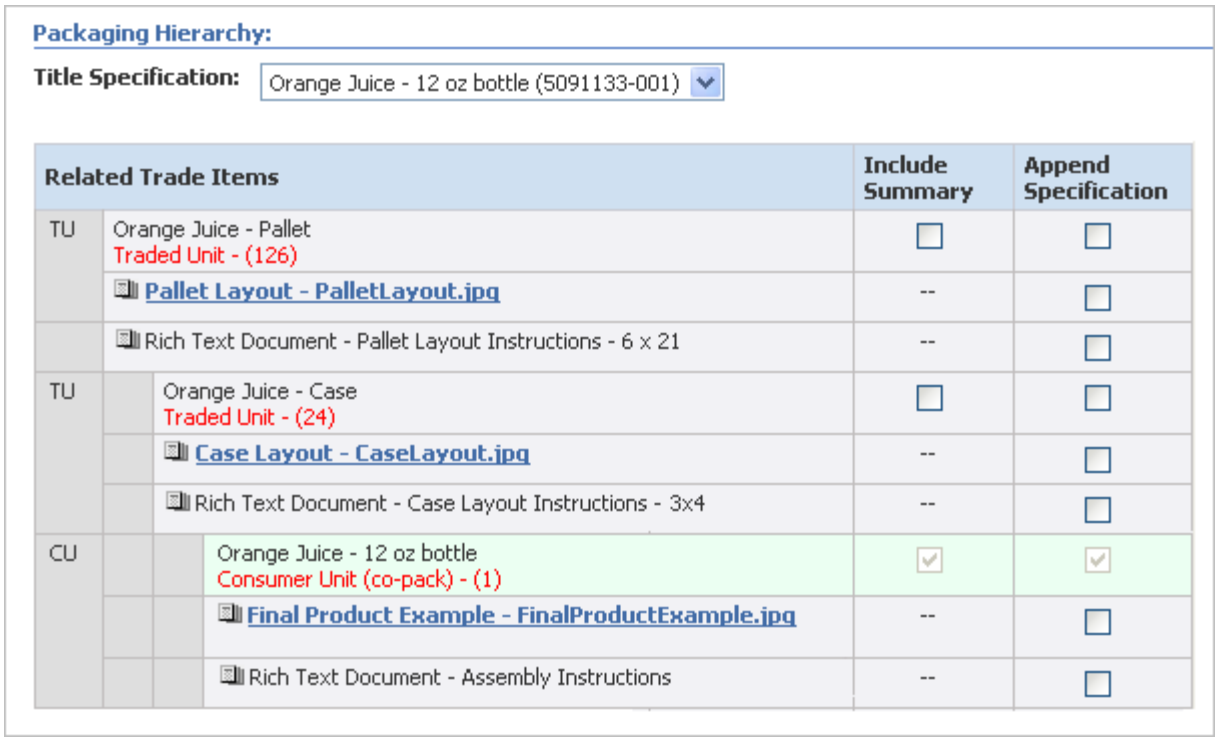
  - Attachments/Procedures are listed as: Attachment Title - Filename
  - Rich Text Documents are listed as Rich Text Document - Rich Text Name
  - URLs are not included in the print dialog

  See figure 2-23 below for examples.

To include any of these items in your printed output, check the box next to the corresponding item in the **Append Specification** column.

You can print attachments individually outside of the printed output. These attachments are listed underneath the associated trade specification and are indicated by the attachment file name.

Figure 2-23: Packaging Hierarchy section



To print attachments, click the linked attachment file name. In addition to printing attachments separately, you can also include JPG and GIF images formats in your PDF package. To include a JPG or GIF, check the box in the **Append Specification** column next to the image(s) to include.

Additional Related Items

Additional related items are listed below the Packaging Hierarchy section. These items are listed in their own sections. Each section is titled by the item type, as shown in figure 2-24.

Possible related specifications include: printed packaging materials, packaging materials, nutrient profiles, testing protocols, and master specifications. On co-pack trade specifications, ingredient breakdowns added to the supporting documents tab will be listed as well, as shown in figure 2-25 below.

If the related specification includes attachments, the attachments will be listed below the specification. To print attachments, click on the linked attachment file name. By default, the custom data on the selected specifications is included in the printout after the activity summary, unless your administrator has indicated to suppress printing.

Figure 2-24: Additional related items

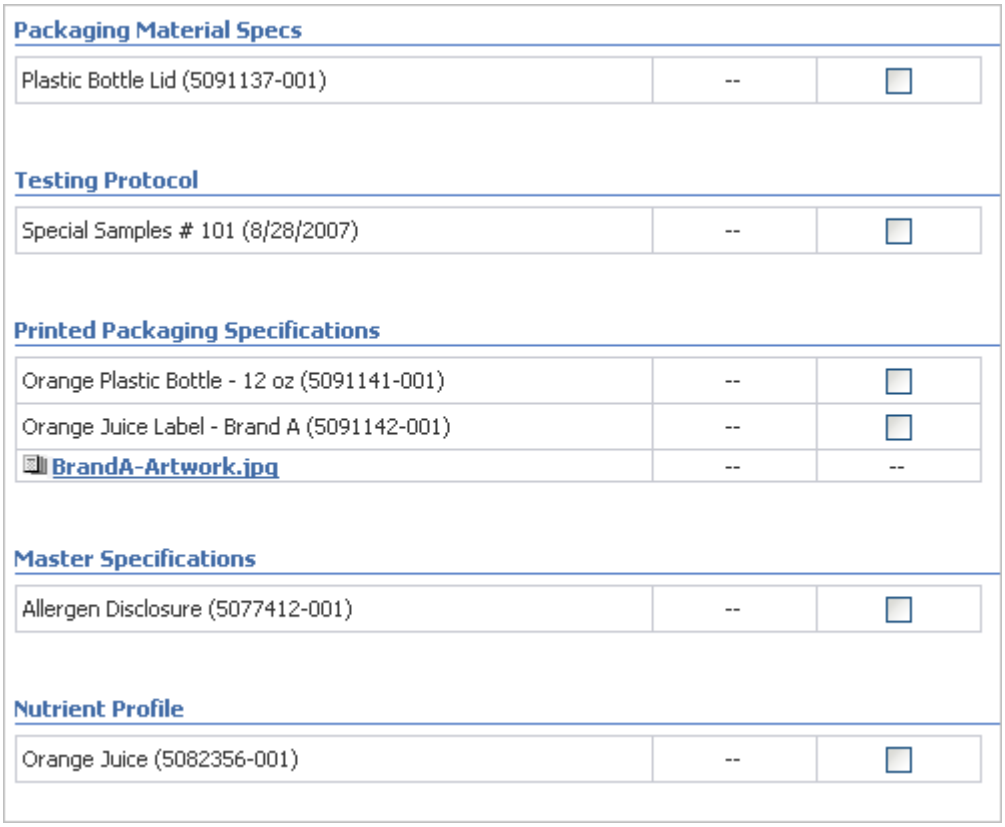
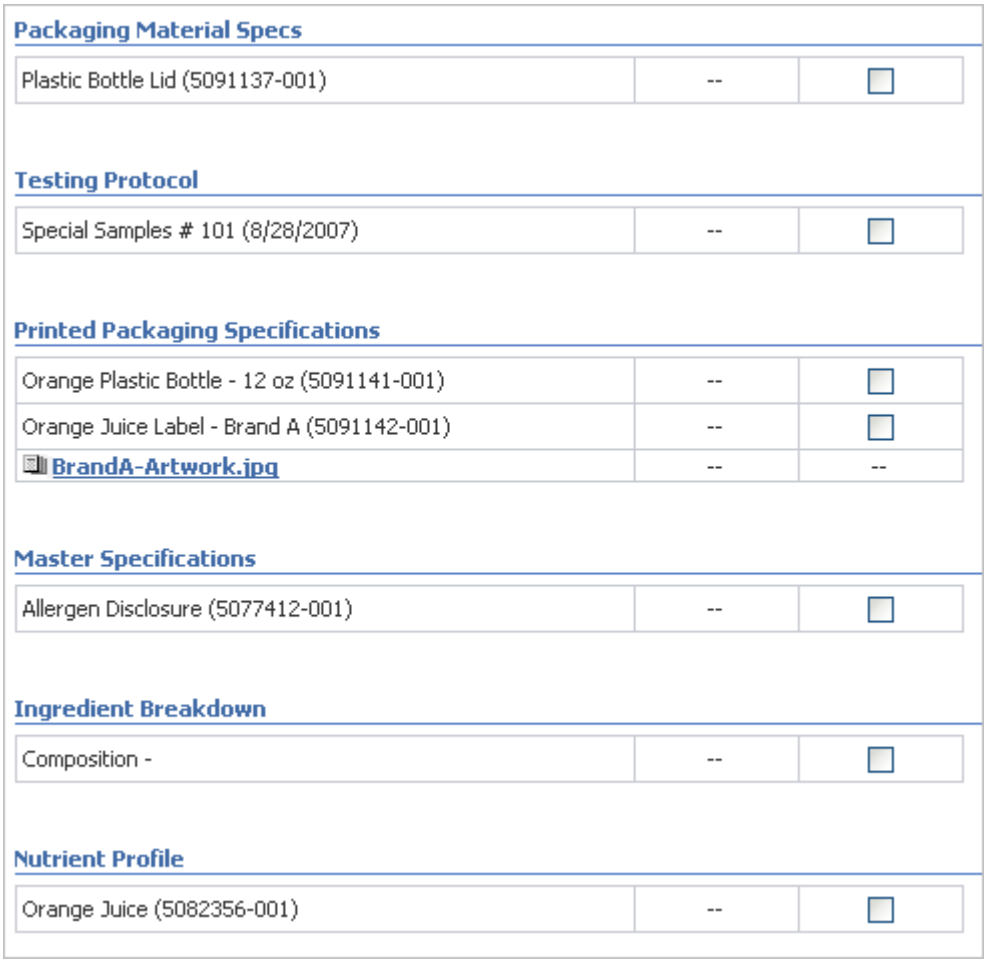


Figure 2-25: Additional related items, co-pack trade specification



Printing Other Specifications

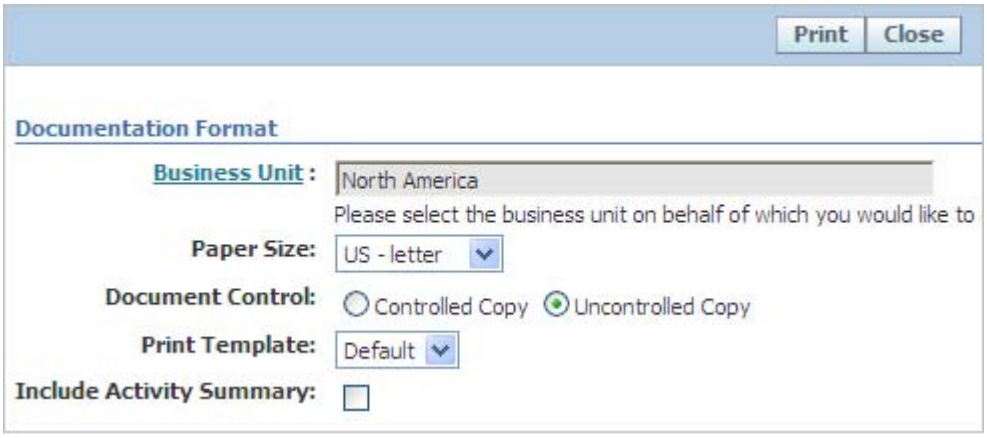
Generally, all specifications other than trade specifications use the same print function. The printing dialog box for these specifications contains two sections:

- Documentation Format
- Specification Listing

Documentation Format

The specification format section, shown in figure 2-26, contains fields that directly affect the format of the printed output.

Figure 2-26: Specifications Format dialog box



Key fields include:

Business Unit—Controls which master specifications are available for printing. Changing this value changes the master specification listing in the Specification Listing section.

Paper Size—Controls the page size.

Document Control—Dictates which watermark to display ("CONTROLLED COPY" or "UNCONTROLLED COPY").

Print Template—If enabled, this field lists all format options for the specification type.

Include Activity Summary—Attach a summarized printout of each activity that is attached to the specification. See page 2-14 for more information on this option.

Specification Listing

The specification listing section contains a list of all specifications and their objects available for printing. Specifications available for printing vary based on specification type. The final printed output is an Adobe Acrobat (PDF) file. The print output can include multiple specifications and objects.

The specification listing section includes the following information:

Specification Type

The specifications available for printing are organized by specification type. The active specification is indicated by the text "Current Specification."

Sections

The printed output includes everything you have selected in the Sections column. Those objects vary by specification type but could include:

Specification—Indicated by the specification number and name

Supporting Documents—Indicated by the type or name of the document (does not include supporting documents/attachments that are marked as proprietary)

Custom Sections—Indicated by the name of the custom section (does not include breakdowns that are marked with the suppress printing tag)

Testing Protocols—Indicated by the name of the testing protocol

% Breakdown—Indicated by the % breakdown name (does not include % breakdowns that are marked with the suppress printing tag)

Sourcing Approval—Indicated by Sourcing Number - sourcing facility/receiving facilities. Includes any sourcing approvals attached to the specification.

Nutrient Composition—Includes the nutrient composition supporting document information

For formulation specifications:

Include the Expanded Bill of Materials—Includes a listing of all ingredients used in lower level formulations

Include Formulation Steps—Includes a summary view of each formulation step

Include Ingredient Summary—Includes a printout containing a summary view of every ingredient used in the formulation specification

Attachments

You can print attachments individually outside of the printed output. These attachments are listed in the Attachments column and are indicated by the attachment file name. The printed output can include images in JPG or GIF format. To include JPG or GIF images in the output, check the **Supporting Documentation** check box in the same row as the image files that you would like to include.

Figure 2-27: Ingredient specification print example

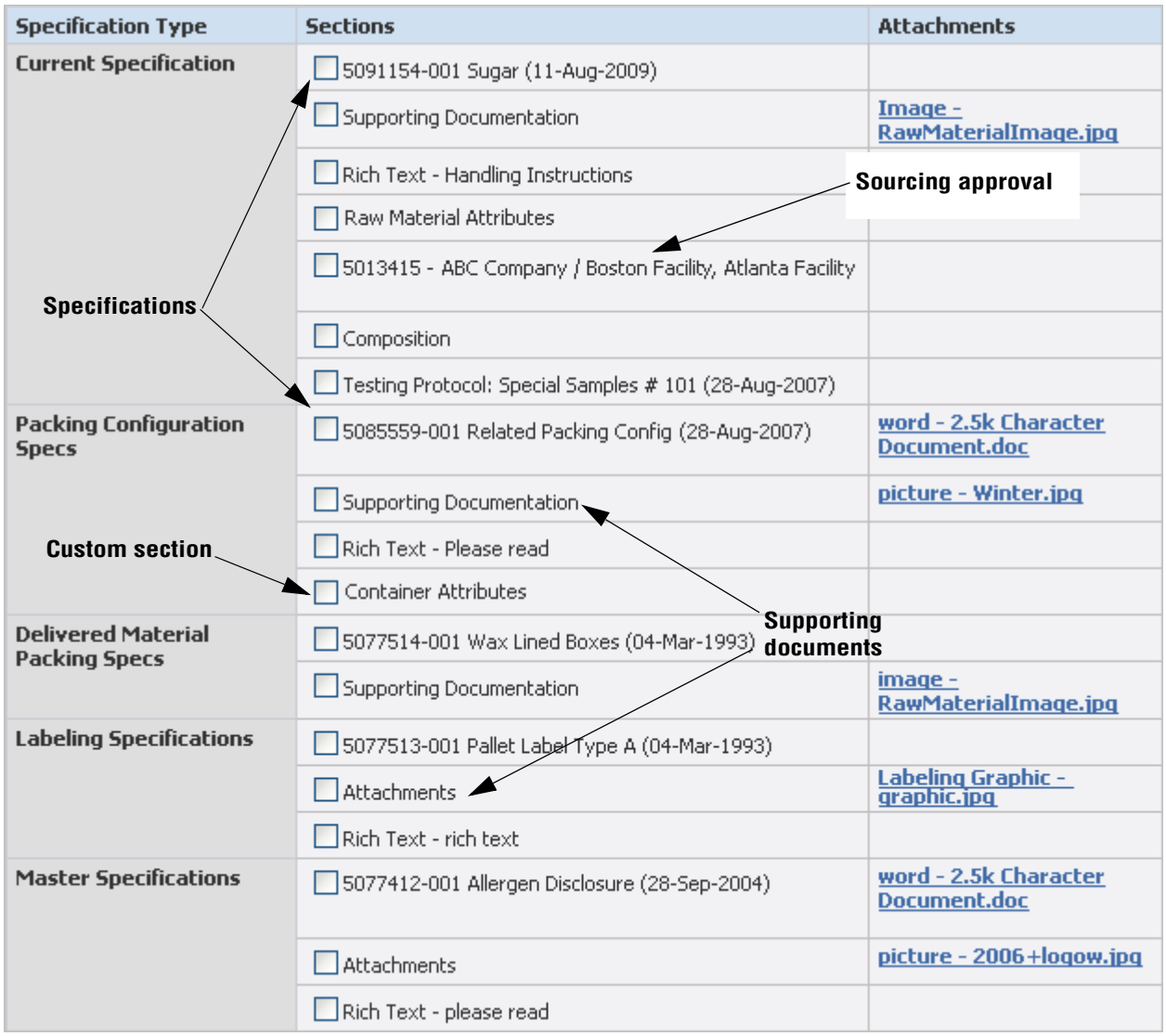


Figure 2-28: Formulation specification print example

Specification Type	Sections	Attachments
Current Specification	5091145-001 Orange Juice (10-Aug-2009)	
	Include the Expanded Bill of Materials	
	Include Formulation Steps	
	Include Ingredient Summary	
	Supporting Documentation	Liquid Example
	Rich Text - Additional Formulation Notes	
	Formulation Custom Section	
	Testing Protocol: Juice Sensory Test (10-Aug-2009)	
Outputs	5091146-001 Orange Juice (10-Aug-2009)	
Master Specifications	5077412-001 Allergen Disclosure (28-Sep-2004)	

Optional Objects to Print Through the Print Dialog Box

For each specification type, there are objects that can be printed using the Print dialog box.

Note "Attachments" listed below refer to files and rich text only.

Trade

1. Current Specification
   a. Attachments [Respect OLS]
2. Entire Trade Hierarchy [Does not respect WFA or BU Security]
   a. This is available through title specification drop-down list. When a trade specification is selected the related objects listing changes based on the active trade specification. This is not secured, the user can print any trade specification here regardless of read permissions
      - Attachments per Trade Spec [Respects OLS]
3. Related Objects [All objects listed respect WFA and BU Security, %Breakdown Classification and OLS]
   a. Packaging Material
      - Attachments (Files and Rich Text)
   b. Printed Packaging Material
      - Attachments (Files and Rich Text)
   c. Testing Protocols
   d. Master
      - Attachments (Files and Rich Text)
   e. % Breakdown (co-pack trades only)
   f. Nutrient Profiles
      - Attachments (Files and Rich Text)

Formula

1. Current Specification
   a. Expanded Bill of Materials [Respect WFA and BU Security]
   b. Step Details
   c. Ingredient Summary [Respect WFA and BU Security]
   d. Attachments [Respect OLS]
   e. Custom Sections [Respect OLS]
   f. Testing Protocols
2. Related Objects [All objects listed respect WFA and BU Security]
   a. Output Materials
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]
      - Nutrient Composition
   b. Master
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]

Menu Item

1. Current Specification
   a. Attachments [Respect OLS]
   b. Custom Sections [Respect OLS]
   c. Testing Protocols
2. Related Objects [All objects listed respect WFA and BU Security]
   a. Nutrient Profile
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]
   b. Master
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]

Nutrient Profile

1. Current Specification
   a. Attachments [Respect OLS]
   b. Custom Sections [Respect OLS]

Product

1. Current Specification
   a. Attachments [Respect OLS]
   b. Custom Sections [Respect OLS]
   c. Testing Protocols
   d. %Breakdowns [Respect Formulation Security]
   e. Sourcing Approvals [Respect OLS and SCRM BU Security]
   f. Nutrient Composition
2. Related Objects [All objects listed respect WFA and BU Security]
   a. Packing Configuration
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]
   b. Master
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]

Ingredient

1. Current Specification
   a. Attachments [Respect OLS]
   b. Custom Sections [Respect OLS]
   c. Testing Protocols
   d. %Breakdowns [Respect Formulation Security]
   e. Sourcing Approvals [Respect OLS and SCRM BU Security]
   f. Nutrient Composition
2. Related Objects [All objects listed respect WFA and BU Security]
   a. Packing Configuration
      - Attachments [Respect OLS]
      - Custom Sections [Respect OLS]

b Delivered Material Packing Specs linked to the Packing Configuration
- Attachments [Respect OLS]

c Labeling Specs linked to the Delivered Material Packing Specifications
- Attachments [Respect OLS]

d Master
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

Packaging Material

1 Current Specification
a Attachments [Respect OLS]
b Custom Sections [Respect OLS]
c Testing Protocols
d Sourcing Approvals [Respect OLS and SCRM BU Security]

2 Related Objects [All objects listed respect WFA and BU Security]
a Packing Configuration
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

b Delivered Material Packing Specs linked to the Packing Configuration
- Attachments [Respect OLS]

c Labeling Specs linked to the Delivered Material Packing Specifications
- Attachments [Respect OLS]

d Master
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

Equipment

1 Current Specification
a Attachments [Respect OLS]
b Custom Sections [Respect OLS]
c Sourcing Approvals [Respect OLS and SCRM BU Security]

2 Related Objects [All objects listed respect WFA and BU Security]
a Packaging Material
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

b Master
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

Printed Packaging

1 Current Specification
a Attachments [Respect OLS]
b Custom Sections [Respect OLS]
c Testing Protocols

d Sourcing Approvals [Respect OLS and SCRM BU Security]

2 Related Objects [All objects listed respect WFA and BU Security]

a Packaging Material
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

b Packing Configuration linked to the Packaging Material
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

c Delivered Material Packing Specifications linked to the Packing Configuration
- Attachments [Respect OLS]

d Labeling Specifications linked to the Delivered Material Packing Specifications
- Attachments [Respect OLS]

e Master
- Attachments [Respect OLS]
- Custom Sections [Respect OLS]

Delivered Material

1 Current Specification

a Attachments [Respect OLS]

2 Related Objects [All objects listed respect WFA and BU Security]

a Labeling Specs
- Attachments [Respect OLS]

Packing Configuration

1 Current Specification

a Attachments [Respect OLS]

b Custom Sections [Respect OLS]

2 Related Objects [All objects listed respect WFA and BU Security]

a Delivered Material Packing Specifications
- Attachments [Respect OLS]

b Labeling Specifications linked to the Delivered Material Packing Specifications
- Attachments [Respect OLS]

Labeling

1 Current Specification

a Attachments [Respect OLS]

Master

1 Current Specification

a Attachments [Respect OLS]

b Custom Sections [Respect OLS]

CHAPTER 3

Commonly Used Sections

This chapter describes sections that are used in many or most specification types.
Topics in this chapter include:

- *Summary Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Custom Data*

Overview

Information in Global Specification Management (GSM) is organized into tabs that are in turn organized into sections. Several sections are common to all or most types of specifications.

This chapter describes the most commonly used tabs and the sections within them.

Summary Tab

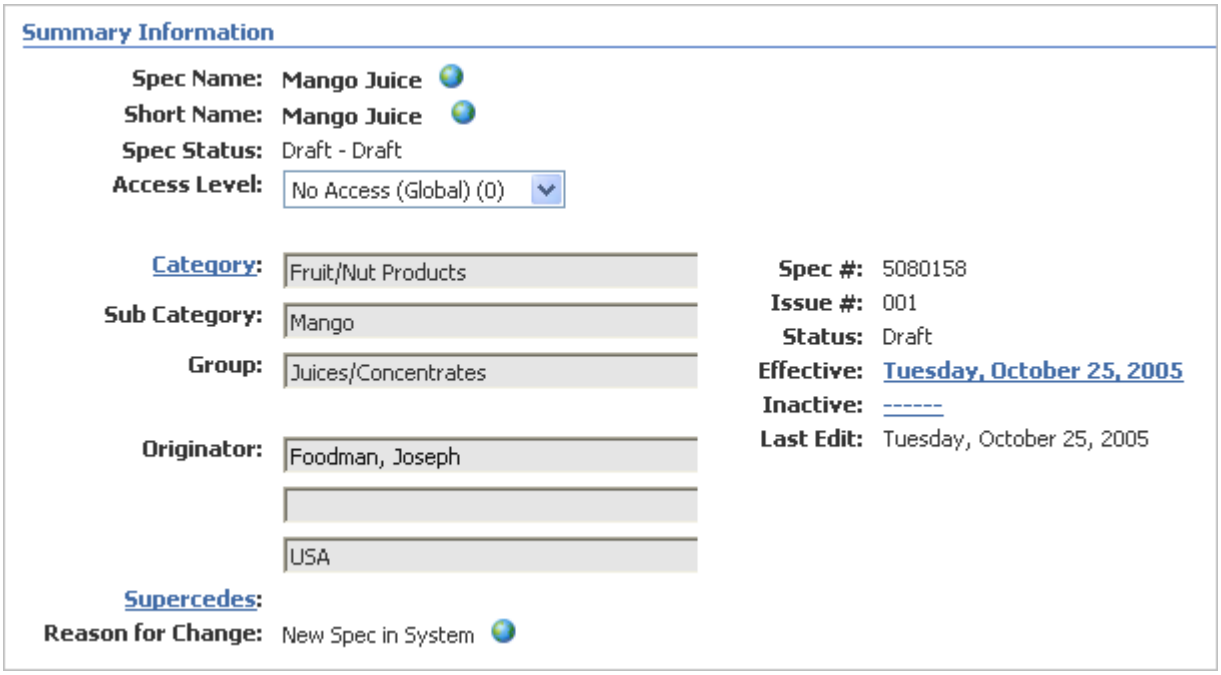
The Summary tab in GSM contains three sections common to several specification types:

- Summary Information
- Cross References
- Available UOM
- UOM Conversions
- Approved for Use In

Summary Information Section

The section contains the primary identifying information for the specification.

Figure 3-1: Summary Information section



The table below shows the key fields for the Summary Information section:

Table 3-1: Summary Information key fields

Field Name	Importance	Details
Spec Name	Required	Use it to identify your specification. This data is used throughout the Agile PLM for Process suite when linking/referencing specifications.
Short Name		Short name is a shorter reference to the specification name. Depending on your configuration, Short name may or may not be required or even displayed.
Access Level	System Generated	Represents the access level for secured objects on that specification. Depending on your configuration this field may not be visible. For more information about object level security, see the *Agile Product Lifecycle Management for Process Administrator User Guide.*
Category/Sub Category/Group	Required, Drives behavior	Defaults to the first node in the specification category.

Table 3-1: Summary Information key fields (continued)

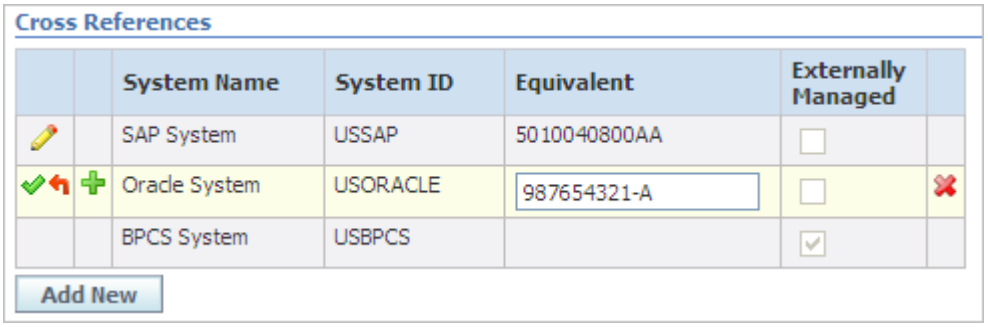
Field Name	Importance	Details
Originator	System Generated	Auto-populated field that denotes the person who created the specification. • Originator Name • Originator Country
Supercedes	Manual Entry or System Generated	Identifies the superceded specification.
Reason for Change	Manual Entry	Shows the reason given for changing the specification.
Spec #	System Generated	Number used to identify specifications.
Issue #		The issue number, generated when an issue is created.
Status		Shows the current workflow status.
Last Edit		Shows the date of the last update.

Note Date fields vary based on specification type.

Cross References Section

The Cross References section contains the list of cross-reference numbers for the specification, as stored in external systems. You can use the equivalent value as a search criteria and it can display in specification search results.

Figure 3-2: Cross References section



Key fields include:

System ID—A code that identifies an external database. Agile PLM for Process obtains this code from the external system.

Equivalent—The equivalent number designed to identify the material as it is referenced by other cross-reference systems.

Externally Managed—An indication of whether this data is managed externally or within Agile PLM for Process. If the data is managed externally, you cannot modify the equivalent number from within Agile PLM for Process. (Notice that there is no edit icon ( ) for the externally managed system shown above.)

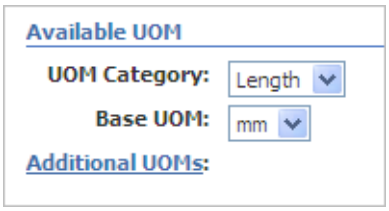
If the cross-referenced database is managed from within Agile PLM for Process, you can modify the equivalent value in the Equivalent field in this table.

Note Only an Agile administrator can turn the Externally Managed flag on or off. For more information on this feature, please see the *Agile Product Lifecycle Management for Process Administrator User Guide*.

Available UOM

The Available UOM section contains the valid UOM's for the specification. The user has the ability to define the base UOM, additional UOMs and define conversions to the base UOM. UOMs are defined using the Data Administration application. Only active UOMs can be used in this section.

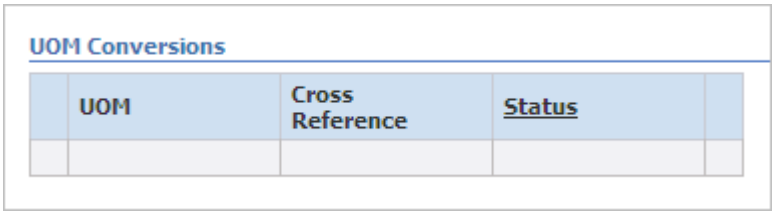
Figure 3-3: Available UOM section



UOM Conversions

The UOM Conversions section is used to define conversions from other UOMs back to the base.

Figure 3-4: UOM Conversions section



For example, if the base UOM is LB, the Additional UOMs section will allow the user to define additional UOMs to be used for the specification.

Once the UOMs from the base category have been defined, the user can enter other UOMs and relate them back to the base. The UOMs in the left column are filtered so the user does not see any UOM from the same category as the base UOM, except for UOMs from the category of “OTHER”. UOMs from the “OTHER” category should always be available in the left column. Additionally, once a UOM from a category has been added, no other UOMs from that category should be available. This will prevent users from specifying that 1IN = 1LB and 1FT=1LB.

The Available UOM control will not allow a user to define the density of a material. The density data is already described on the specification so the list will be filtered to prevent that from occurring.

The Available UOM control will also disallow conversions for UOMs in the following categories:

- Concentration (ratio, %, Brix)
- Temperature (F, C)
- Time (ms, s, min, hr, days, wks, mos, yrs)

The available UOM selector respects the status assigned to each UOM described in Data Administration (ADMN). Only Active UOMs are available for selection.

The user will also have the ability to select a cross reference system and equivalence combination to a UOM conversion to assist with the tie back to the ERP system. The Cross Reference column will be a concatenation of the available cross reference systems and equivalence data that is present on the specification.

The user can add a status to the UOM conversions and can therefore inactivate specific conversions. When a conversion is marked as inactive, the BOM consumption should not show the UOM.

Once the available UOMs have been added to the specification and the specification has been saved, the available UOM data cannot be edited by the user. Up until the point the specification is saved, the user can edit or delete available UOM data. Users can add new UOM conversions any time they have edit access to the specification.

Approved for Use In Section

The Approved for Use In section contains a list of business units that the specification is approved for use in. Business Units is a required field. Business Unit is used in relation to search visibility. The Business Unit field can also be used as the deciding factor in workflow resolution.

This section is configurable. One configuration is Concepts and Business Unit; the other is Business Units and Countries, as shown in the figures below.

Figure 3-5: Approved for Use In section with Concepts and Business Units fields

Figure 3-6: Approved for Use In section with Business Units and countries fields

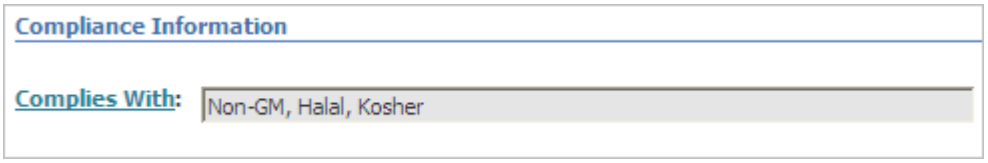
Compliance Tab

The Compliance tab contains the compliance, additive, allergen, and intolerance data related to a specification. Depending on your system configuration, some of these sections may not be visible.

Compliance Information Section

Adding Compliance Items

Figure 3-7: Compliance Information section



To add items:

1. Click the **Complies With** link to open the Compliance dialog box. Select the compliance items to add on the left, holding down the **Ctrl** key to select multiple compliance items.
2. Click the add selected data icon ( ) to move your selections to the right.
3. When you have made all of your selections, click **Done.** The page reloads and the Complies With field displays your choices.

Removing Compliance Items

To remove one or more compliance items:

1. Click the **Complies With** link to open the Compliance dialog box.
2. Select the compliance items to remove on the right, holding down the **Ctrl** key to select multiple compliance items.

3 Click the remove selected data icon ( ) to remove the selected items from the selection box.
4 Click **Done** to commit your changes. The page reloads and the Complies With field reflects your changes.

Some specifications contain an rollup icon ( ) to the right of the Complies With field. This icon opens the compliance roll up dialog box.

Note For the specification to be marked as "compliant" based on the roll up, compliance items marked as "negative" only have to be declared on one item; those not marked as negative must be declared on all formula items.

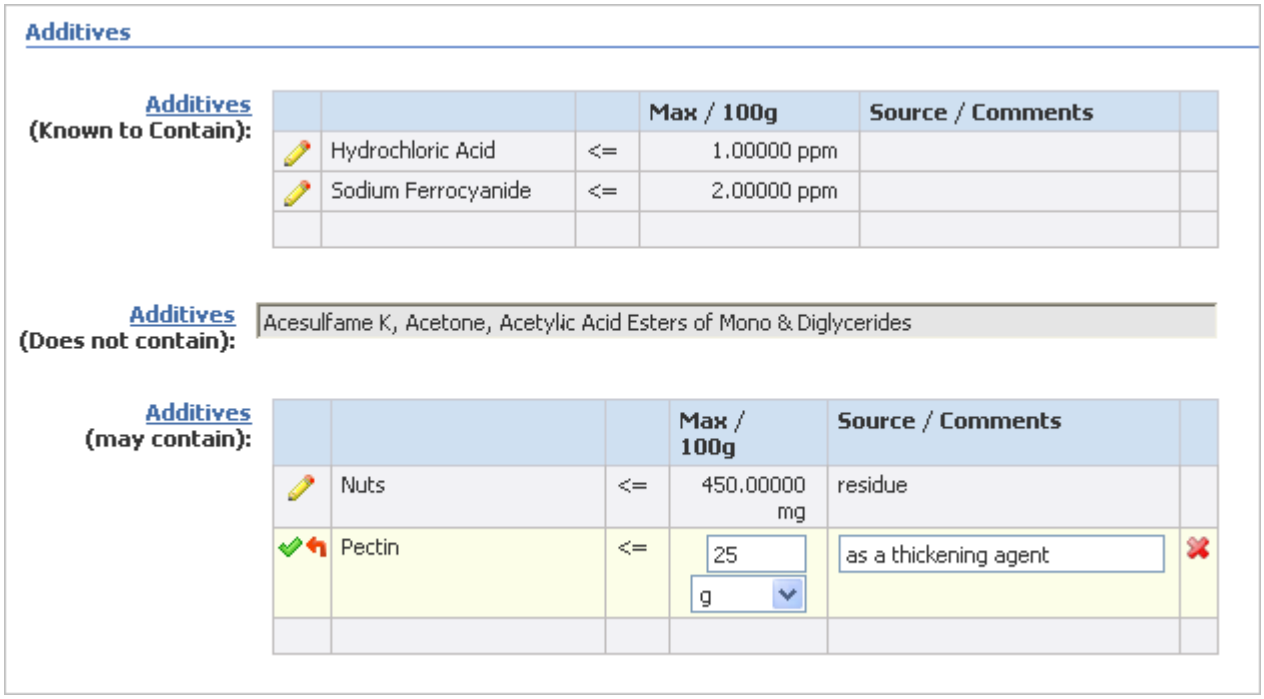
Compliance roll up for "does not contain" is supported for trade specifications, but is not supported for menu item specifications.

Additives, Allergens, and Intolerances Sections

Note The Additives, Allergens, and Intolerances sections all follow the same procedures. This section demonstrates the use of additives, but the same behavior can be used for allergens or intolerances.

The Additives section contains the additive data linked to a specification, and can be broken out by "known to contain," "does not contain," and "may contain."

Figure 3-8: Additives section



Adding Additives

To add items:

1. Click the **Additives** link to open the Additives dialog box.
2. Select the additives to add on the left.
3. Click the add selected data icon ( ) to move your selections to the right.
4. When you have made all of your selections, click **Done**.
5. The page reloads, and the Additives table displays the additives that you selected.

To add/edit the Max/100g and Source/Comments values:

1. Click the edit row icon ( ) to the left of the row to edit.
2. Once done editing, click the apply changes icon ( ) to apply your changes or click the undo icon ( ) to cancel your changes.

> **Note** Max/100g values and Source/Comment values are only available for Known to Contain and May Contain fields.

Removing Additives

To remove a single additive, click the delete icon ( ) when the row is open for edit.

> **Note** As described above, removing values is only available for Known to Contain and May Contain fields.

To remove one or more additives:

1. Click the **Additives** link to open the Additives dialog box.
2. Select the additives to remove on the right.
3. Click the remove selected data icon ( ) to remove them from the selection box.
4. Click **Done** to commit your changes.

Related Specs Tab

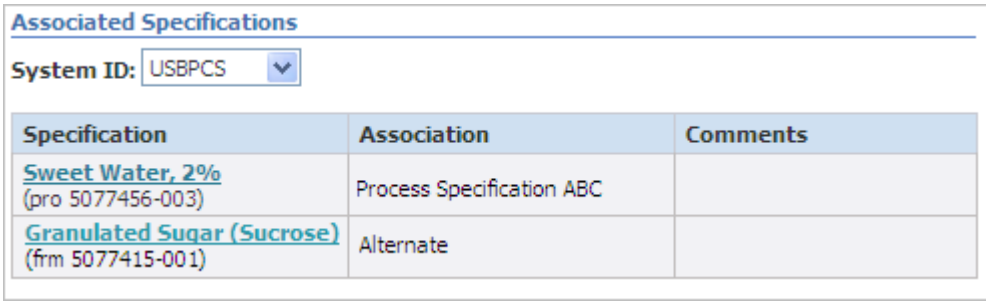
Associated Specifications Section

In this section you can relate the current specification to one or more specifications in the system. The Associated Specifications section provides a context for that relationship. You can define pairs of contexts (such as "source/by-product" or "primary/alternate") and can apply these contexts to both sides of an association. These relationships will depend on your system configuration.

For example, "Formulation Specification ABC" could be associated to one or more formulation specifications as alternates. These formulations would be declared and visible as "alternates of Formulation Specification ABC." On the individual formulation specifications, "Formulation Specification ABC" would be automatically displayed as a "Primary."

System ID is a code that identifies an external system. Select a system ID to display the cross reference of the specification listed in the specification column. The equivalent number will appear before the specification number.

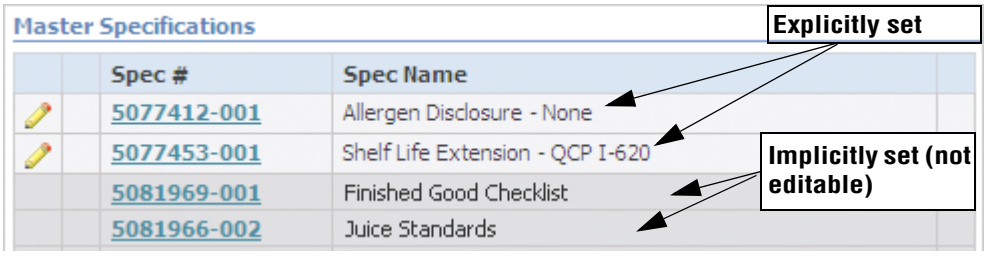
Figure 3-9: Associated Specifications section



Master Specifications Section

In this section you can explicitly connect the specification to one or more master specifications.

Figure 3-10: Master Specifications section



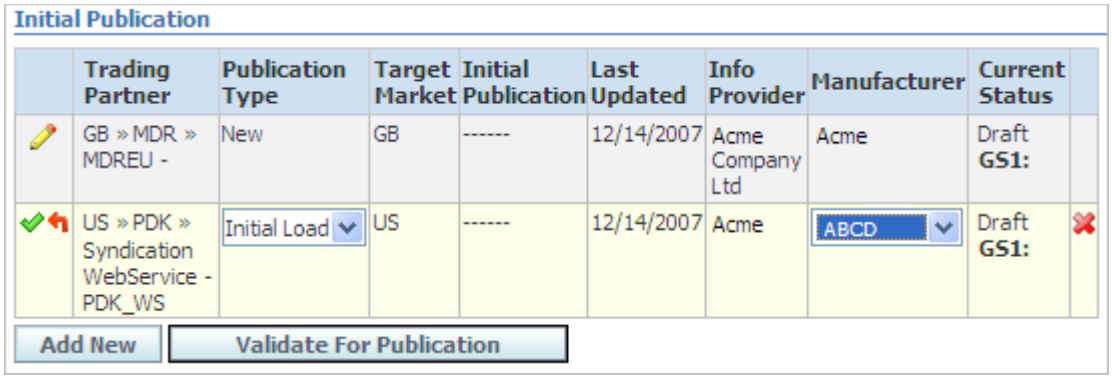
Note Specifications can have both explicit associations with master specifications (defined by the relationship here) and implicit associations with master specifications (by which the relationship is defined on the master specification). See *Chapter 17, Master Specifications* for more information.

CSS Tab

The sole section in the CSS (content synchronization and syndication) tab, Initial Publication, contains the list of publications related to the specification.

You can create initial publications only from within GSM. Using the CSS application, you can syndicate these publications to an internal or external target system. Once created, these publications can be managed on the CSS tab of the specification or they can be managed inside the CSS application. As shown in the figure below, this section contains additional data about each publication.

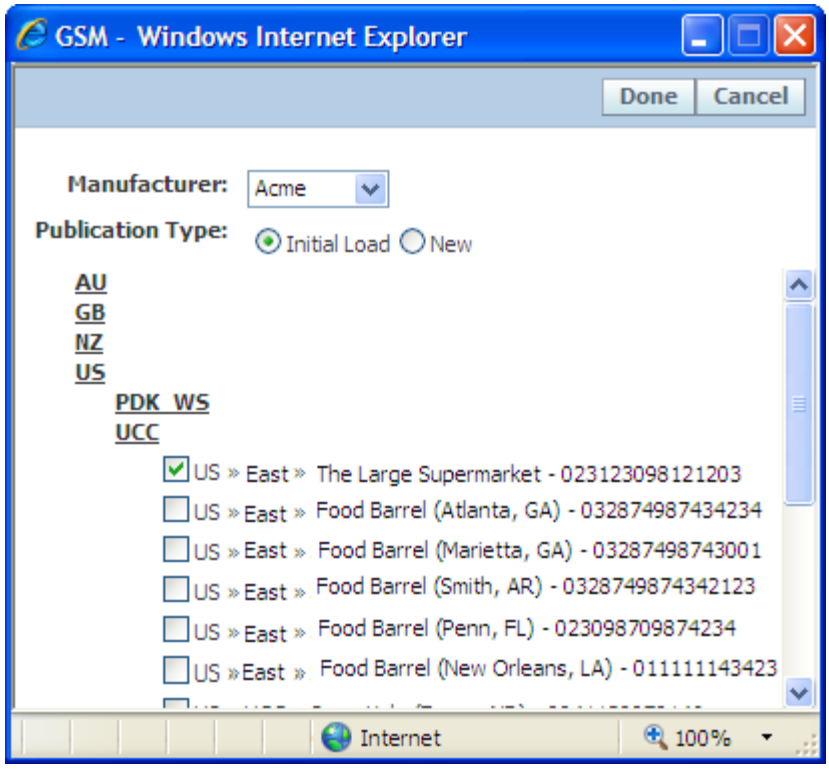
Figure 3-11: Initial Publication section



To add an initial publication:

1 Click **Add New** under the Initial Publication table. The publications requirements dialog box displays, as shown below.

Figure 3-12: CSS Publications Requirements dialog box



2 Specify the following required data:

- **Manufacturer**—Defines the source of the data being syndicated. For Global Data Synchronization Network (GDSN) compliant target systems, this is the Global Locator Number or GLN of the information provider.
- **Publication Type**—Used for GDSN compliant target systems. Typically this is used to tell retailers if it is the first time they have received this product information or if they already have it and should update their information.
- **Target Market**—Defines the destination for the syndicated data. Publications are organized by target market. Target market is a GDSN term used to indicate the country where the trade item is available for sale. For example, the US and Canada are two different target markets.

Note This information resides on the Summary tab of the saved publication.

3 Click **Save**. The publication appears in the Initial Publication table. The default starting status for publications depends on the configuration of the publication workflow.

Note You cannot view publications with a current status of "Draft." Statuses are controlled and updated automatically by the publication workflow.

For more information, please see the *Agile Product Lifecycle Management for Process Content Synchronization and Syndication User Guide.*

Supporting Documents Tab

The Supporting Documents page includes sections which vary depending on specification type. The following sections are found on most specification types:

- Supporting Documents
- DRL Documents
- Testing Protocols
- Attachments
- % Breakdown

Supporting Documents Section

Overview

The Supporting Documents section enables you to add unique documents to the specification. You can add the following document types:

- Attachments/Procedures
- URL
- Rich Text
- Product Facts Sheet
- Nutrient Composition

Note The Supporting Documents section is unique to each specification type. Not all document types can be found on all specification types.

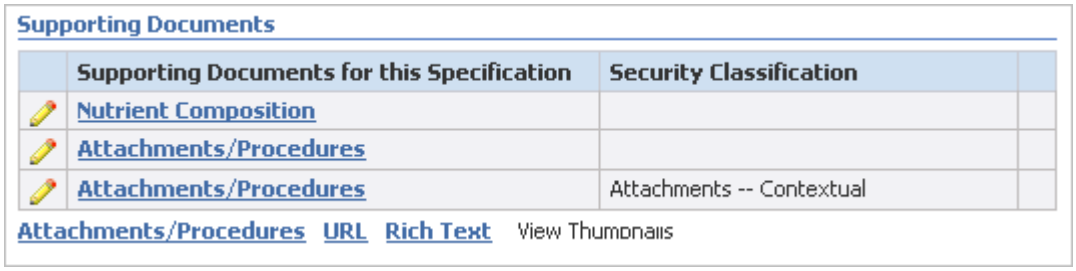
Creating a Supporting Document

The specification needs to be in edit mode before you can add a supporting document to it.

To create a supporting document:

1. Click **Edit** at the upper right corner of the page. The page reloads with several hyperlinks displayed below the table in the Supporting Documents section.
2. From the links below the supporting documents table, click the type of document to create.

Figure 3-13: Supporting Documents section (Ingredient Specification example)



Managing Supporting Documents

To view a supporting document, click the hyperlinked document name. You can only edit supporting documents when the specification is in edit mode.

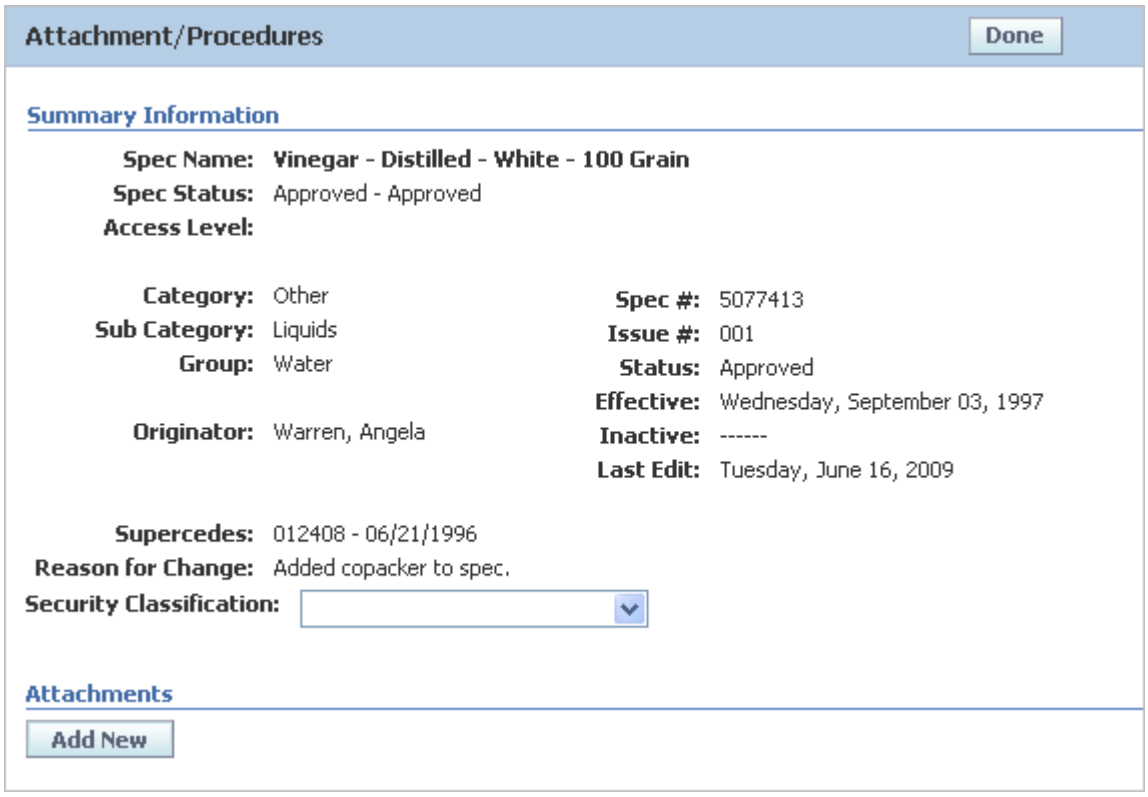
To edit a supporting document:

1. When the specification is in edit mode, click the edit icon ( ) in the row of the document to edit. The page reloads and displays the row in edit mode.
2. Open the document in edit mode by clicking the hyperlinked document name, or click the delete icon ( ) to delete that document from the specification.
3. After making your changes to your document, click the apply changes icon ( ) to apply the changes.
4. Click **Save** at the upper right of the page to save your changes.

Document Types

Attachments/Procedures Document Type

Figure 3-14: Attachment/Procedures window



An attachments/procedures document is a collection of attachments. Each document includes the noneditable summary section, which pulls its content from the parent specification. Use the Security Classification field to assign a security level to the document. This field appears when object level security (OLS) is configured on.

To add an attachment to a document:

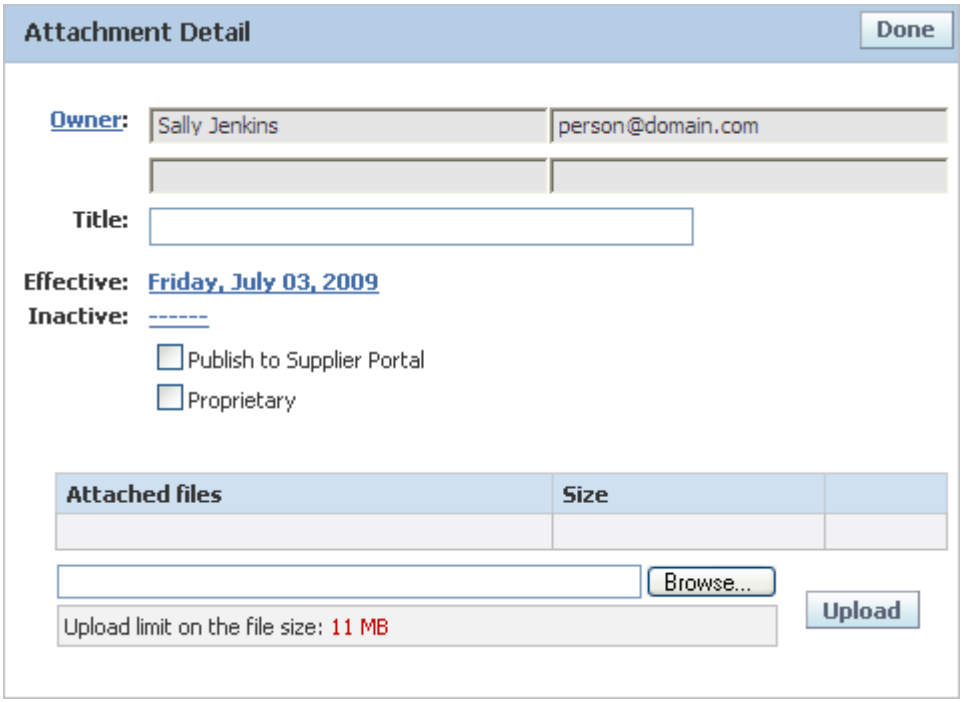
1. Click **Add New** below the attachments table. The Attachment Details dialog box displays, as shown in figure 3-15, on page 3-15.
2. Complete the following fields, as shown in table 3-2 below:

Table 3-2: Attachment Detail fields

Field	Definition
Owner	Owner of the attachment
Title	Title of the attachment
Effective	Effective date of the attachment
Inactive	Inactive date of the attachment
Publish to Supplier Portal	Check this box if you want to publish the attachment on Supplier Portal
Proprietary	Check this box to prevent the attachment from being exposed in Supplier Portal or from being printed

3 Attach the file by clicking **Browse** to search for the file, and then click **Upload**.
4 Click **Done** on the Attachment Details dialog box and then click **Done** on the Attachment/Procedures page.
5 Click **Save**.

Figure 3-15: Attachment Details dialog box



URL

Figure 3-16: URL Detail dialog box

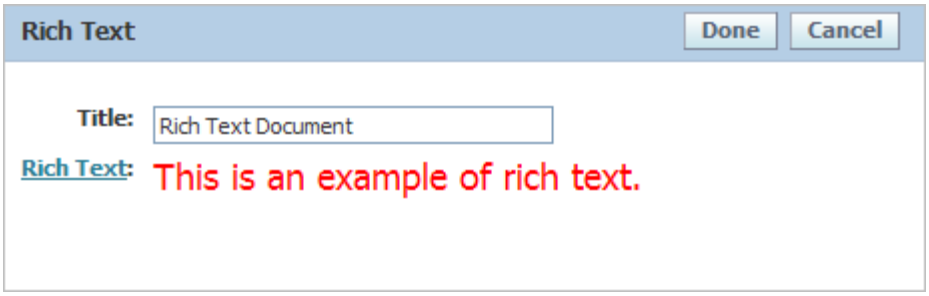
You can store a URL link as a document. Clicking the link launches a URL popup. These URLs will not be available through the print model, eQ, or Supplier Portal. Key fields include:

Title—Name for the web page link

URL—Address for the URL

Rich Text Document Type

Figure 3-17: Rich Text dialog box

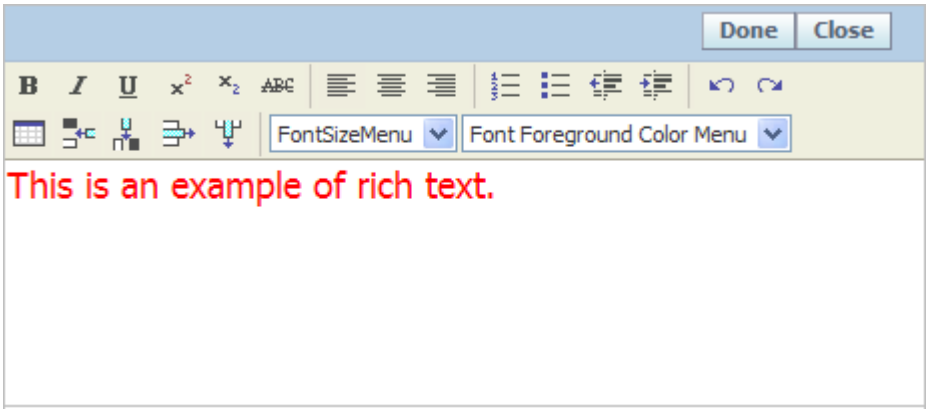


The rich text document type is a way to create a formatted attachment to the specification that can be printed in line with the printed specification. The rich text document includes a title and an enriched textual entry.

To add rich text:

1 Click the **Rich Text** label link. The rich text dialog box opens.

Figure 3-18: Rich text label link dialog box



Using the rich text dialog box, you can apply simple formatting (boldface, font color, font size, bullets, numbering, and so on.).

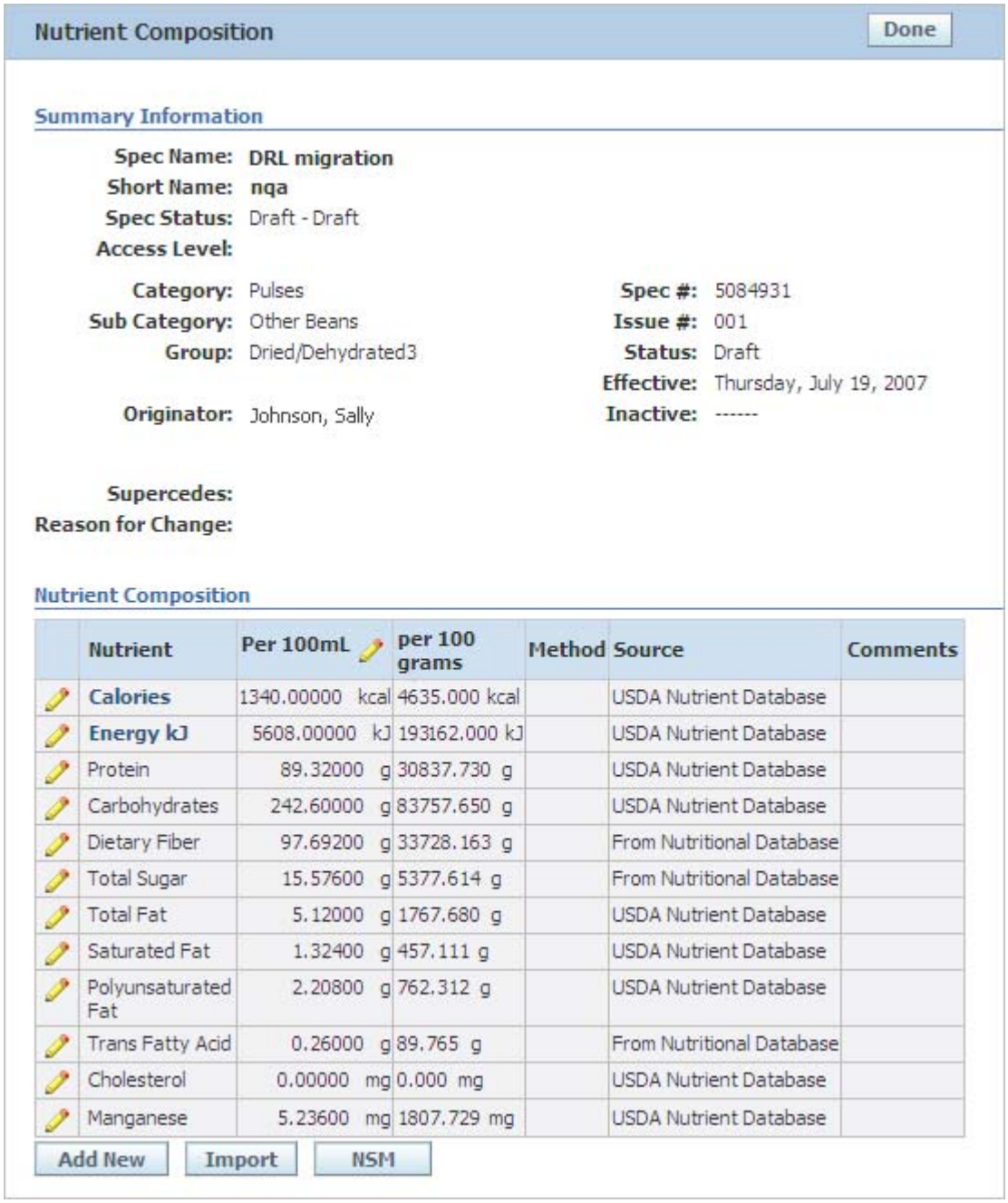
Product Fact Sheets

Note Product Fact sheets are a configurable feature, and by default are configured off. For more information, refer to the *Agile Product Lifecycle Management for Process Configuration Guide*.

Nutrient Composition

Select Nutrient Composition as a supporting document to create a new a nutrient composition document and enter the composition data for that specification, as shown in figure 3-19, *Nutrient Composition page,* on page 3-17. A specification can have only one nutrient composition.

Figure 3-19: Nutrient Composition page



Key fields include:

Per 100g—Values per nutrient

Method—Select the method for determining this value; methods are configured per nutrient item

Source—Administered list of sources that declare where this information came from. This will be automatically populated if the value was set from some other source in the Agile PLM for Process solution.

Click **Import** to select and import nutrient values from nutrient profiles, ingredient specifications, or from Food Composition Library (FCL) items if your environment has them available.

Note The Food Composition Library will need to be configured as a part of your implementation.

Click **NSM** to select and import nutrient values from nutrient analyses or nutrient composites in the Nutrient Surveillance Management (NSM) application.

View Thumbnails

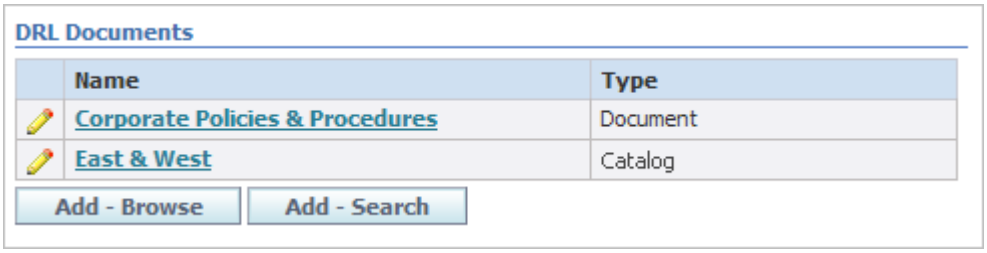
In some specifications, you can view attached images in a thumbnail view (for supported file formats). Click the **View Thumbnails** link to open a dialog box showing all supported image types in thumbnail format.

DRL Documents Section

In the DRL Documents section you can link the specification to existing DRL (Document Reference Library) catalog and document references. All referenced catalogs and documents are read only. DRL catalogs and documents are created and managed using the DRL application. For more information about the DRL application, see the *Agile Product Lifecycle Managment for Process Document Reference Library User Guide*.

A DRL catalog is a collection of DRL documents and child catalogs. The DRL table consists of two columns: Name and Type. Name displays the DRL document or catalog name. The type column identifies the linked DRL item as either document or a catalog, as shown in figure 3-20 below.

Figure 3-20: DRL Documents section



Viewing DRL Catalogs and Documents

You can view a DRL document or catalog by clicking on the linked name.

Viewing a Catalog Reference

A catalog opens the DRL catalog viewer dialog box. In this view you can expand the catalog to view its contents. Select a document name to open the DRL document viewer.

Figure 3-21: DRL catalog viewer

Viewing a Document Reference

Documents open the DRL document viewer dialog box. A DRL document contains the following sections:

- Description
- Version/Revision
- Attachments

Figure 3-22: DRL document viewer

Description Section

This section contains the overall identifying information of the DRL document. It includes the document title, description, and status. It also lists which catalogs, business units, and classifications the document is assigned to.

Version/Revision Section

Use this information to track versions and revisions for the document. This section includes:

- Document ID
- Document dates
- Whether or not the document is publishable to the Supplier Portal
- Originator of the document
- Reason for any revision (if revised)

Attachments Section

This table lists all of the attachments added to the document. It includes attachment title, file name, and file size. You can view an attachment by clicking its file name.

Adding DRL Catalog and Document References

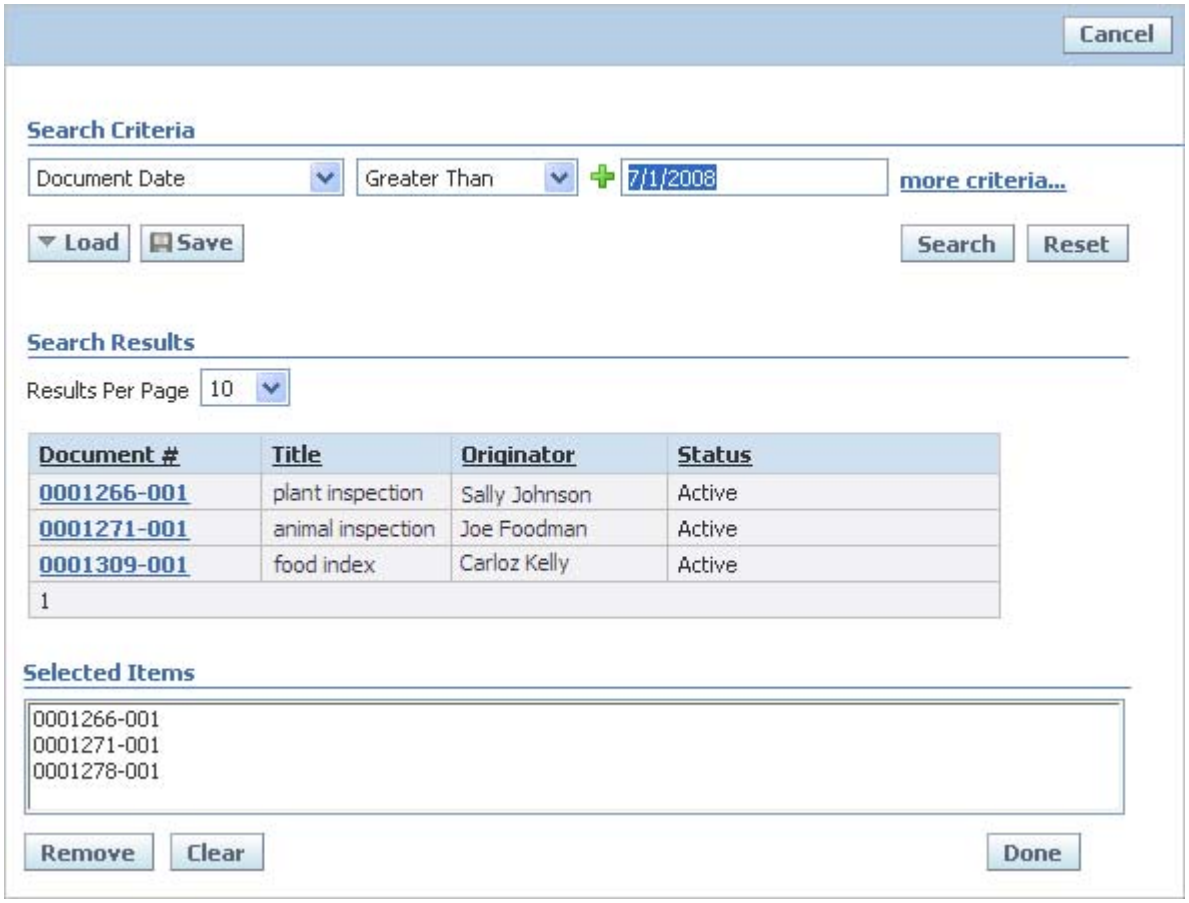
In order to add a DRL catalog or document, you need to place the specification in edit mode. You can add DRL catalogs and/or documents to the DRL section in two ways:

Browsing—Click **Add - Browse**. The DRL browse dialog box displays. You can link an entire catalog of documents or a specific individual document. Each linked node is a catalog. Click the link to expand the catalog and view its contents. A catalog can hold other catalogs and individual documents.

Figure 3-23: DRL browse dialog box

Searching—Click **Add - Search**. The DRL search dialog box opens. You can search for documents using the provided criteria. Refer to the *Agile Product Lifecycle Management for Process Getting Started Guide* for more information about searching.

Figure 3-24: DRL search form



Testing Protocols Section

In the Testing Protocols section you can link testing protocols to the specification. For a more detailed discussion of testing protocols, please see Chapter 19, *Testing Protocol Library*.

The specification needs to be in edit mode before you can add a testing protocol. You can add testing protocols to the section in two ways:

Add a new protocol—Click **Add New**. The testing protocol dialog box displays, allowing you to create a new testing protocol. This testing protocol will be specific to this specification.

Add an existing protocol—Click **Pull from Library**. The testing protocol search dialog box displays. You can search for testing protocols using the provided criteria. Refer to the *Agile Product Lifecycle Management for Process Getting Started Guide* for more information about searching.

Note Protocols from the testing protocol library are managed centrally. Changes made in the testing protocol library will be reflected on any specification which consumes that testing protocol.

Select protocols from your search results by clicking the protocol number of each testing protocol you would like to reference, thereby adding the protocol to the selection box below it. When you are finished adding protocols, click **Add Spec** to add the testing protocols to the specification.

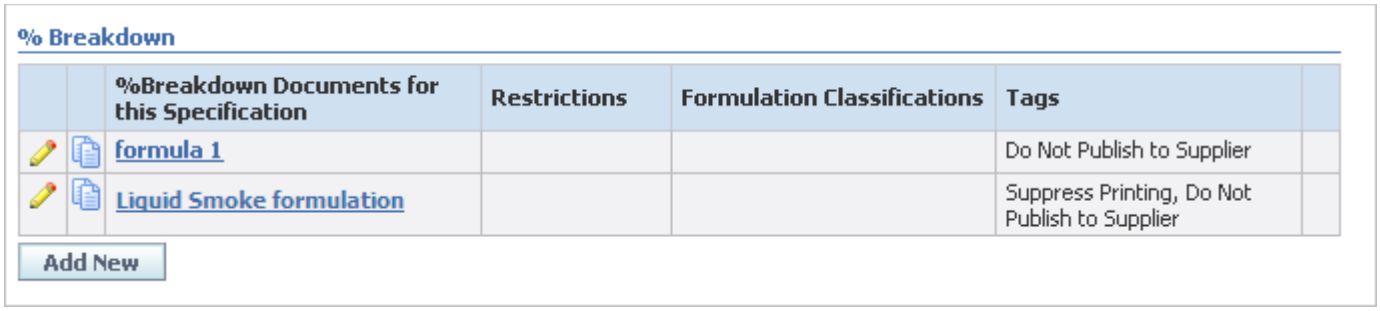
Attachments Section

The attachments section is where you add individual documents to a specification. An attachment is an individual document. For instructions for adding an attachment, see *Attachments/Procedures Document Type* and the procedure under it on page 3-14.

% Breakdown (Formula) Section

The % Breakdown (Formula) section contains any percent breakdown formulas for the specification. You can use these breakdowns to host different versions of the formula breakdown based on supply or regulatory differentiation.

Figure 3-25: % Breakdown section



Key fields include:

Restrictions—This is used to help categorize different versions of the breakdowns for usage in the Listed Ingredient Order (LIO) tool

Formula Classifications—Formula classifications can be used to enforce security for individual specifications. Classifications can be managed in the Admin Tool and are tied to user groups. Only users in the associated groups can view formulas that have a formulation classification.

Note On a trade specification, this section only appears when the item type is "co-pack." When it is available, this section appears on the Supporting Documents tab.

Tags—Breakdowns can be tagged. Tags help identify breakdowns and most tags help define how you want the system to react to the breakdown. Available tags are listed on page 3-23.

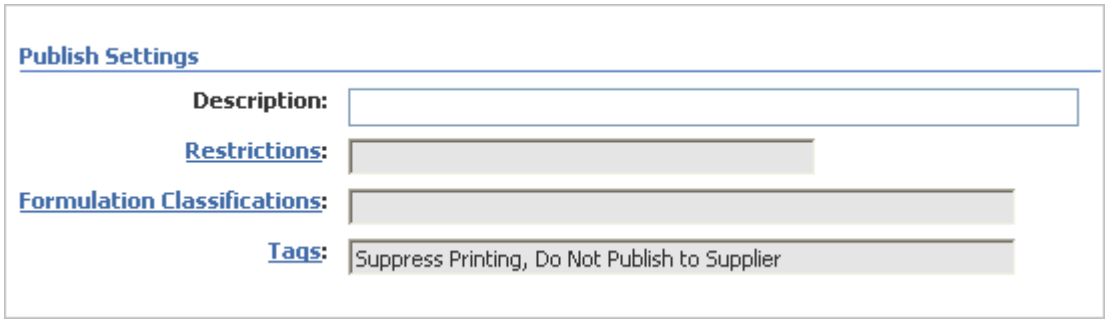
Formula Detail

On the Formula detail page you can capture header information about the breakdown, such as publication, sourcing, and formulation information. This page is where the itemized % breakdown is captured and defined.

Publish Settings Section

In this section you can capture information that helps determine how to use this breakdown elsewhere in the system.

Figure 3-26: Publish Settings section



Key fields include:

Restrictions—A list of configurable tags that you can assign to the disclosure to prevent use in the LIO process. LIO will only use disclosures with the same restriction(s) or no restrictions applied.

Formula Classification—You can use formula classifications to enforce security for individual specifications. Your Agile administrator can manage classifications in the admin tool. Classifications are tied to user groups. Only users in the associated groups can view formulas that have a formulation classification.

Tags:

- Master Formula—Denotes that this formula is considered the master formulation. This tag is for informational purposes only; no system behavior is tied to this tag.
- Regulatory—Designates which breakdown will be used during formulation specification theoretical breakdown creation. Only one breakdown can be marked as regulatory per specification. Breakdowns created by a formulation specification will be automatically tagged as regulatory.

Caution! If the breakdown is on a formula output, this breakdown could be possibly overwritten during formulation. See Chapter 6, *Formulation Specifications* for more info.

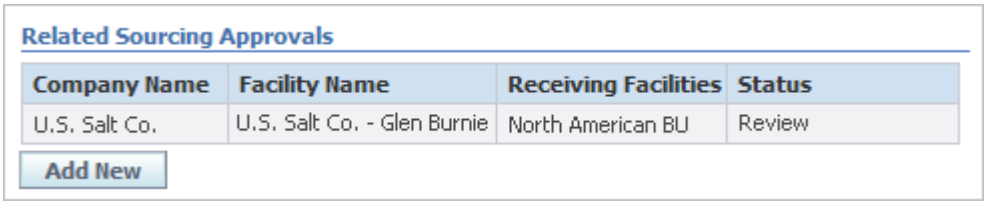
- Do Not Publish to Supplier—Denotes that this breakdown will not appear in Supplier Portal and eQ.
- Suppress Printing—Keeps the breakdown from being included in the specification print out.

Note The Suppress Printing and Do Not Publish to Supplier tags are added by default when a breakdown is initially created.

Related Sourcing Approval Section

In this section you can associate an existing supplier with this formulation. You can select a supplier from any of the current sourcing relationships that are related to the specification. These relationships help determine visibility to the % breakdown in the Supplier Portal.

Figure 3-27: Related Sourcing Approvals section

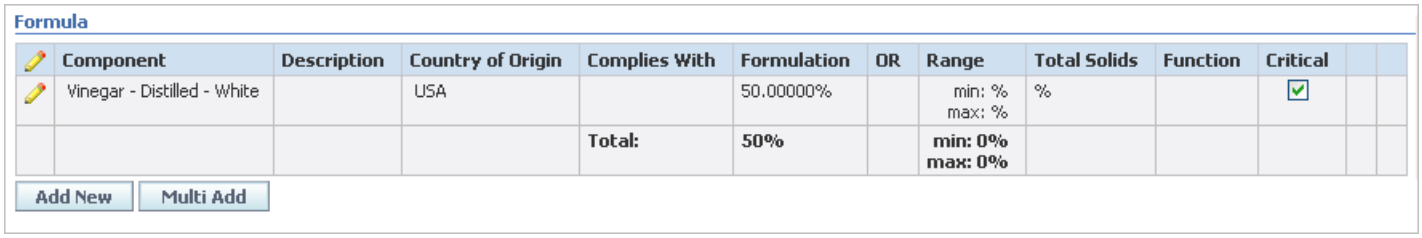


Formula Section

In this section you can declare the breakdown along with associated information such as country of origin. You can add items to the breakdown as free text, from existing ingredient specifications in the system, Food Composition Library, or from the Component Catalog.

Note If your configuration is set to use strict % breakdowns, you can only add Component Catalog terms to the breakdown.

Figure 3-28: Formula section



References Tab

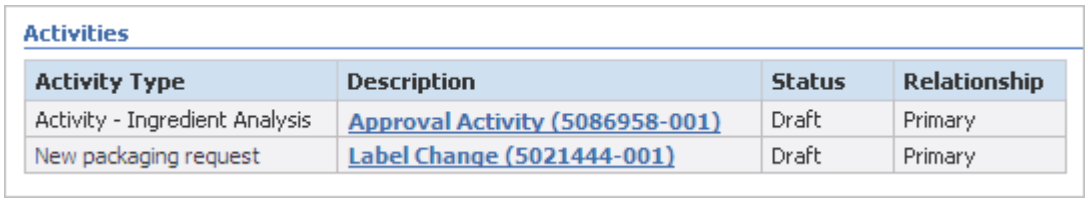
The Reference page contains the list of all reference data linked to a specification. The following sections appear on most specification types:

- Activities
- Suppliers
- Specification Dependencies
- Related Documents

Activities Section

The Activities section displays all GSM activities that contain this specification as the primary object. The description of an activity is the activity's name and number. To view an associated activity, click the description. For more information on GSM activities, refer to Chapter 20, *Activities*.

Figure 3-29: Activities section



Suppliers Section

Supply Chain Relationship Management (SCRM) is the application dedicated to managing supplier information. However, you can manage some supplier-related tasks from within GSM. For detailed information on SCRM, see the *Agile Product Lifecycle Managment for Process Supply Chain Relationship Management User Guide*.

The Suppliers section of the References tab displays a summary of sourcing approval documents that are associated with the specification. If you initiate the creation of a sourcing approval from within GSM, you can add new suppliers.

Note A specification must be assigned to a workflow before it can be associated with a sourcing approval.

To add a new supplier to the specification:

1. With the specification in read mode, click **Add New**. The SCRM facility search dialog box opens.
2. Search for the facility that will supply this specification. Refer to the *Agile Product Lifecycle Management for Process Getting Started Guide* for help with searching.
3. Select a facility. The SCRM application opens, displaying a new specification-related sourcing approval, with prepopulated specification and sourcing facility fields.

Note Sourcing approvals can also be created directly from Supply Chain Relationship Management.

For more information on creating specification-related sourcing approvals, refer to the *Agile Product Lifecycle Managment for Process Supply Chain Relationship Management User Guide*.

You can also import sourcing approvals from an existing specification. This action creates a copy of an existing sourcing approval, linking it to your active specification.

To import a sourcing approval from an existing specification:

1. With the specification in read mode, click **Import**. GSM opens the Import Sourcing Approvals dialog box. If the previous issue of the specification has sourcing approvals, the dialog box will be populated with references to the sourcing approvals from the prior issue.
2. Click **Add Specs**. GSM opens the Specification Search dialog box.
3. Find the specifications that reference the sourcing approvals that you would like to import.
4. Once all of the specifications are selected, click **Add Spec** to apply your selections and close the dialog box. The Import Sourcing Approvals dialog box should now contain any sourcing approvals that existed on the selected specifications.
5. Select the sourcing approvals to add and click **Done**. The system creates new instances of sourcing approvals and populates them with data from the selected sourcing approvals.

The Suppliers section displays important identifying information from the specification. You can click the add data icon (+) to go directly to the sourcing approval. You can click the hyperlinked company or facility name to go directly to the SCRM company or facility profile.

Figure 3-30: Suppliers section

Suppliers

	Company	Facility	Sourcing Type	Receiving Facilities	Sourcing Approval Status	Protocol ID	Supplier Item #	Notes
+	I P T SK Foods	IPT Ware-house	Producer	Angus Facility Auburn Heights Plant Peedmont Facility	Review	A		
+	Bellingham	Akron			Draft			

Add New Import

Specification Dependencies Section

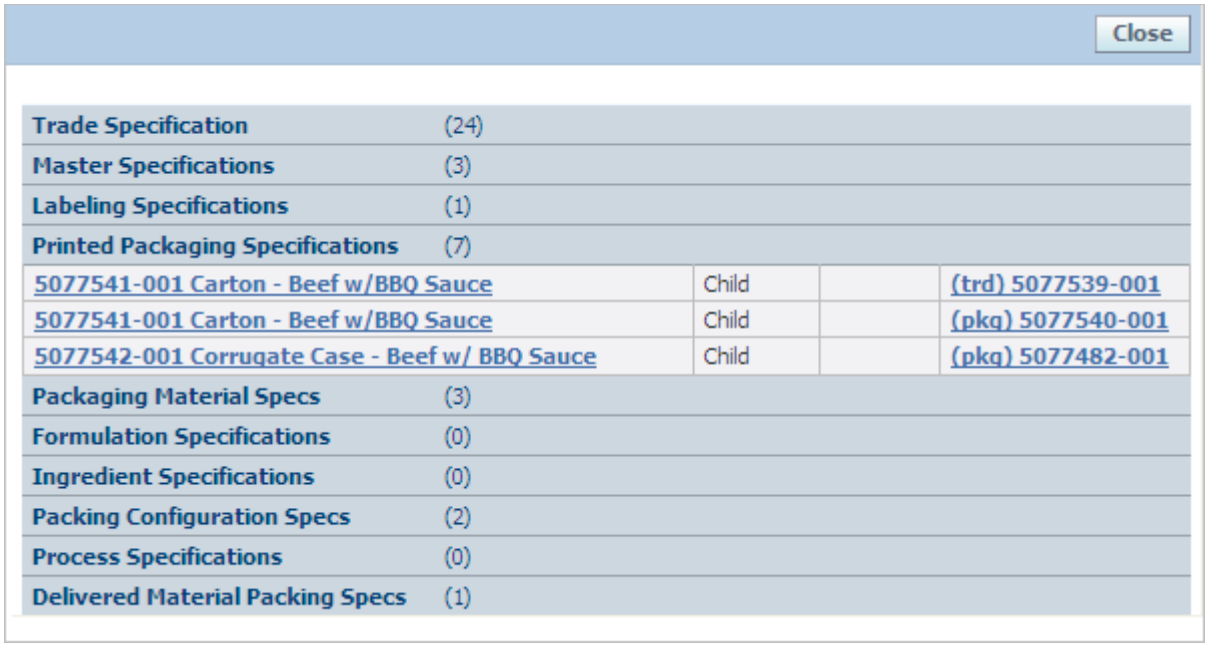
The Specification Dependencies section contains a Where Used link. When clicked, GSM displays a dialog box listing parent and child specifications that are directly or indirectly related on this specification. This information is read only.

The dialog box displays a table that contains the parent or child specification type and the number of specifications of that type that are related with the specification that you are viewing. If you click the specification type hypertext link, the table expands and displays the specification number and name of all the dependent specifications.

Note The specifications listed in the popup are configurable. For more information, please see the *Agile Product Lifecycle Management for Process Configuration Guide*.

You can go directly to a related specification by clicking on the linked specification name.

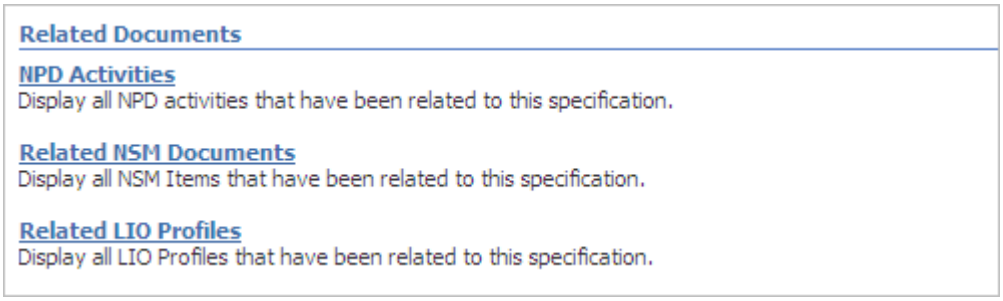
Figure 3-31: Specification Dependencies dialog box, expanded



Related Documents Section

The Related Documents section contains links to a listing of NPD activities, NSM documents, and LIO profiles that are related to a specification. This list contains system-generated information that is read only.

Figure 3-32: Related Documents section



Click the **NPD Activities** link to open the NPD Activities dialog box. The dialog box displays all related NPD activities.

Refer to the *Agile Product Lifecycle Management for Process New Product Development User Guide* for more information.

Click the **Related NSM Documents** link to open the Related NSM Documents dialog box. The dialog box displays two sections: Nutrient Analysis and Nutrient Composite. The Nutrient Analysis section displays a table that contains the analysis number, date of analysis, source facility, and description. The analysis number is a link to the actual analysis associated with the specification. The Nutrient Composition section displays a table with composite number, date of composite, title, and description. The composite number is linked to the actual composite associated with the specification. Refer to the *Agile Product Lifecycle Management for Process Nutrient Surveillance Management User Guide* for more information.

Click the **Related LIO Profiles** link to open the Related LIO Profiles dialog box. The dialog box displays the LIO number, date of creation, LIO name, status, and description for each associated profile. Refer to *Chapter 18, LIO Profiles* for more information.

Custom Data

Select specifications contain custom data. Use custom data to enter customized information, in the form of extended attributes or custom sections.

The extended attributes and custom sections templates are created and maintained by your administrator.

Custom data can consist of:

- Extended Attributes
- Custom Sections

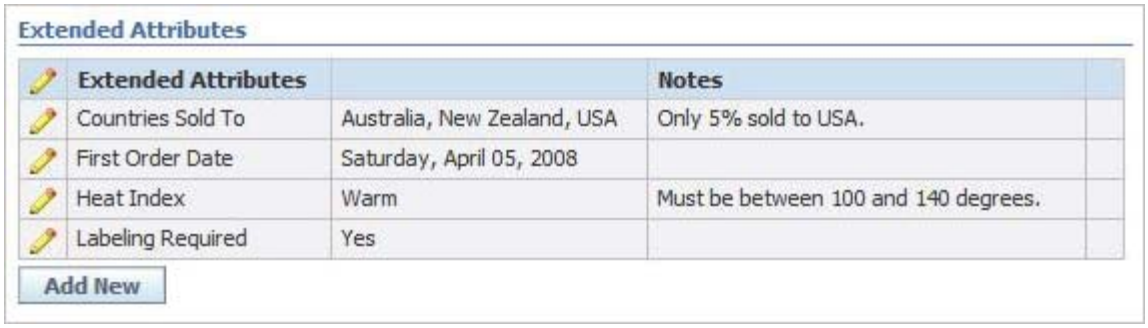
For more information on creating custom data or extended attributes, see the *Agile Product Lifecycle Management for Process Administrator User Guide*.

Important If you remove a custom section or extended attribute, the system deletes the data that you entered. Delete data with caution, because deleted data cannot be restored.

Extended Attributes Section

Extended attributes define important features and characteristics of the specification.You can build these attributes to meet specific needs, as shown in the figure below.

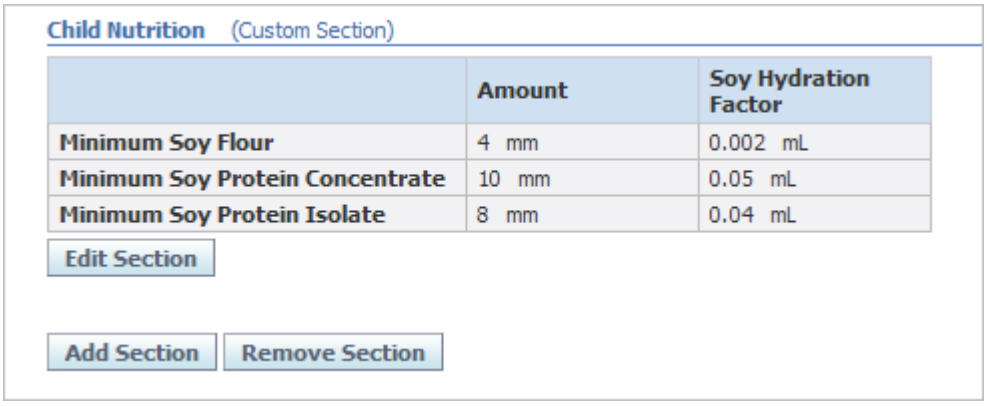
Figure 3-33: Extended Attributes section



Custom Sections

Custom sections are configurable sets of extended attributes. The custom data that you enter is displayed in a table, as shown in the figure below.

Figure 3-34: Custom section



Calculated Attributes

Some extended attributes inside the Extended Attributes table and in custom sections can be calculated. A calculated extended attribute is an attribute that references other specification attributes and performs calculations. When you add a calculated attribute to your specification, GSM calculates it when you click any of the following buttons at the top right of the page:

- **Calculate**
- **Save**
- **Save & Close Document**

GSM can calculate attributes only when the specification is in edit mode. If GSM encounters an error while calculating the attribute, it displays a calculation error icon ( ). In some cases, you can click the error icon to see error details.

Note You can add each distinct attribute to a specification once only. Only distinct attributes inside the Extended Attributes table are pulled into formulation specifications for use in prototyping. Additionally, extended attributes tagged as design attributes will automatically be added to the output.

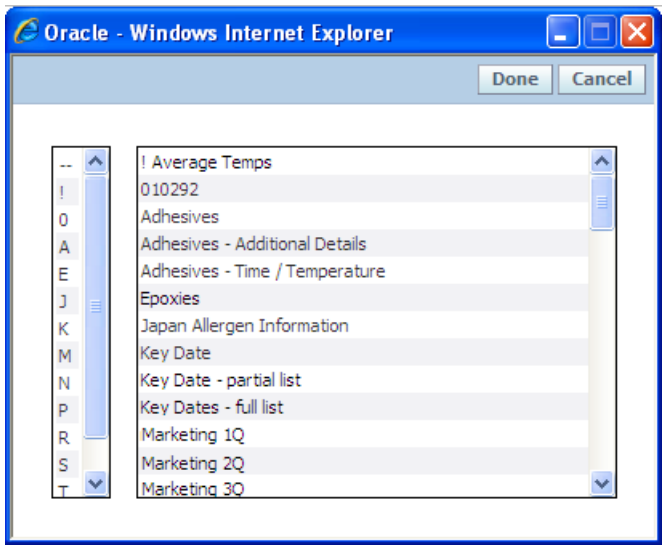
Important If you remove a custom section or extended attribute, the system deletes the data that you entered. Delete data with caution, because it cannot be retrieved.

Adding a Custom Section

To add a custom section:

1 With the page in edit mode, click **Add Section**. GSM displays a dialog box listing available custom sections, as figure 3-35 shows below.

Figure 3-35: Custom section selection dialog box



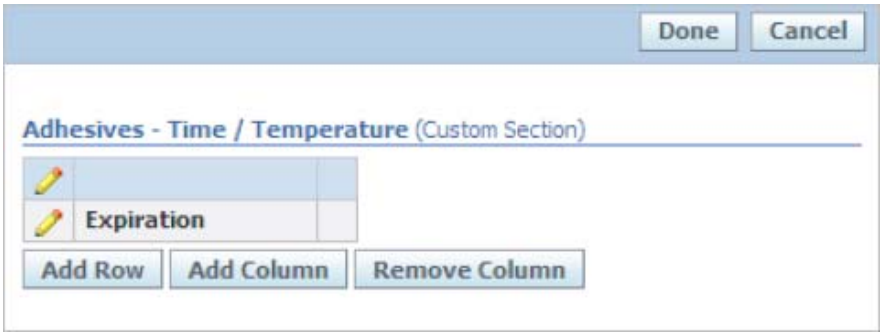
2 Select a section name, and then click **Done**. The custom section is added to the company profile.

Editing a Custom Section

To edit a custom section table, row, or column:

1. To add values to the custom section, click **Edit Section**. A dialog box displays the custom section in edit mode, as figure 3-36 shows below. The edit icon ( ) displays for every editable row and column. It also displays in the upper left corner of the table, indicating you can edit the entire section. Depending on the size of your custom section, editing the entire section may not be available.

Figure 3-36: Custom section in edit mode

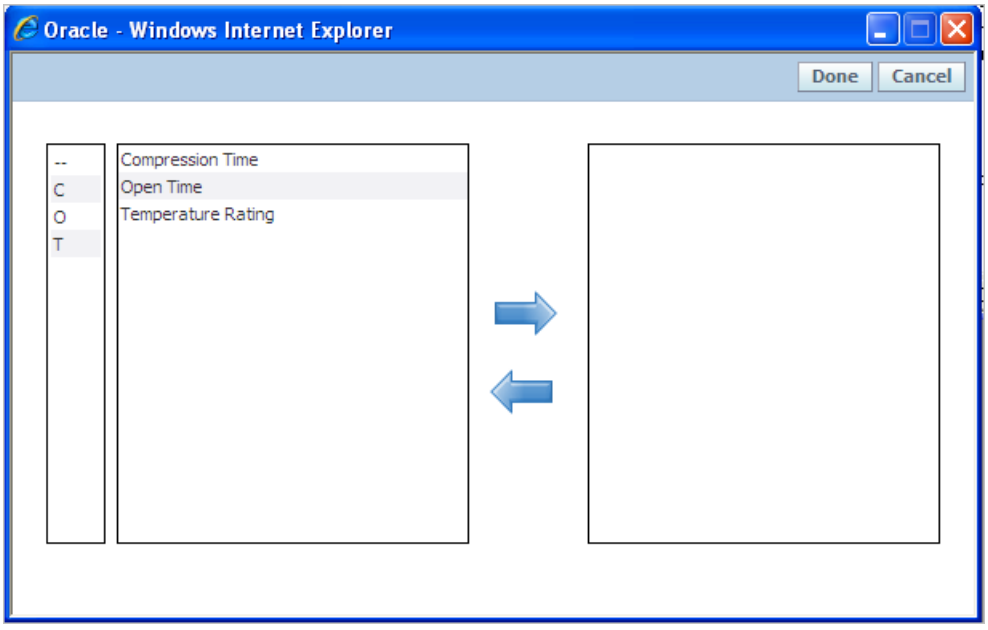


2. Click the edit icon ( ) and make appropriate changes to the table, row, or column.
3. Click the apply changes icon ( ).
4. Click **Done**.
5. Click **Save**.

To add a row:

1. With the custom section in edit mode, click **Add Row**. GSM displays a dialog box listing rows that can be added, as figure 3-37 shows below:

Figure 3-37: Available rows dialog box



2 Select a row, and then click the add selected data icon ( ).
3 Repeat step 2 to add additional rows.
4 Click **Done**. GSM closes the dialog box. The added rows display in the table.
5 Click **Save**.

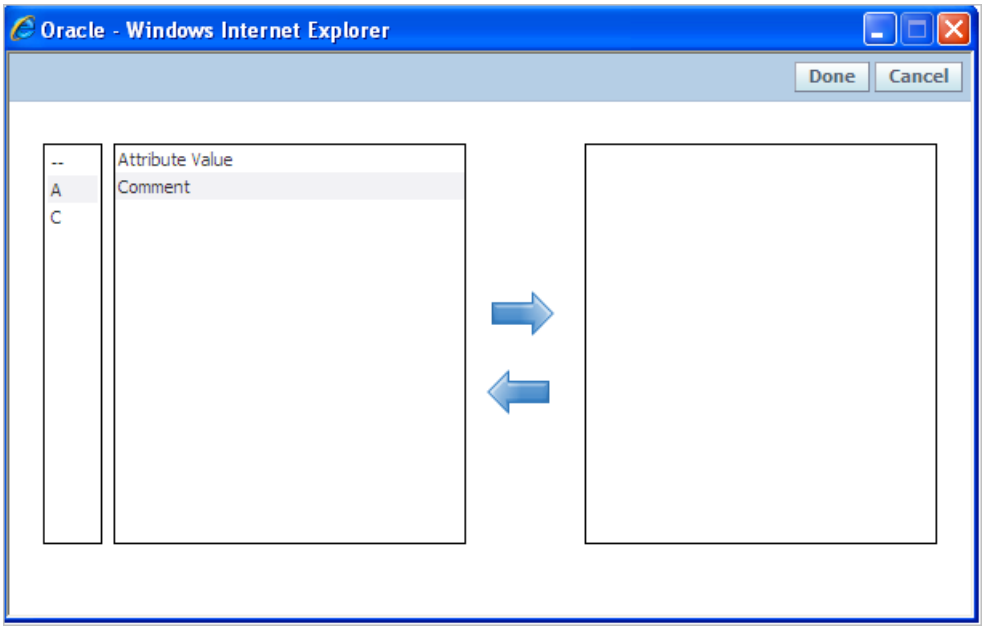
To delete a row:

1 With the custom section in edit mode, click the edit icon ( ) on the row you want to delete.
2 Click the delete row icon ( ). The row is deleted from the table.
3 Click **Save**.

To add a column:

1 With the custom section in edit mode, click **Add Column**. GSM displays a dialog box listing columns that can be added, as figure 3-38 shows below:

Figure 3-38: Available columns dialog box



2 Select a column, and then click the add selected data icon ( ).
3 Repeat step 2 to add additional columns.
4 Click **Done**. GSM closes the dialog box. The added columns display in the table.
5 Click **Save**.

To delete a column:

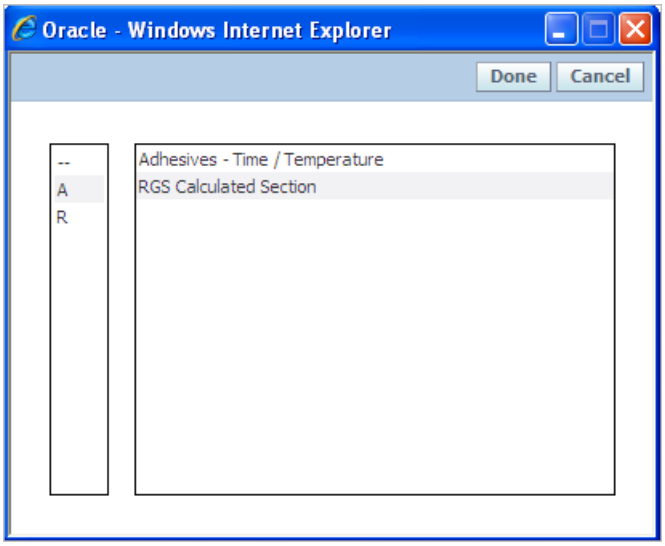
1 With the custom section in edit mode, click **Remove Column**. GSM displays a dialog box listing columns that can be deleted, as figure 3-38 shows above.
2 Select a column, and then click the add selected data icon ( ).
3 Repeat step 2 to delete additional columns.
4 Click **Done**. GSM closes the dialog box. The selected columns no longer appear in the table.
5 Click **Save**.

Deleting a Custom Section

To remove a custom section:

1 With the page in edit mode, click **Delete Section**. GSM displays a dialog box listing all custom sections, as figure 3-39 shows below.

Figure 3-39: Available sections dialog box



2 Select a custom section, and then click **Done**. The custom section is removed.

3 Click **Save**.

CHAPTER 4

Trade Specifications

This chapter presents an overview of GSM capabilities regarding trade specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Packaging Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *Regulatory/Legislation Detail Page*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Trade Specification page consists of the following tabs:

- *Summary Tab* on page 4-3
- *Packaging Tab* on page 4-8
- *Compliance Tab* on page 4-13
- *Related Specs Tab* on page 4-17
- *CSS Tab* on page 4-17
- *Supporting Documents Tab* on page 4-18
- *Regulatory/Legislation Detail Page* on page 4-19
- *References Tab* on page 4-25
- *Approval/Audit Trail Tab* on page 4-25

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current trade specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **LIO**—Create a new LIO profile, automatically referencing the active nutrient profile attached to the trade specification. The LIO button only displays if the Formulation and Compliance (F&C) bundle has been installed.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a trade specification, please see *Printing Trade Specifications* on page 2-13
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*.
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

Key sections in the Summary tab include:

- Summary Information—Discussed below, at *Summary Information Section* on page 4-3
- Product Identification—Discussed below, at *Product Identification Section* on page 4-3
- Next Lower Items—Discussed below, at *Next Lower Level Items Section* on page 4-5
- Parent Items—Discussed below, at *Parent Items (Calculated) Section* on page 4-5
- Brand Information—Discussed below, at *Brand Information Section* on page 4-6
- Product Classification—Discussed below, at *Product Classification Section* on page 4-7
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5

Summary Information Section

Fields in the Summary Information section are described in *Summary Information Section* on page 3-2. For trade specifications, two additional fields are included:

Available Date—Indicates when the product will be available for a retailer to order.

End Available Date—Indicates when the product will no longer be available to order.

Product Identification Section

In this section you can document product identifiers like GTIN (Global Trade Item Number). Additionally, the Item Type chosen here determines which fields and sections appear elsewhere in the specification. Figure 4-1 and figure 4-2 below demonstrate some of the field variations based on the Item Type field.

Figure 4-1: Product Identification section (Traded unit)

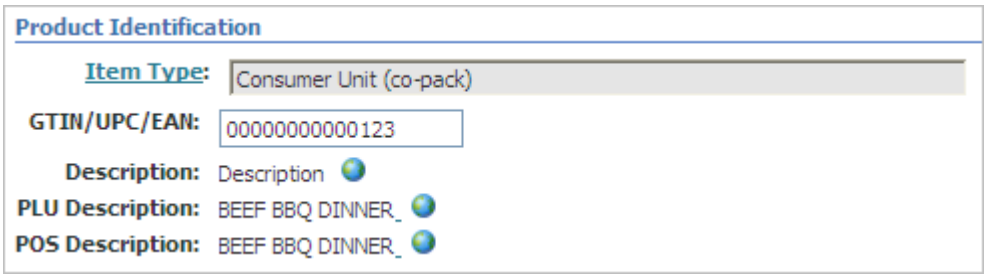
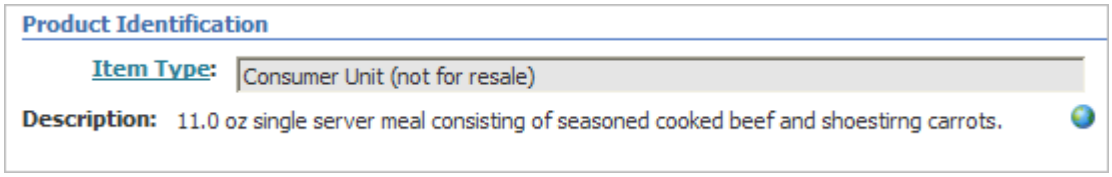


Figure 4-2: Product Identification section, Consumer Unit (not for resale)



Key fields include:

Item Type—The item type selected determines which fields and sections are visible on specification. For example, co-pack items have sections available to create supply associations and formulation breakdowns. These sections are unavailable for other trade item types. Available item types are as follows:

- **Consumer Unit**—Represents the lowest levels of the item hierarchy. This type can be used to represent Eaches and Inner Packs depending on what other specifications are linked to it.
- **Consumer Unit (co-pack)**—Represent the lowest level of the hierarchy that is produced for you by someone else. This type has the ability to record percent breakdown information and might be used for a can of green beans produced on your company's behalf.
- **Consumer Unit (not for resale - co-pack)**—Represents the lowest level of the hierarchy that is produced for you by someone else but is not intended for individual sale. This type might be used for a bottle of pickle relish in a picnic pack that is produced on your company's behalf.
- **Consumer Unit (not for resale)**—Represents the lowest level of the hierarchy that is not intended for individual sale.
- **Traded Unit**—Represents the orderable units of the item hierarchy. This type can be used to represent Cases, Pallets, Display Shippers, or Mixed Modules depending on what other specifications are linked to it.
- **Traded Unit (co-pack)**—Represents the orderable units of the hierarchy that are produced for you by someone else. This type has the ability to record percent breakdown information and might be used for a case or pallet of green beans produced on your company's behalf.
- **Traded Unit (no children - co-pack)**—Represents a specification that is both the orderable unit and the consumer unit all in one. It does not have any children linked to it but can have a percent breakdown. This type might be used for a barrel of vegetable oil that is produced on your company's behalf.
- **Traded Unit (no children)**—This type would represent a specification that is both the orderable unit and the consumer unit all in one. It does not have any children linked to it.

GTIN/UPC/EAN—This field is not visible for "Consumer Unit - Not for Resale" trade items.

PLU Description—This field is not visible for "Consumer Unit - Not for Resale" trade items.

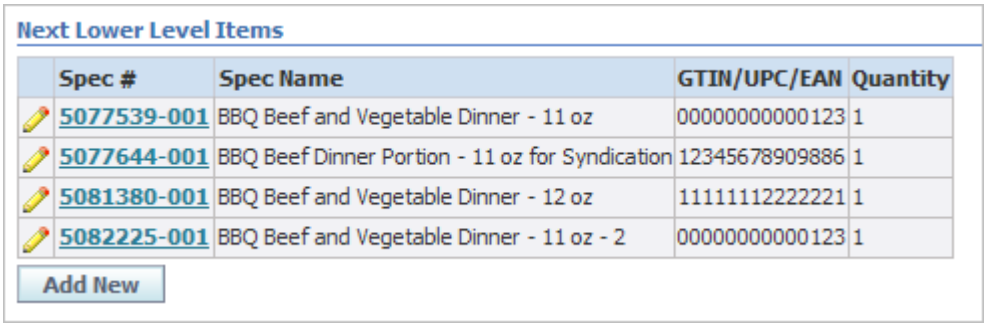
POS Description—This field is not visible for "Consumer Unit - Not for Resale" trade items.

Most other specifications are static in nature, but the trade item is dynamic. The trade item specification can display different attributes, fields, or sections based on the item type selected.

Next Lower Level Items Section

In this section you can capture the next lower level in the trade item hierarchy along with quantity information.

Figure 4-3: Next Lower Level Items section

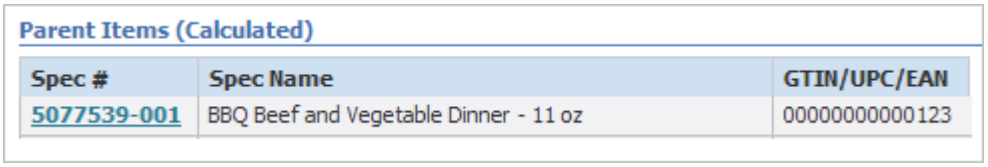


Note This section does not appear when the item type is a "Traded Unit (no children)" or "Traded Unit (no children - co-pack)."

Parent Items (Calculated) Section

This section shows the derived relationships based on other specifications that have referenced this specification as a lower level item.

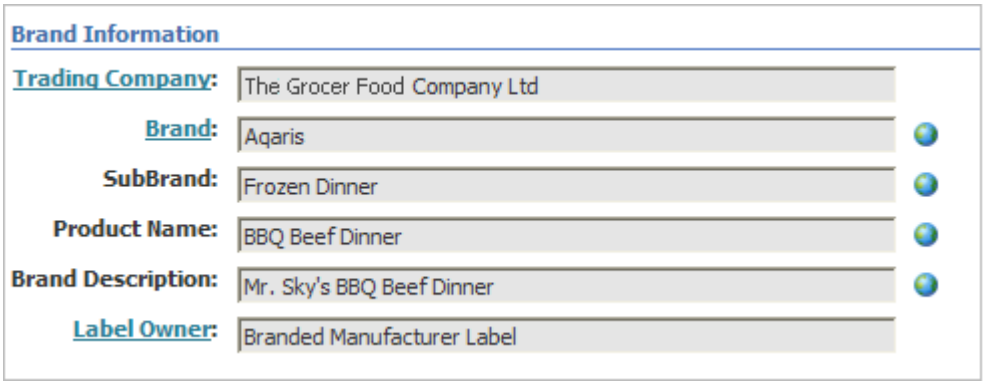
Figure 4-4: Parent Items (Calculated) section



Brand Information Section

In this section you can declare any relevant brand information.

Figure 4-5: Brand Information section



Key fields include:

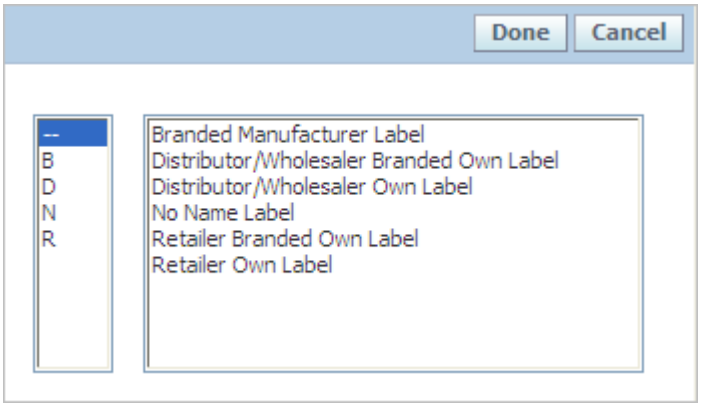
Trading Company—Click the hyperlinked field label to display a dialog box from which you can choose a company from a prepopulated list (configured by your administrator).

Brand—Click the hyperlinked field label to display a dialog box from which you can choose a brand name from a prepopulated list (configured by your administrator).

SubBrand—Free text entry field that you can use for a more granular level of information about brand, for example.

Label Owner—Click the hyperlinked field label to display a dialog box from which you can choose a label owner from a prepopulated list (configured by your administrator), as shown in figure figure 4-6 below.

Figure 4-6: Label Owner dialog box



Product Classification Section

In this section you can declare any relevant product classification information. The trade item type declared on the specification affects which of these fields are visible (based on relevance).

Figure 4-7: Product Classification section, Traded Unit

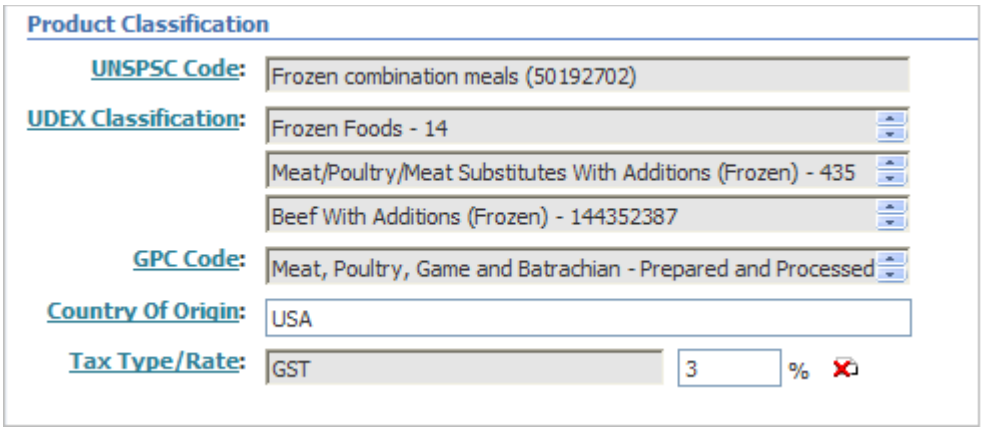


Figure 4-8: Product Classification section, Traded Item (no children)

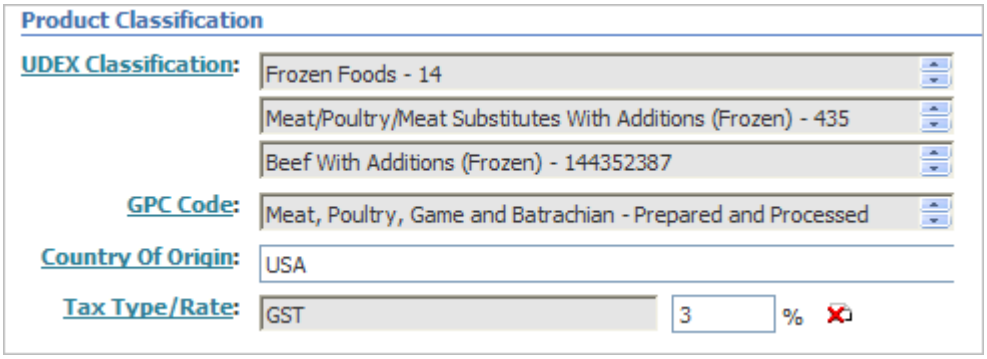
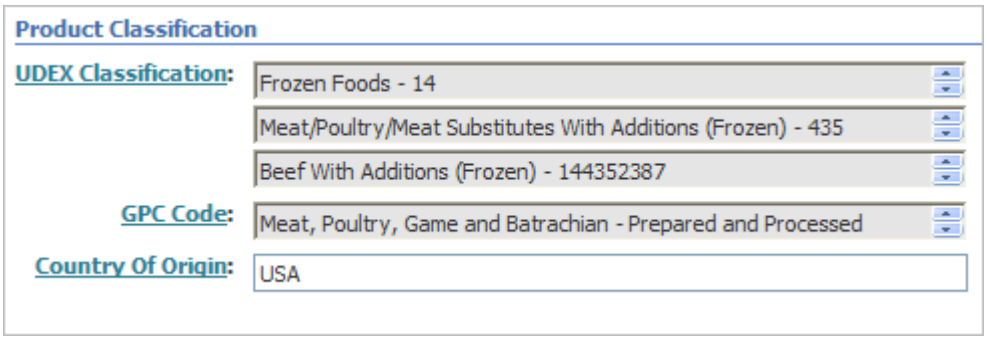


Figure 4-9: Product Classification section, Consumer Unit (not for resale)



Key fields include:

UNSPSC Code—This field is not visible on Traded Unit (no children - co-pack), Traded Unit (no children), Consumer Unit (co-pack), or items not meant for resale.

UDEX Classification—Search against categories used by UDEX Electronic Exchange.

GPC Code—Click the hyperlinked field label to display a dialog box from which you can choose a GPC code taxonomy.

Tax Type/Rate—Click the hyperlinked field label to display a dialog box from which you can choose a tax type or rate. This field is not visible on items not meant for resale.

Packaging Tab

This tab hosts all of the attributes necessary to describe the traded or consumer unit information, including dimensional and weight information, shelf life, and packaging details.

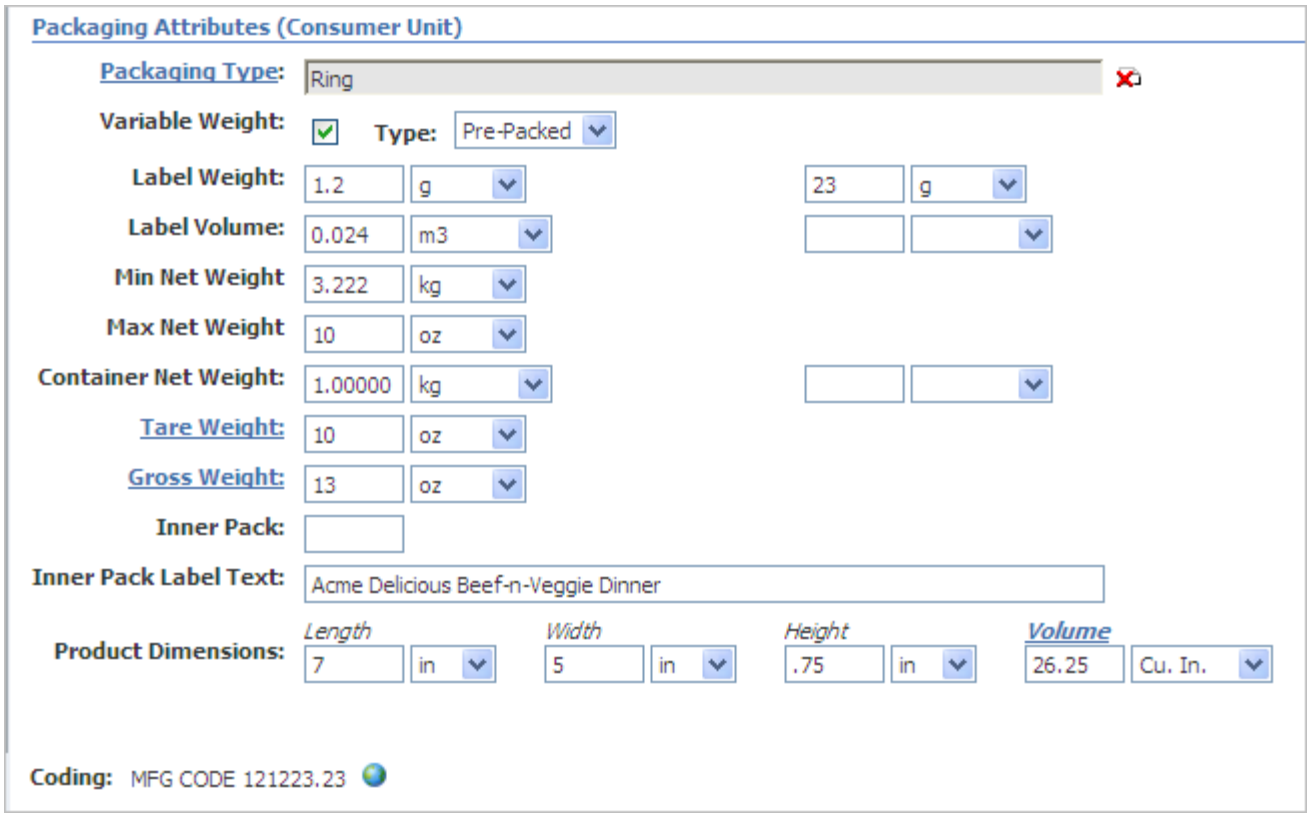
Key sections in the Packaging tab include:

- *Packaging Attributes (Consumer Unit) Section* on page 4-8
- *Packaging Attributes (Traded Unit) Section* on page 4-10
- *Stacking Height Section* on page 4-11
- *Storage Requirements Section* on page 4-11
- *Shelf Life Section* on page 4-11
- *Packaging Materials Section* on page 4-12
- *Alternate Packaging Section* on page 4-12
- *Environmental Waste (per item sold) Section* on page 4-13

Packaging Attributes (Consumer Unit) Section

Depending on the item type of the specification, different packaging attributes can appear in this section.The attributes below are designed to capture information about a consumer unit.

Figure 4-10: Packaging Attributes (Consumer Unit) section



Key fields include:

Packaging Type—Click the hyperlinked field label to display a dialog box from which you can choose a packaging type from a list of available types

Variable Weight—Select this flag if the traded unit is best represented by a min/max weight.

Variable Weight Type—"Pre-packed" and "Loose" represent how the product content is packaged.

Min Net Weight—The least weight that is acceptable for the product.

Max Net Weight—The greatest weight that is acceptable for the product.

Tare Weight—This section appears when the item type is a "consumer unit" or a "traded unit (no children)." For more information on tare weight and gross weight, see *Tare Weight Section* on page 11-3.

Gross Weight—Net weight + tare weight. Click the hyperlinked field label to choose.

Note Net weight is defined as the weight of the food content or non-packaging related material.

Packaging Attributes (Traded Unit) Section

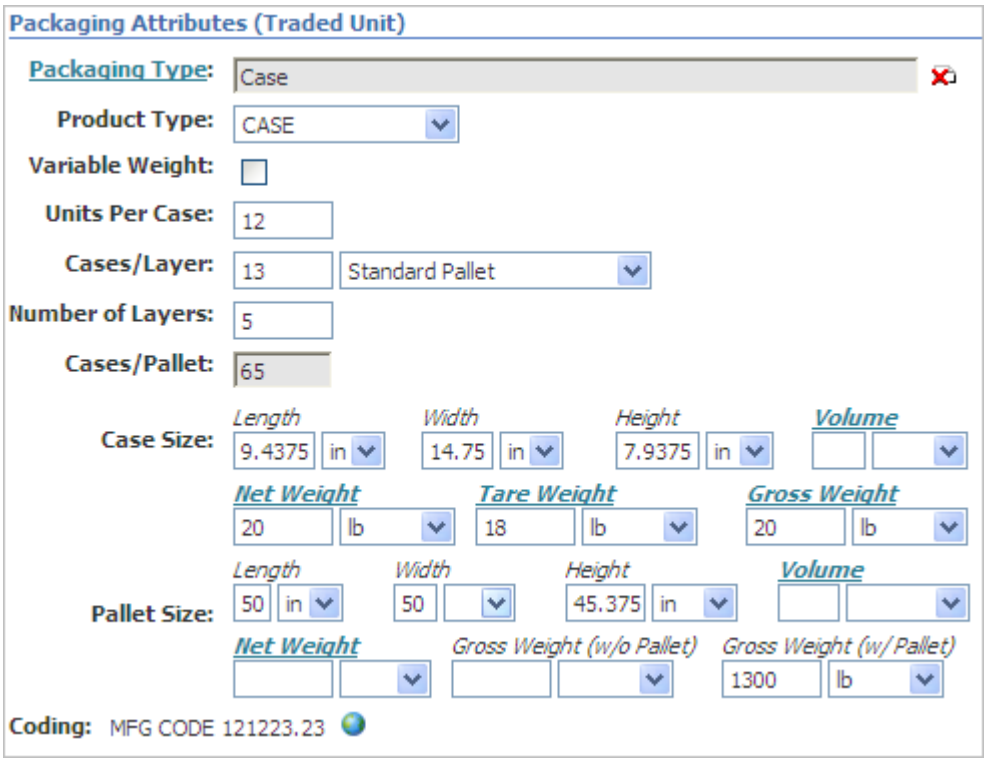
As with consumer units, depending on the item type of the specification, different packaging attributes can appear in this section. This section appears when the item type is a "traded unit." The attributes below are designed to capture information that help describe a traded unit, such as case and pallet information.

The Net Weight calculations for case and pallet on a traded unit trade specification use the net weight of the lower level item and the net weight of the case as packaging is accounted for in the tare weight value.

The Tare Weight calculation takes into account packaging at all levels of the hierarchy. If the user calculates the tare weight of the lowest level (no child trade items) consumer unit trade specification, GSM adds the packaging associated directly with the consumer unit and any packaging associated with the formulation specification that is linked directly to the consumer unit trade specification. The inclusion of the packaging associated with the formulation specification is dependent on a configuration.

The Gross Weight calculation has been modified so that it adds the net weight and the tare weight of the specification. Users can select the UOM prior to calculating. This allows them to select the final UOM instead of returning in the default UOM.

Figure 4-11: Packaging Attributes (Traded Unit) section



Key fields include:

Packaging Type—Click the hyperlinked field label to choose a packaging type from a list of available types.

Product Type—Choose a product type by selecting from a list of available types.

Stacking Height Section

In this section you can describe the stacking height information relevant to this specification. This section appears when the item type is a "traded unit."

Figure 4-12: Stacking Height section

Key fields include:

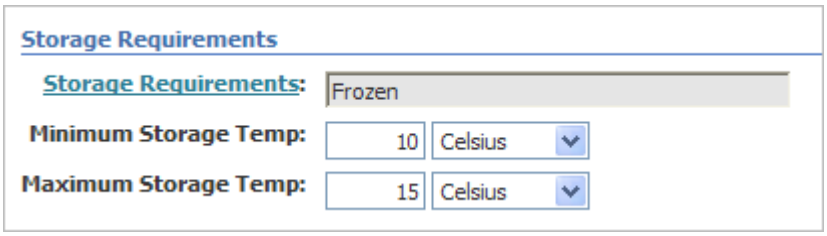
Mode Stacking Height—Enter the number of levels that the product can be stacked.

Warehouse Stacking Height—Enter the number of units that can be stacked in warehouse storage.

Storage Requirements Section

This section is for describing the storage requirements relevant to this specification.

Figure 4-13: Storage Requirements section



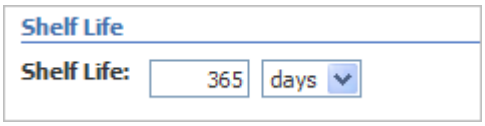
Key fields include:

Storage Requirements—Click the hyperlinked field label to display a dialog box from which you can choose the storage requirements from a list of options.

Shelf Life Section

This section is for describing the shelf life relevant to this specification.

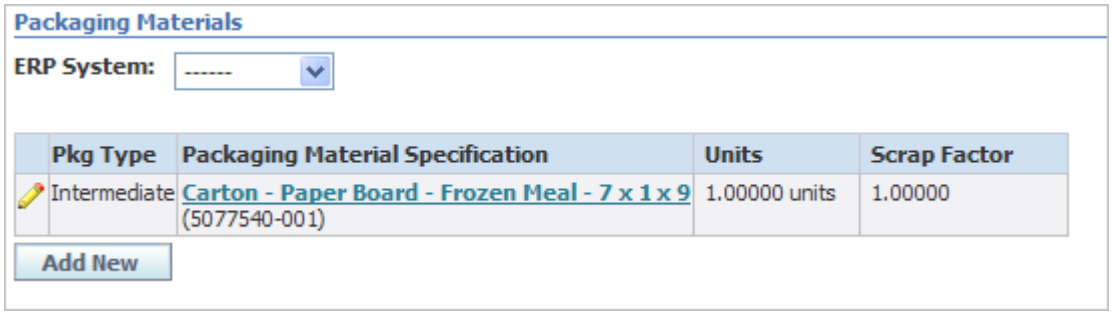
Figure 4-14: Shelf Life section



Packaging Materials Section

In this section you can describe the packaging associated with this specification by associating and categorizing packaging and printed packaging specifications.

Figure 4-15: Packaging Materials section



Key fields include:

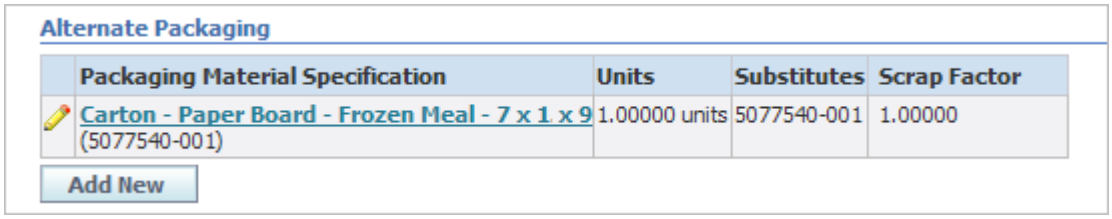
ERP System—This enables you to select the relevant cross-reference from the system so that the system's equivalent package identification number can be seen along with the Agile PLM for Process number. Changing this selection toggles the presentation of that equivalent number, but the preference is not stored as part of the specification.

Pkg Type—Enables you to categorize how the packaging is applied to this item, for example, whether it is considered inner, intermediate, or outer packaging.

Alternate Packaging Section

In this section you can describe the alternate packaging associated with this specification. You can do so by associating packaging and printed packaging specifications to the packaging that they are allowed to substitute for.

Figure 4-16: Alternate Packaging section



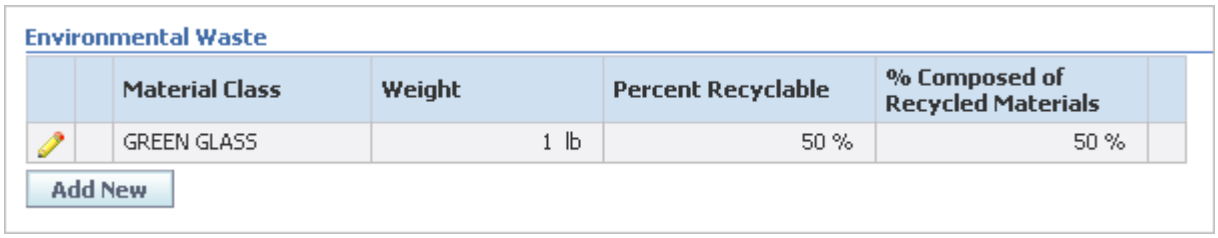
Key fields include:

Substitutes—Choose which piece of packaging (from the Packaging Materials section) that this alternate is meant to substitute for.

Environmental Waste (per item sold) Section

This section provides a place to log known waste materials for this specification along with other relevant attributes required for environmental waste reporting.

Figure 4-17: Environmental Waste (per item sold) section



Key fields include:

Material Class—Click **Add New** to display a dialog box from which you can choose a material class from a prepopulated list.

Compliance Tab

Key sections in the Compliance tab include:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29
- Label Claims—Discussed below, at *Label Claims Section* on page 4-13
- Compliance Information—For discussion of this commonly used section, please see *Compliance Information Section* on page 3-6
- Allergens, Intolerances, and Additives—For discussion of this commonly used section, please see *Additives, Allergens, and Intolerances Sections* on page 3-7

Label Claims Section

The Label Claims section contains the label claims linked to a trade specification, as figure 4-18 shows below. The label claims values and calculation rules are maintained by an administrator

Figure 4-18: Label Claims section

Key fields include:

Potential—Select all of the possible label claims for the finished good. This field can be populated two ways. You can either click on the linked label **Potential**, or calculate the label claims by using label claims determination. To calculate label claims, select the label claims determination icon ( ). GSM opens the label claims determination popup, shown in figure 4-20, on page 4-16. See *Label Claims Determination* on page 4-14 for more information.

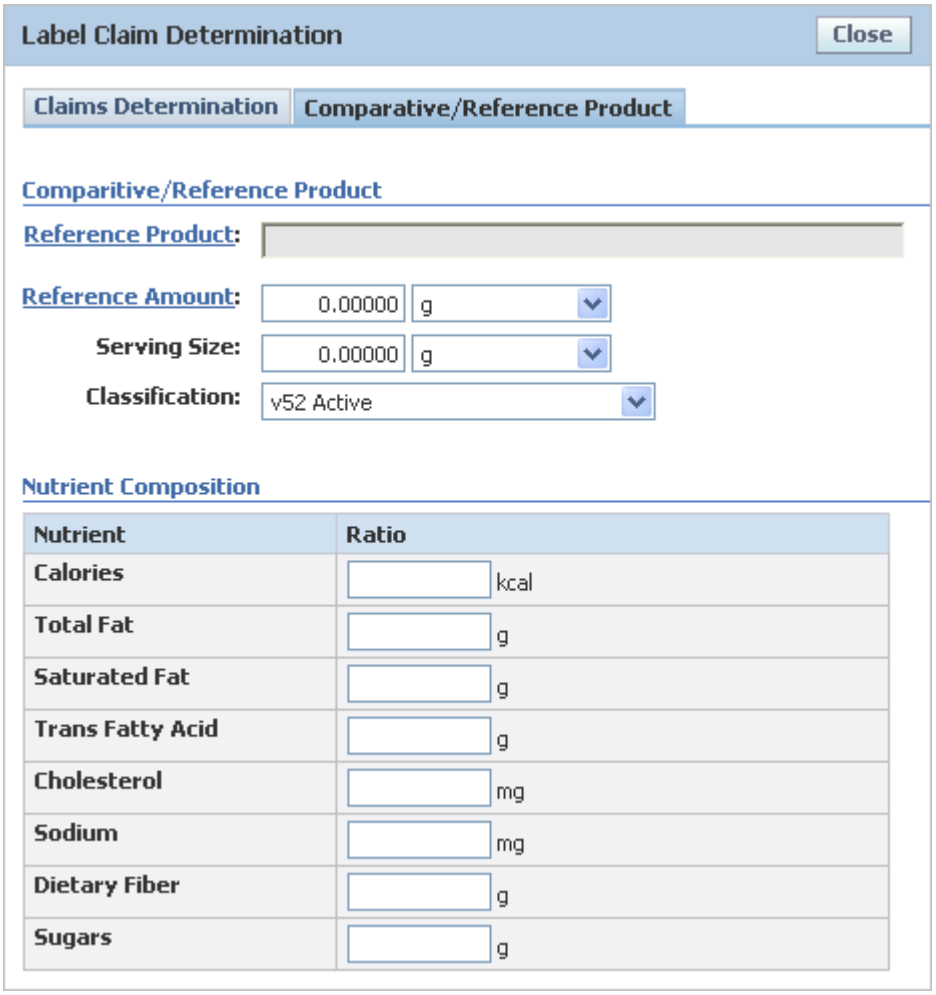
Actual—Select the actual label claims declared on the finished good. This field can be populated two ways. You can either click on the linked label **Actual** or use the copy field icon ( ). When you click the copy field icon, GSM displays a multi select dialog box containing all values in the potential label claims field. You can use the dialog box choices to populate the actual field only with potential options.

Label Claims Determination

Using the label claims determination feature, you can interrogate a product for claims applicability based on a centralized group of rules segregated by label claims authority.

1. Click the label claims determination icon ( ). GSM opens the Label Claim Determination dialog box.
2. Some claims require another product to compare to, such as Low Fat. The system can evaluate comparative claims if you provide additional nutrient information that describes the comparative product. Select the Comparative/Reference Product tab and fill in the appropriate information needed. You can also import data from another trade specification by selecting the **Reference Product** label. Data will be imported from the trade specification's active nutrient profile. See figure 4-19 below.

Figure 4-19: Label Claim Determination dialog box, Comparative/Reference Product tab



3 On the Claims Determination tab, from the **Label Claim Authority** drop-down list, select a specific rule group to use for considering claims applicability.

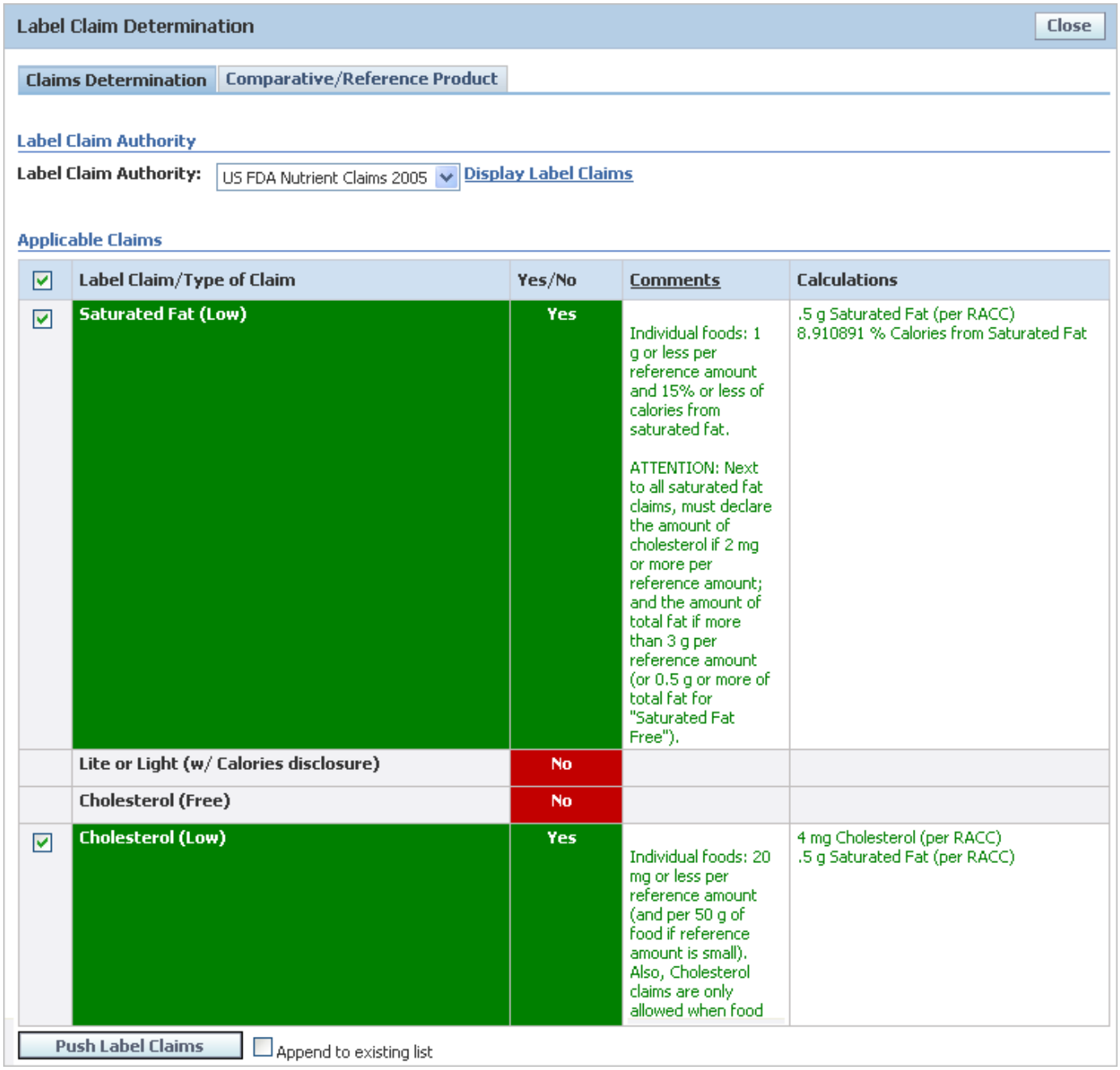
4 Click **Display Label Claims** to display the Applicable Claims table.

The system evaluates label claims against rules that you previously defined. All selected claims based on the label claims authority appear in the Applicable Claims table with color coding to show whether the claim may be made for the product.

When the system evaluates a claim as compliant, the Comments column displays supporting information for the claim along with one or more user-defined values supporting the assessment in the Calculation(s) column, as shown in figure 4-20. If the system finds that the claim is invalid, no such information appears in the Comments column.

5 Select the claims you want to push to the specification. All compliant claims are automatically selected. You can unselect any claims you do not want to push to the specification. Once you have all the claims selected, click the **Push Label Claims** button at the bottom of the grid. This action will close the dialog window and populate the potential label claims field with the selected claims. This action will replace all existing potential label claims in the field; if you would like to just append to the list make sure the "Append to existing list" checkbox is selected. See figure 4-20 below.

Figure 4-20: Label Claims Determination dialog box



Related Specs Tab

The Related Specs tab contains the following sections:

- **Ingredient Specification**— Discussed below, at *Ingredient Specification Section* on page 4-17.
- **Associated Specifications**—For discussion of this commonly used field, please see *Associated Specifications Section* on page 3-9.
- **Master Specifications**—For discussion of this commonly used field, please see *Master Specifications Section* on page 3-9.

Ingredient Specification Section

This section represents the material that was produced as a result of a formulation specification.

Figure 4-21: Ingredient Specification section

Key fields include:

Context—Used to specify which formulation specification actually produced the material.

Qty—Indicates how much of the produced material is actually going into the trade specification. The tare weight calculation uses this ratio when calculating the amount of packaging.

CSS Tab

The CSS tab contains the data related to the list of publications of a specification to any internal or external target system. For discussion of this tab, please see *CSS Tab* on page 3-10.

Supporting Documents Tab

Key sections in the Supporting Documents tab include:

- **Supporting Documents**—The document types available are URL, Attachments/Procedures, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- **DRL Documents**—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- **Testing Protocols**—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.
- **Nutrient Profile**—Discussed below, at *Nutrient Profile Section* on page 4-18.
- **% Breakdown section**—This section only appears on trade items that are identified as "co-pack." For discussion of this commonly used section, please see *% Breakdown (Formula) Section* on page 3-22.
- **Regulatory/Legislation**—Discussed below, at *Regulatory/Legislation Section* on page 4-19.

Nutrient Profile Section

In this section you can create new or associate existing nutrient profiles for this specification.

Figure 4-22: Nutrient Profile section

Nutrient Profile

Profile #	Nutrient Profile	Active Profile	Effective Date	Status
5077592-001	Nutrient Profile: Tomato Puree, 8.6% Total Solids	☐	Monday, October 04, 2008	Approved
5077592-002	Nutrient Profile: Tomato Puree, 8.6% Total Solids	☐	Tuesday, October 05, 2008	Draft

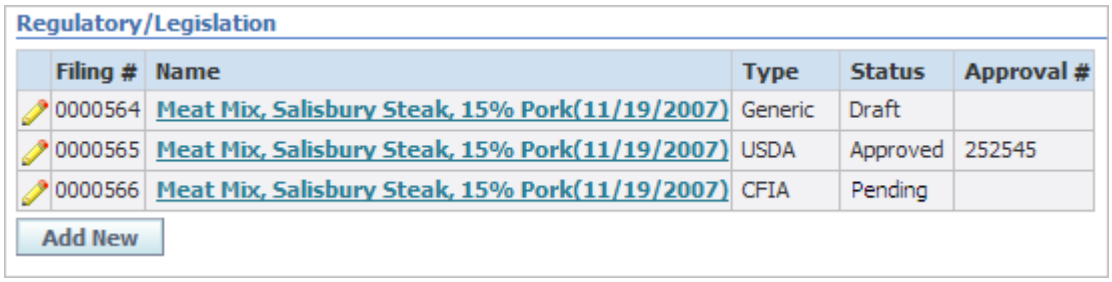
Nutrient profiles are actually separate documents from the trade specification with their own workflows.

More than one nutrient profile can exist on a trade specification, but one of the nutrient profiles must be flagged as the "Active Profile" for usage in rollups elsewhere in the system and label claim determination. Only one nutrient profile can be marked as active.

Regulatory/Legislation Section

The Regulatory/Legislation section displays summary details of the regulatory documents that have been created for this trade specification.

Figure 4-23: Regulatory/Legislation section



Key fields include:

Filing #—A system-assigned number associated with the regulatory filing.

Approval #—An internal tracking number that you can enter in the Regulatory/Legislative Detail page, Cover Page tab, Application Summary section. (See *Application Summary Section* on page 4-20 below.)

Regulatory/Legislation Detail Page

On the Regulatory Legislation Detail page you can generate and document data that supplements the trade specification in order to produce regulatory filing documentation.

This page is unusual in that you access it from within another tab (Supporting Documents). To access the Regulatory/Legislation Detail window, click the hyperlinked specification name in the Regulatory/Legislation section of the Supporting Documents tab. A new window opens with five tabs:

- *Cover Page Tab* on page 4-19
- *Product Formula Tab* on page 4-22
- *Processing Procedures Tab* on page 4-23
- *Comments Tab* on page 4-23
- *Attachments Tab* on page 4-24

Cover Page Tab

On the Cover Page tab you can define the application summary data including the application type. The application type in turn drives some of the relevant fields on the rest of the cover page.

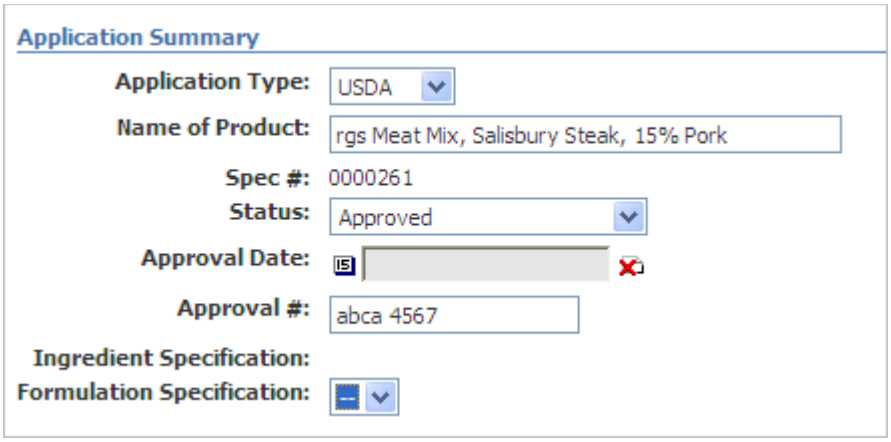
Cover Page has the following sections:

- *Application Summary Section* on page 4-20
- *[Application Type] Cover Page Section* on page 4-20

Application Summary Section

In this section you can identify information that will help classify and generate a regulatory filing application such as the name of the product, the status, and the formulation specification to use to generate the procedures.

Figure 4-24: Application Summary section



Key fields include:

Application Type—Controls which cover page attributes are visible and the printed format of the filing

Status—You can alter the status when the specification is in edit mode

Ingredient Specification—Defines the produced material that the regulatory filing is being created for

Formulation Specification—Choose from a list of formulation specifications that are tied to this trade item. The formulation specification identified here is the one that the system uses to generate data elsewhere in the filing document.

[Application Type] Cover Page Section

This section enables you to capture information necessary for generating different regulatory forms.

Figure 4-25: [Application Type] Cover Page section, Generic sample

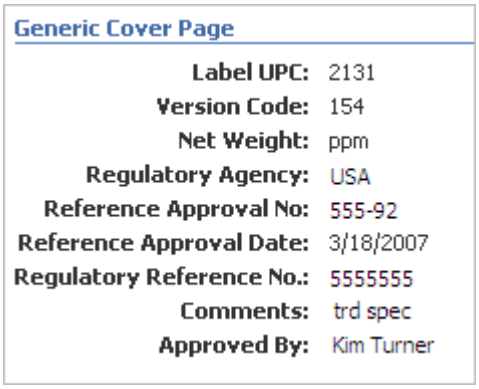
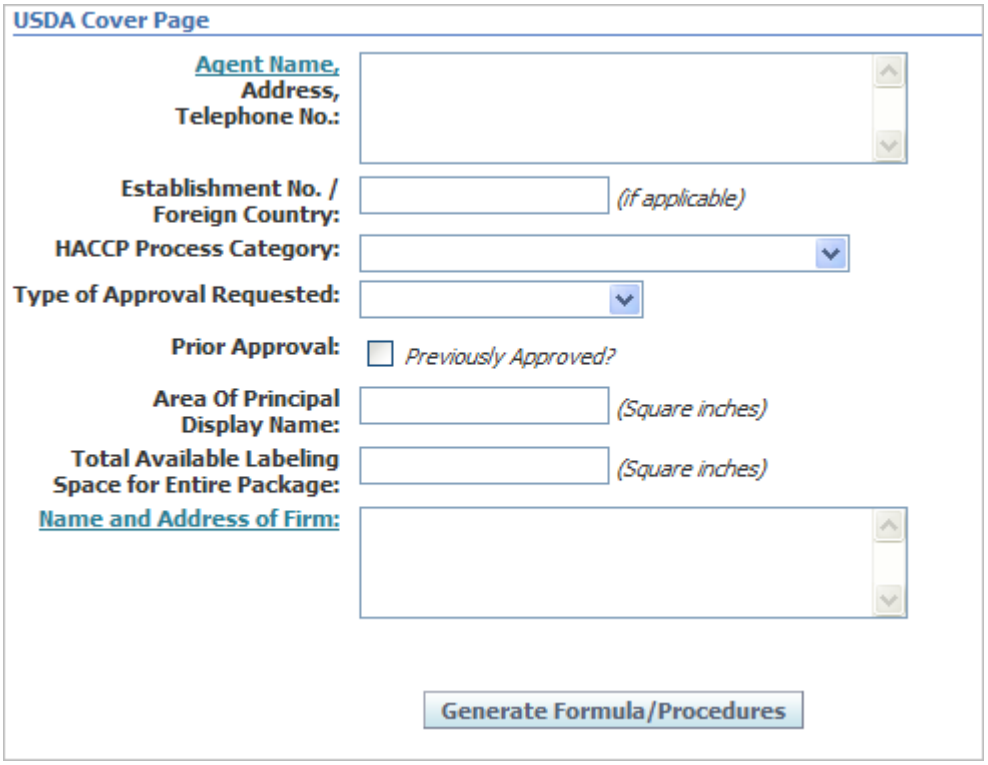


Figure 4-26: [Application Type] Cover Page section, USDA sample



Key fields include for the USDA sample include:

Agent Name, Address, Telephone No.—Click **Agent Name**, the hyperlinked part of the field label, to open a dialog box from which you can choose a company from a prepopulated list. When you select the company, the dialog box closes and the company name, address, and telephone number appear in the text box to the right of the field label.

HACCP Process Category—From the drop-down list, select an HACCP (Hazard Analysis and Critical Control Point) process category.

Click **Generate Formula/Procedures** to pull information from the selected formulation specification and nutrient profile to build the filing.

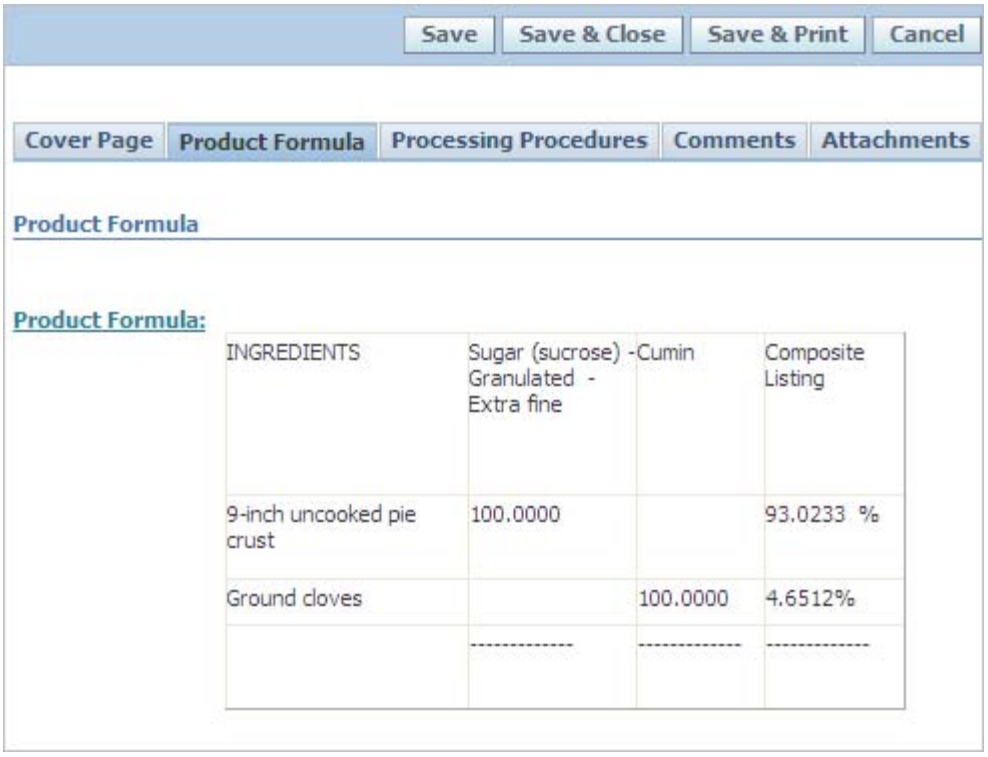
Product Formula Tab

The Product Formula tab contains only one section: Product Formula.

Product Formula Section

In the Product Formula section you can store an enriched text rendering of the product formulation for use when generating the document. Using the **Generate Formula** button, you can automatically generate an enriched text version of the formulation information from the label composition of the attached nutrient profile. This label composition will be generated when the LIO statement is pushed from the LIO profile to the nutrient profile. If LIO has not been performed, the label composition will not be present and the automatic rendering will not be available.

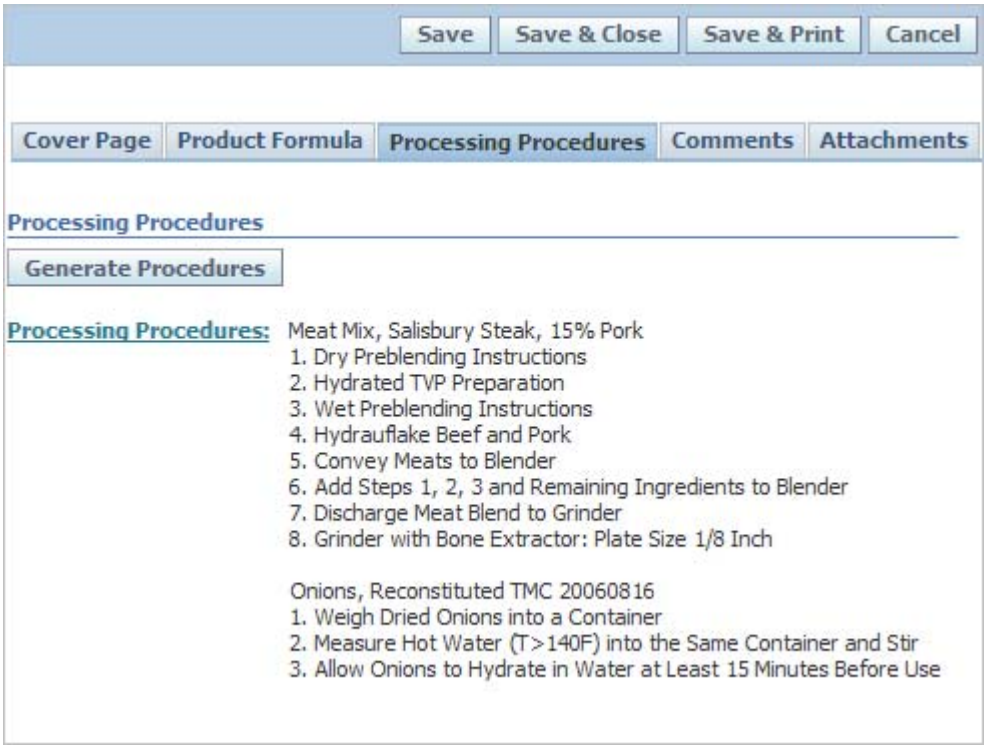
Figure 4-27: Product Formula section



Processing Procedures Tab

Processing Procedures, the sole section in this tab, is for storing an enriched text rendering of the processing procedures that can be used when generating the document. You can use the **Generate Procedures** button to automatically generate an enriched text version of the processing procedures information from the formulation specification selected on the Cover Page tab.

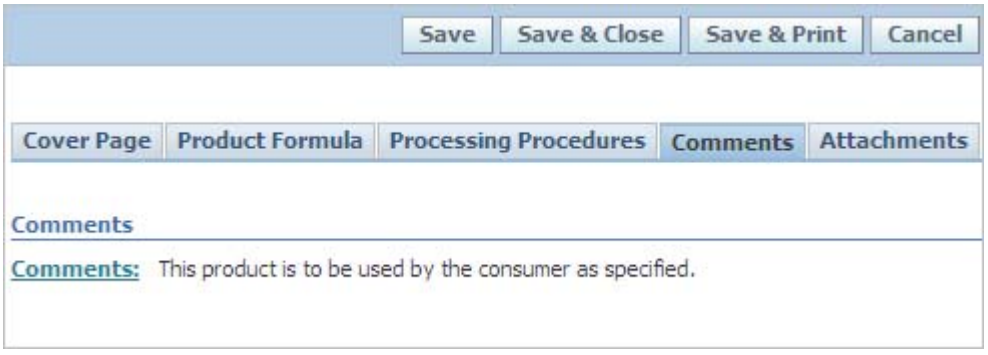
Figure 4-28: Processing Procedures section



Comments Tab

In Comments, the sole section in this tab, you can store enriched text comments for use when generating the document.

Figure 4-29: Comments section



Attachments Tab

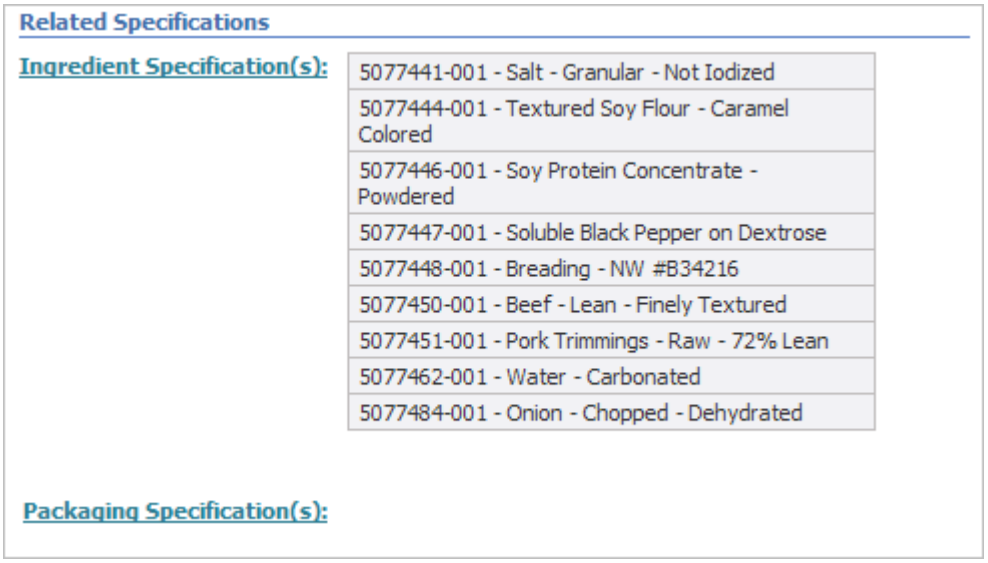
The Attachments tab contains the following sections:

- Related Specifications
- Attachments

Related Specifications Section

The section allows you to reference attachments from ingredient and packaging specifications related to the product.

Figure 4-30: Related Specifications section



Attachments Section

In this section you can attach binary documents such as Adobe™ Acrobat (PDF) documents and Microsoft Office documents.

Figure 4-31: Attachments section

References Tab

The trade specification References tab contains the list of all reference data linked to a specification. Key sections in the References tab include:

- **Suppliers section**—This section only appears on trade items that are identified as "co-pack." For discussion of this commonly used section, please see *Suppliers Section* on page 3-25.
- **Activities section**—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- **Specification Dependencies section**—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.
- **Related Documents section**—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 5

Process Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding process specifications. Topics in this chapter include:

- *Process Specification Integration into Formulation Specification Feature*

Process Specification Integration into Formulation Specification Feature

All features related to process specifications have been integrated into the formulation specification process. For more information, refer to *Chapter 6, Formulation Specifications*.

CHAPTER 6

Formulation Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding formulation specifications. Topics in this chapter include:

- *Overview*
- *Concepts and Definitions*
- *Page-Level Functions*
- *Summary Tab*
- *Formulation Tab*
- *Process Tab*
- *Ext Data Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*
- *Additional Tools*

Overview

The formulation specification is where we document the process or recipe for one or more inventoried items. The formulation specification describes:

- The name of the formulation, which is often associated with the output item(s).
- The required ingredients with their quantities needed to make the item(s).
- The ordered preparation steps and instructions describing when and how to mix materials.
- Descriptive information about the formulation specification and the output item(s). Examples include:
  - Documents
  - Custom Data
  - Related Specifications
  - And various core attributes used to describe specific elements of the specification

In addition the formulation specification is the foundation for a number of tools that we use throughout the lifecycle of the specification. Examples of organizational goals and the tools provided by the formulation specification to help achieve these goals include:

- Capturing accurate data:
  - Modeling operational and moisture gain/loss to better reflect manufacturing conditions.
  - Describing the various items created by a formula including Products, Co-Products, and Waste.
  - Identifying alternate inputs and outputs that are available at the time of production.
- Making better decisions:
  - Rolling up an output's theoretical values for nutrition, compliance information, yield, and custom data in order to understand and verify if a recipe's goals have been achieved.
  - Performing ingredient substitutions using predefined and approved substitute items.
  - Modeling appropriate batch sizes to better understand the impact of scaling.
  - Optimizing a formula to achieve identified goals and constraints. See *Optimization* on page 6-65 for more information.
- Efficiently managing information:
  - Finding and reviewing historical recipes.
  - Creating new issues of formulations to reflect specification changes over time.
  - Capturing "Snapshots" of a given formula while developing a new or modified item, as described in *Snapshots* on page 6-64.
  - Verifying and approving accuracy through a formal workflow process.

Concepts and Definitions

Outputs

When ingredient specifications are added to the formula and processing occurs, an output is created. The output should be considered the result of a manufacturing process or formulation specification.

Data associated with an output material includes:

- Ingredient specification attributes such as Nutrition, Compliance, Custom Data, Supporting Documents, % breakdown, etc.
- Formulation and step specific information including:
  - Gain/Loss Factors, Qty, Yield, etc.
  - % Step

- Composition (inputs)
- Packaging

Output Types/Sub-Types

Outputs can be classified as one of the following types:

- **Internal**—Used to describe the material that moves from one step to another within a single formulation specification. Internal outputs are not available for use by other formulation specifications.
- **External/Owned**—Represents the result of the formulation. External/Owned outputs can be used by other specifications for various purposes. To help describe these purposes External/Owned outputs are further described by Sub-Types. Sub-Types available include:
  - **Product**—The primary material created from the formulation specification. A product can be used in further processing by another formulation specification or linked to a trade specification and thought of as a finished good.
  - **By Product**—A material that is created as a result of creating a product. A by product output can be linked to a trade specification and sold as a finished good. However it cannot be linked to other formulation specifications for further processing.
  - **Waste**—A material that is created as a result of making a product. A waste output cannot be linked to a trade or formulation specification. Therefore it is merely a tool to help accurately reflect inefficiencies or loss during a manufacturing process.
- **Referenced**—Materials can exist outside the context of a single formulation. Examples include:
  - The item is both purchased and manufactured: An organization buys the item and can choose to resell it. In this case, the ingredient can and would exist whether a formulation specification was ever created.
  - The item can be manufactured using different processes or procedures: Multiple formulas can point to a single output ingredient. Each formula can represent acceptable alternatives for manufacturing the output. In this situation, the technical data for the output represents the goal for any given formulation rather than the result. Therefore technical data does not transfer from the formulation to the referenced output.
  - Separate and distinct approval process or security: Some companies manage formulation/processing instructions differently than materials. These differences can include different approval processes and/or different security rights. By referencing an ingredient as an output, the output maintains all the functionality related to raw material ingredients including its own workflow and security permissions. Therefore the output ingredient can be approved using a different workflow and follow different security rules than the formulation specification that produces the output.

Referenced outputs can be described by Sub-Types similar to External/ Owned outputs. Because the referenced output ingredient lives independent of the formulation, the Sub-Types merely describe the role the output plays in relation to the formulation specification.

Theoretical Ingredient Verses Output Ingredient

There are two parts to every output:

- **Theoretical Ingredient**—Describes how the inputs of a formulation come together and create technical definition for composition, nutrition, custom data, and other data elements. This technical definition represents a rollup of data from the input ingredients. The theoretical ingredient is described by a given formulation and is considered part of the formulation specification. The theoretical ingredient is represented on an output's BOM Item Definition screen.
- **Output Ingredient**—The formal definition of the material. This portion is represented using an ingredient specification. When an ingredient specification is owned by a formulation specification, theoretical data is pushed from the formulation specification to the ingredient specification. When an ingredient specification is referenced the formulation specification is not able to push data. Therefore users manage updates and changes.

Using both the Theoretical and Output Ingredient, it is possible to have multiple formulation specifications that create the same output. Each of the formulation specifications would have its own context specific data and references the same material.

Please note, differences can exist between the Theoretical and Output Ingredient due to timing issues related to the push from one to the other or the inability to push when an item is referenced.

"Designable" Workflow Status

Formulation specifications provide a number of powerful tools. These tools are often used during the early steps in a formulation specification's workflow. As a formulation specification moves past the initial workflow steps, it is expected that the organization will focus their efforts on minor changes and approving the specification for use by the greater organization.

Therefore in Workflow Administration, an administrator can designate or tag a given step of a workflow as "Designable". When a specification is in that designable workflow step, the following design features will be available to that specification:

- Costing
- Optimization
- Snapshots
- Moisture Loss Calculators

- Batch Tuning
- Theoretical Rollups
- Instance Level Ingredient Attribute Overrides or Basis
- Substitute Materials

Note When using a formulation specification, if you are not able to access the above features please verify that the specification is in a workflow step marked as "Designable."

Remaining Concepts and Definitions

The Formulation Specification page consists of the following tabs. Remaining features and concepts will be described as we review the specific screen elements of the formulation specification in the following sections.

- *Summary Tab* on page 6-9
- *Formulation Tab* on page 6-10
- *Process Tab* on page 6-23
- *Ext Data Tab* on page 6-40
- *Related Specs Tab* on page 6-40
- *CSS Tab* on page 6-40
- *Supporting Documents Tab* on page 6-41
- *References Tab* on page 6-41
- *Approval/Audit Trail Tab* on page 6-41

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Settings**—The fields displayed in this drop-down list drive specific functionality throughout the formulation specification. The default values are derived from a user's Profiles and Preferences. The values are then associated to the formulation specification upon saving the specification. You can change these settings at any time while working with your formulation.

  Key fields include:

  - **UOM**—The default unit of measure for steps in a formulation specification.
  - **Path**—The default BOM Calculation path to use when creating formulation specifications. Examples include: Input Percent, Input Quantity, and Input Yield.
  - **Combine Like Items**—When checked, combines like input items when viewing the formulation specification's Formulation tab in read mode.
  - **Cross Reference**—The cross references system equivalent used for presenting alternate identities for attached specifications. This field will be the equivalent number that is defined on the referenced specification.
  - **Currency**—The default currency.
  - **Cost Type**—Type associated with the cost set.
  - **Cost Set**—The actual set of costs that will be used for viewing and optimization for the bill of material (BOM) items added to the formulation specification.

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs calculations related to the formulation specification. Specifically:
  - **BOM Calculation**—This button is displayed when the specification is in edit mode. Updates values associated with the formulation and step BOMs. BOM Calculations also update:
    - Yield
    - Theoretical Nutrition
    - Theoretical Compliance Data
    - Theoretical Composition Data
  - **Custom Data**—Executes custom calculations which are defined in ADMN and associated with Calculated Extended Attributes which are then placed on the specification as either simple extended attributes or as part of a custom section.

Note Calculation also happens when you save your specification.

- **Create Copy**—Create a new copy of the current formulation specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Optimization**—Optimize the formulation by defining goals and establishing constraints related to ingredient costs, nutrients, and extended attributes. See *Optimization* on page 6-65 for more information.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. CACS provides limited functionality when run on a formulation specification due to the fact that most material data is defined on the output ingredient. Therefore CACS can perform screening for extended attributes defined on the formulation specification (as opposed to an output ingredient) and approved for use in business units.
  Please note CACS appears only if your installation includes CACS. For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **Target Revision**—Allows users to create a new issue of a given specification by:
  - Starting with an established specification.
  - Using "Target Revision" to point to another specification (the target) and generating a new issue based on the target specification's lineage (Specification Number and Issue Number).

  This feature is valuable when designers/developers create many different variations of a potential product yet want to conform to a specific issue number.
- **Compare**—Allows users to compare the input bill of materials between two or more formulation specifications or snapshots. In addition, using the Formula Basis, users can choose to compare based on the following options:
  - **Quantity - Recursive 100%**—Provides items from the exploded bill of materials and determines percentage based on the input quantity.
  - **Yield - Recursive 100%**—Provides items from the exploded bill of materials and determines percentage based on the yielded quantity.
  - **Quantity - Top Level Only**—Provides items from the selected specifications only and determines percentage based on the input quantity.
  - **Yield - Top Level Only**—Provides items from the selected specifications only and determines percentage based on the yielded quantity.
- **Print**— Opens dialog box through which you can print the current specification in a variety of formats.
- **Act**—Create a primary activity, or an additional workflow object to manage parallel work streams associated with this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)

- **Snapshot**—A tool used to take a picture of a specification at a given point in time. “Snapshots” can be retrieved at any point in time while a specification is in edit mode. Snapshots are considered useful during early design when a developer is refining a formula and wants to protect data.
- **Refresh**—Replaces override values on the Basis with input ingredient specification values. Upon clicking this button the system prompts you to confirm the global update. When you select **OK**, the system pulls the information from the input specifications for all items in your formulation specification. This is only available in edit more. If you do not want to perform a global refresh, then use the Basis screen to select specific sections for a given input specification to refresh.
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. Please note that this workflow button may control more than just the given formulation specification. If the output ingredients are of the Type External/Owned then the output ingredient specifications will also be impacted by this action. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Note As of 6.0, Custom Nutrients are no longer supported.

Summary Tab

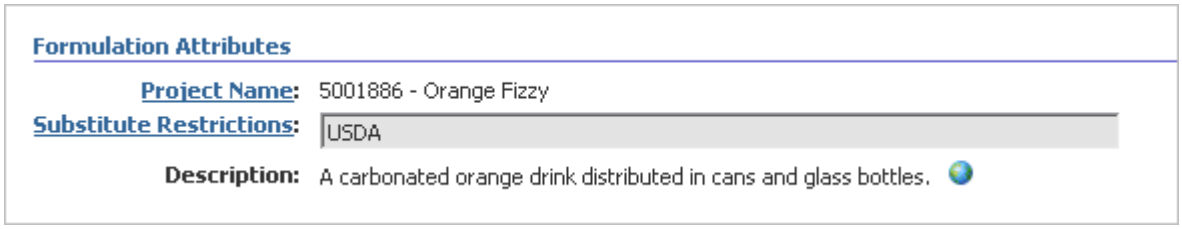
Key sections in the Summary tab include:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2
- Formulation Attributes—Discussed below, at *Formulation Attributes Section* on page 6-9
- Facility Information—Discussed below, at *Formulation Attributes Section* on page 6-9
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5

Formulation Attributes Section

This section allows users to describe the formula being created, associate the formula to a specific project, and filter data by defining substitute restrictions.

Figure 6-1: Formulation Attributes section



Key fields include:

Project Name—A reference to a project associated with the formulation specification. This field is configurable to either:

- Allow users to link the formulation specification to a project defined in NPD, or
- Enter free text to describe the project in an appropriate manner.

Substitute Restrictions—Links to a multi-select dialog box containing substitute restrictions. Chosen restrictions filter the list of available substitutes that will be presented while designing. This field is only available when the specification is in a workflow status that is marked with a system action of "Designable."

If a formulation specification is not marked with any substitute restrictions, all substitutes defined for raw materials in the BOM are available for design use. If a formulation specification is marked with a USDA restriction, only substitutes marked with a restriction of USDA will be available for design use.

Description—An appropriate definition or explanation of the formulation specification. It is common for the description to describe what the formulation is producing and occasionally methods used during production.

Facility Information Section

The Facility Information section contains the list of facilities linked to a formulation specification. This information is useful for identifying plants that use or are approved to use a given formulation when performing production.

Figure 6-2: Facility Information section

Formulation Tab

The Formulation Tab is useful for:

- Building entire formulations from scratch
- Viewing:
  - All input items associated with the formulation
  - The total number of steps and descriptive data related to steps
  - Processing step assigned to a given input material
  - Input quantities, input yield, and relative percentages
  - All output items (internal, external and referenced)
- Updating most aspects of the ingredient bill of materials, outputs, and processing steps

The Formulation tab was designed to help users build formulations faster. Therefore some functions such as defining multiple outputs and re-sequencing steps must be performed using the Process Tab.

It is also important to note that many of the features available on the Formulation tab are also available on the Process tab. Therefore it is recommended that users interact with both tabs to determine which best fits their needs when creating formulations.

Inputs Section

Adding Materials To The Inputs Grid

There are two primary methods for adding materials to the inputs grid. The two approaches are:

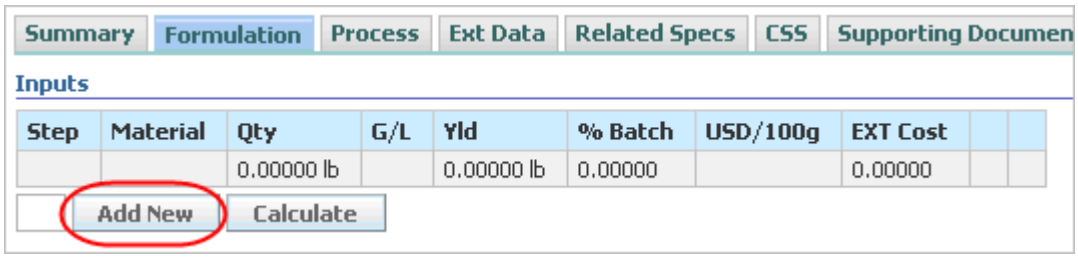
1. Adding Materials—Allows the user to add multiple BOM items using a search window.
2. Adding Rows And Then Using Auto Complete—Allows the user to add one or many rows and then enter the information about the BOM item and have GSM look up available entries leveraging the existing search model. You can tailor auto complete to lookup based on specification name, specification number, cross reference, and by how many characters the user must enter before auto complete starts. These settings are configurable. See the *Agile Product Lifecycle Management for Process Configuration Guide* for more information.

Adding Materials

To add materials:

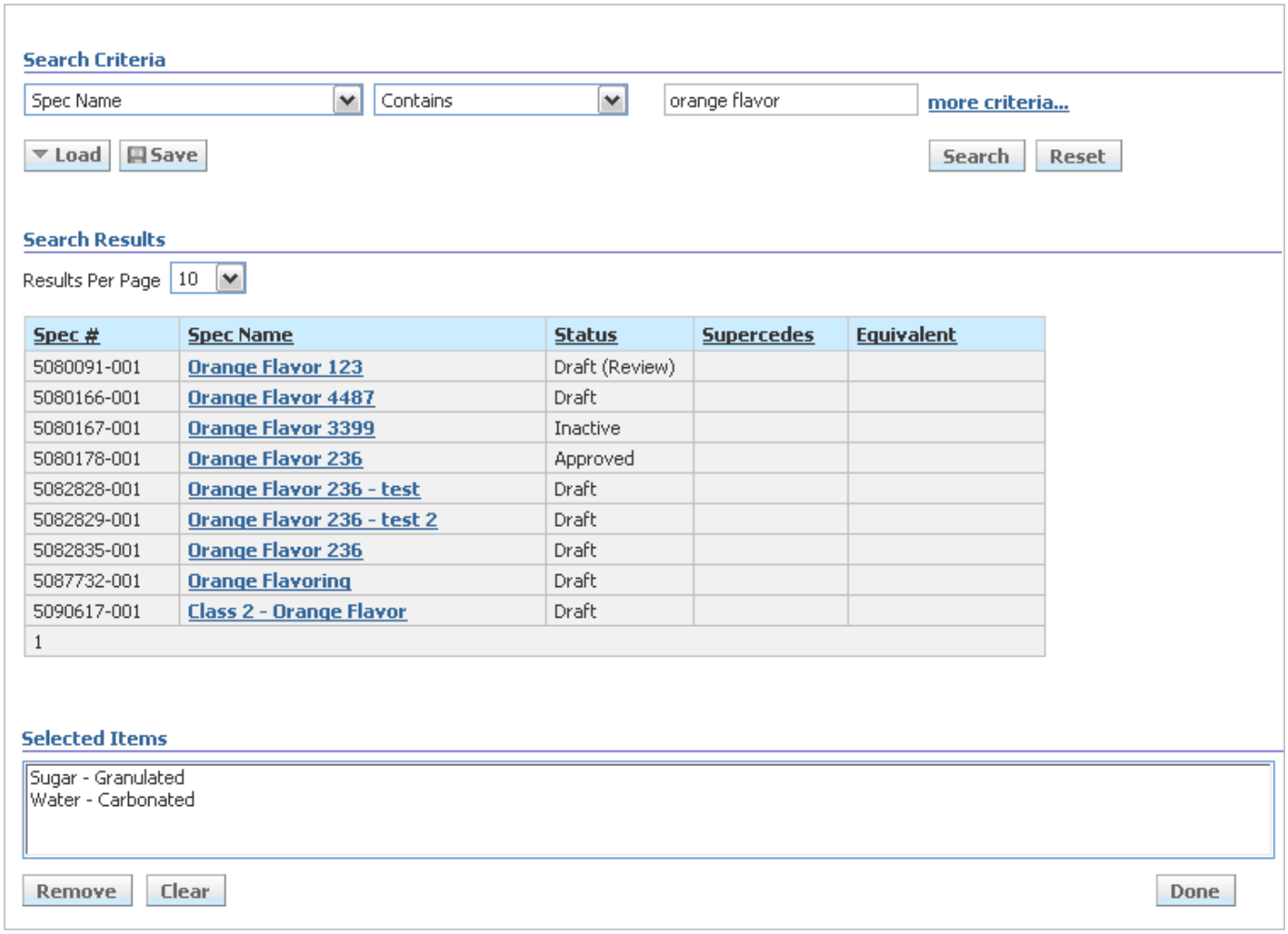
1. Click the **Add New** button leaving the field to the left of the button null, as figure 6-3 shows below.

Figure 6-3: Add New button



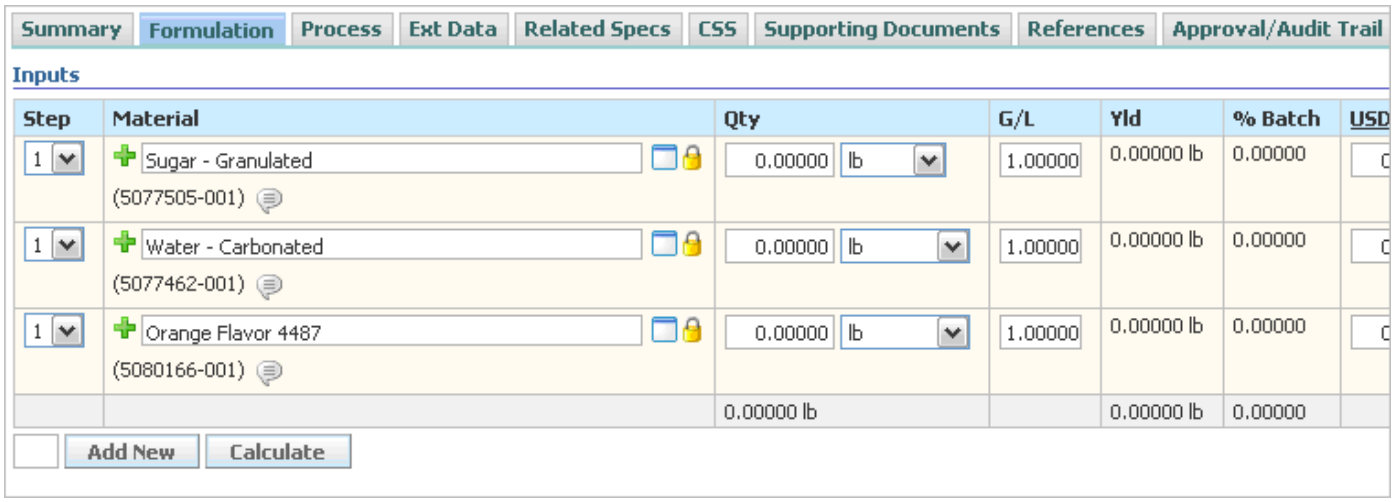
GSM opens a search page, as figure 6-4 shows below.

Figure 6-4: Search page



2 When you have found all the specifications you wish to add, click **Done** to return to the populated Inputs grid.

Figure 6-5: Populated Inputs grid

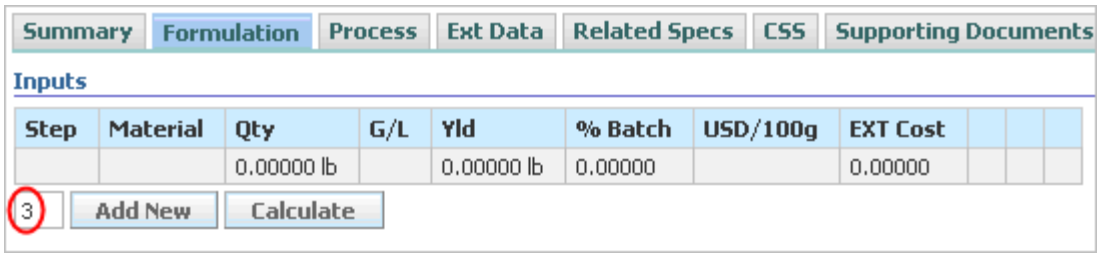


Adding Rows and Then Materials

To add rows and then materials:

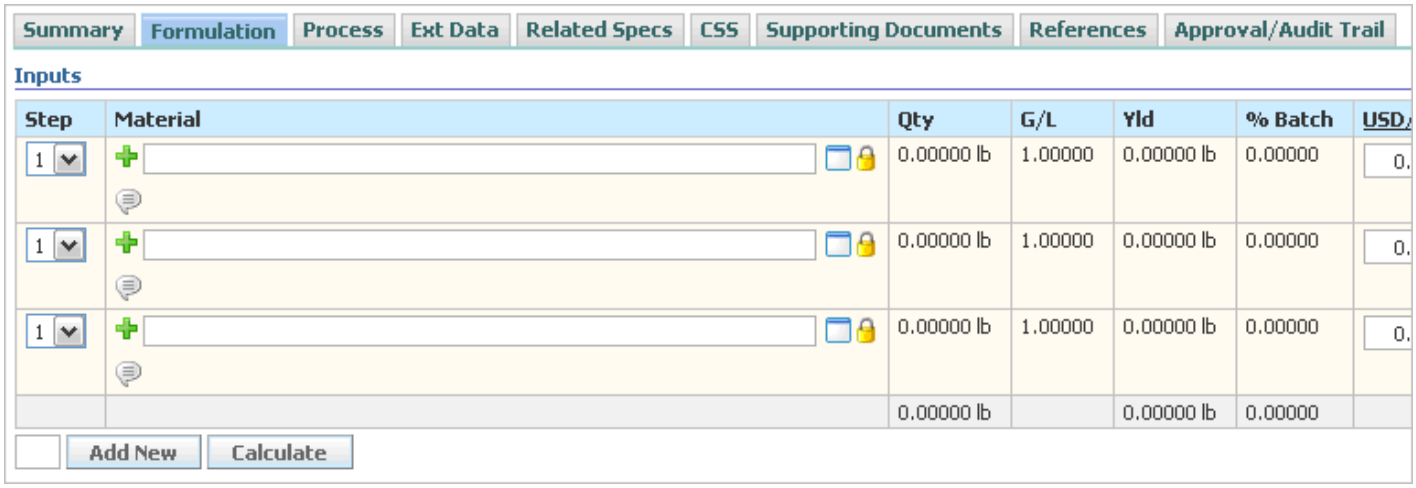
1 Enter the number of rows you wish to add to the left of the Add New button.

Figure 6-6: Inputs grid, number of rows to add



2 Click the **Add New** button. In the example below, the three rows are added without a material assigned.

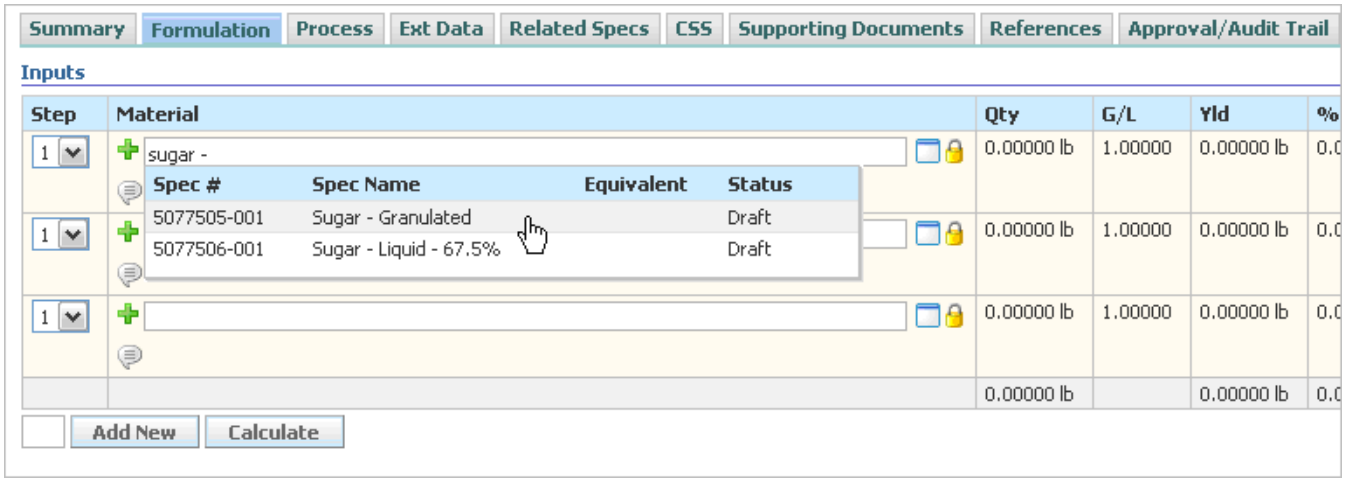
Figure 6-7: Three rows added



3 Next, click on the first row and start to type the name of the material. As you type, a GSM search is performed and specifications are presented for your selection. Use your mouse or up/down arrow to select the desired material. We refer to this feature as "Auto-Complete."

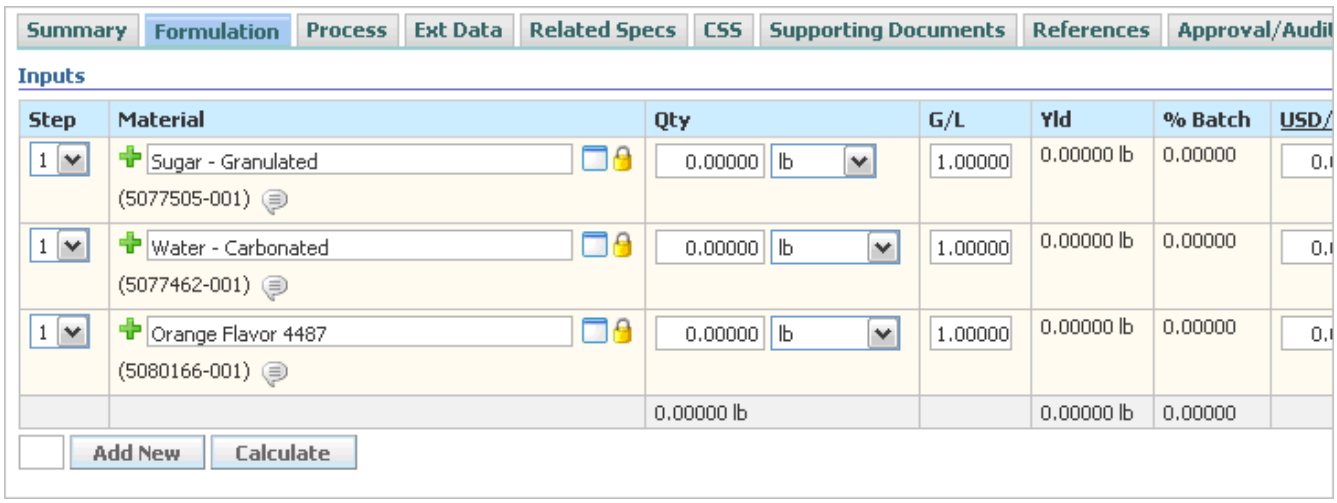
Note Once materials are defined for a given row, the grid will re-sequence, often placing the material at the bottom of the grid.

Figure 6-8: Auto Complete feature



4 Repeat the previous step for each row to populate the entire grid, as figure 6-9 shows below.

Figure 6-9: Populated grid



Additional Notes Regarding Adding Materials To The Inputs Grid

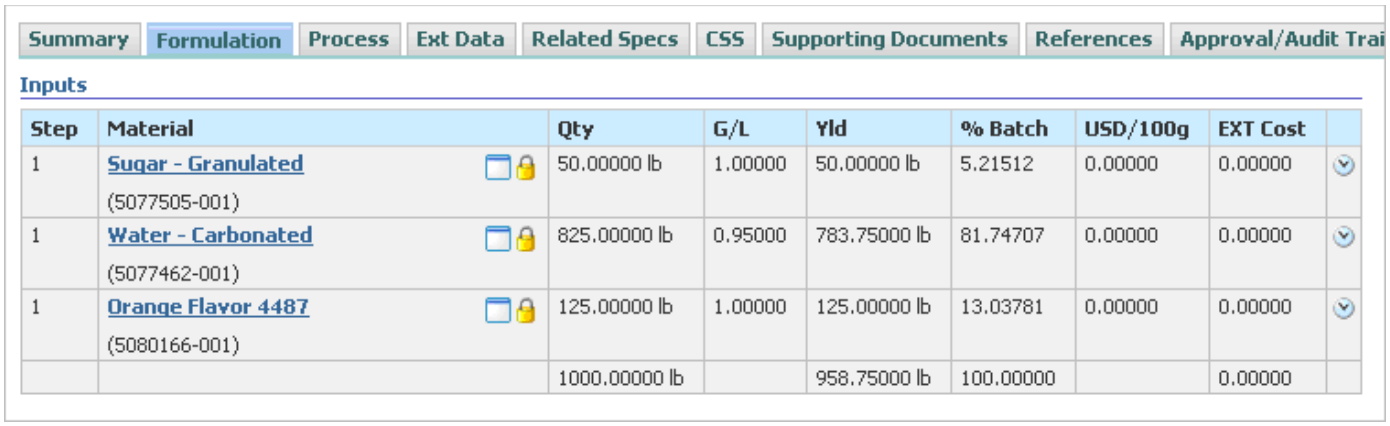
- Changing a BOM Item: To change the specification for an item in the inputs grid, click the add data icon (✚) in the Material column. GSM displays the search page where you can search for and select an ingredient specification.
- Using either approach, the grid is placed in an "edit all" mode, so the user can easily continue to enter data in the grid.

Note Auto-Complete can be configured to search based on specification name, specification number, cross reference, and by how many characters the user must enter before auto complete starts. Refer to the *Agile Product Lifecycle Management for Process Configuration Guide* for more information.

Establishing Quantities Within The Inputs Grid

Once one or more materials are established, the user can describe the amount of each material for each row.

Figure 6-10: Defining amounts of material



Step	Material	Qty	G/L	Yld	% Batch	USD/100g	EXT Cost
1	Sugar - Granulated (5077505-001)	50.00000 lb	1.00000	50.00000 lb	5.21512	0.00000	0.00000
1	Water - Carbonated (5077462-001)	825.00000 lb	0.95000	783.75000 lb	81.74707	0.00000	0.00000
1	Orange Flavor 4487 (5080166-001)	125.00000 lb	1.00000	125.00000 lb	13.03781	0.00000	0.00000
		1000.00000 lb		958.75000 lb	100.00000		0.00000

Material Quantity Fields Defined

Quantity—The amount of material gathered and placed into the manufacturing process. A total field is presented as the final row of this column.

G/L (Gain/Loss)—A factor used to describe the amount of material either gained or lost during a manufacturing process. As an example, when cookie dough is placed in a bowl some amount sticks to the bowl and is lost.

Yield—The amount of material contributing to the output item(s). Quantity * G/L = Yield. A total field is presented as the final row of this column.

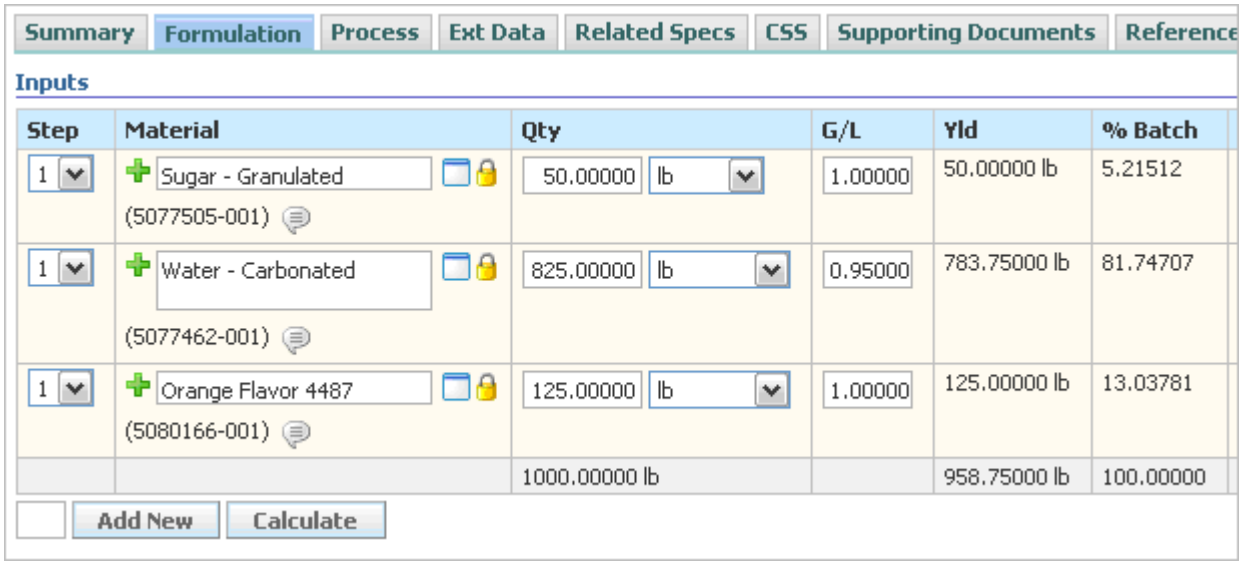
Percent Batch—The percent yielded for a given material as compared to the total yield.

Entering Material Quantity Data Using BOM Calculation Paths

When the formulation specification is in edit mode, the user is limited to enter data based on predefined BOM calculation paths. The paths are described as follows:

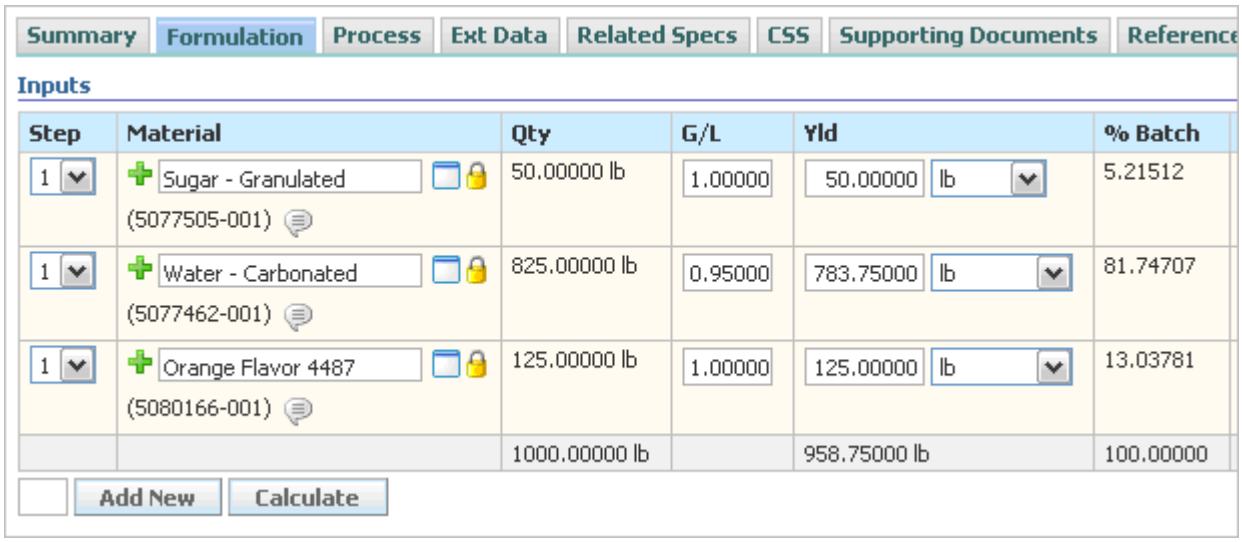
- **Input Quantity**—The user enters data by typing in the quantity. As needed, the user can adjust gain/loss to establish the yield. The remaining fields including yield are populated when the application recalculates.

Figure 6-11: User types in Quantity



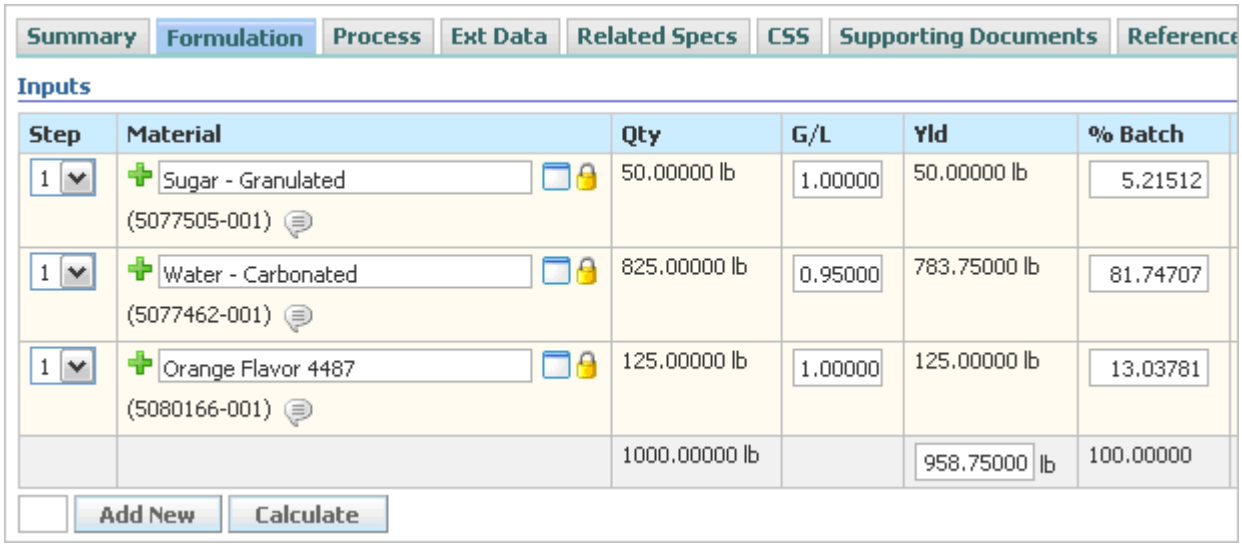
- **Input Yield**—The user enters data by typing in the yield. As needed, the user can adjust gain/loss to establish the quantity. The remaining fields including the quantity are populated when the application recalculates.

Figure 6-12: User types in Yield



- **Input Percent**—The user enters data by typing in the Total Yield and entering in the proper allotment per row. When the application performs its calculations, the yield for a given material or row will be established. As needed, the user can adjust the gain/loss to establish the quantity. The remaining fields will be updated as the application calculates.

Figure 6-13: User types Total Yield



Selecting a BOM Calculation Path—When a formulation specification is created, the BOM calculation path is immediately assigned using the path found in the user's Profile and Preferences. Once the formulation specification is saved, the BOM calculation path for the formulation specification is managed via the formulation specifications Settings button. A user may change the formula's BOM calculation path at any time via the Settings button and the path will be saved when the formulation specification is saved. Profile and Preferences is described in detail in the *Agile Product Lifecycle Management for Process Getting Started Guide*.

Calculation paths control the following:

- Which fields are editable
- Certain system actions
- Which type of user messages display based on the calculation
- Tags and rules

❑ **Units Of Measure**—When a formulation specification is created, the default unit of measure (UOM) is derived from the user's Profile and Preferences. Therefore any rows added to the Inputs grid will initially be presented using the UOM.

Similar to BOM calculation paths, the default UOM for a formula can be changed via the Settings button. Upon making a change within Settings, any new row added will correspond to the formula's default UOM.

For a given material, a standard list of UOMs is presented by default. This list can change if:

- Density is/is not defined on a given input ingredient specification. If it is defined, additional UOMs associated with volume will appear in the UOM drop down.

- Explicit UOMs are defined on a given input ingredient specification. If explicit UOMs are defined, they will also appear in the UOM drop down.
- If your site is configured to only use explicit UOMs, then the material will only display UOMs described on the ingredient specification.

Working With Cost In The Inputs Grid

Two columns present cost data in the inputs grid. They are:

- **USD/100g**—The cost per 100 grams of material. This cost is derived and presented in one of two ways.
  - Cost Library—Cost can be loaded to the cost library via an API. If this is performed then the data presented on the screen is controlled through settings found on Profiles and Preferences, Formulation Preferences under the Cost Preferences section.
  - Override—Also, within GSM, you can change cost using the Setting action button, Cost Preferences section. If a cost override has been entered, the override icon ( ) displays.
- **EXT Cost**—The calculated cost for the input material based on the quantity. A total field is presented as the final row of this column representing the total ingredient cost for the formula specification.

Figure 6-14: Cost data

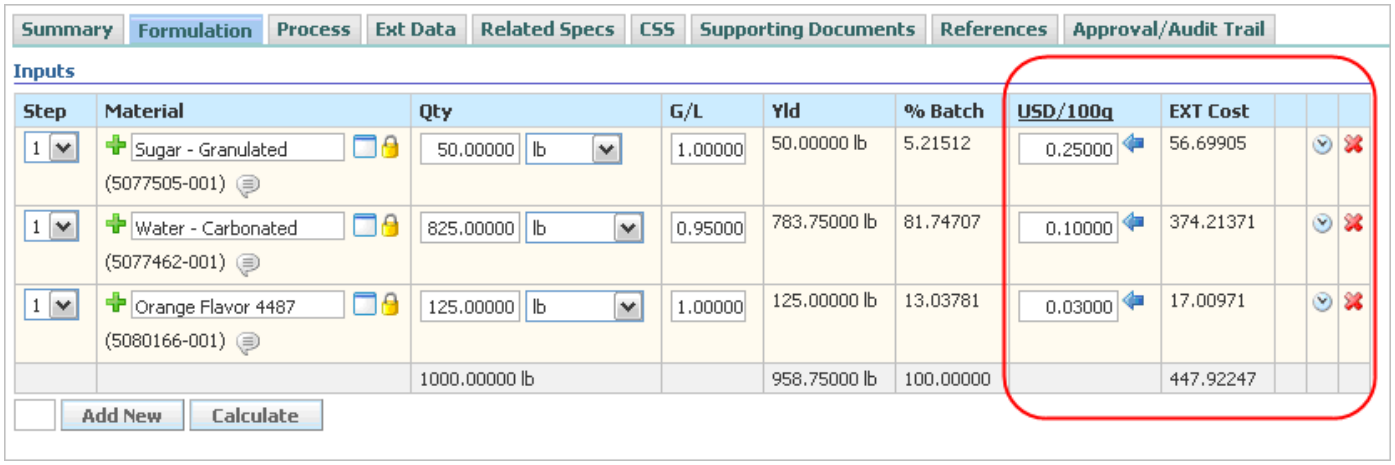
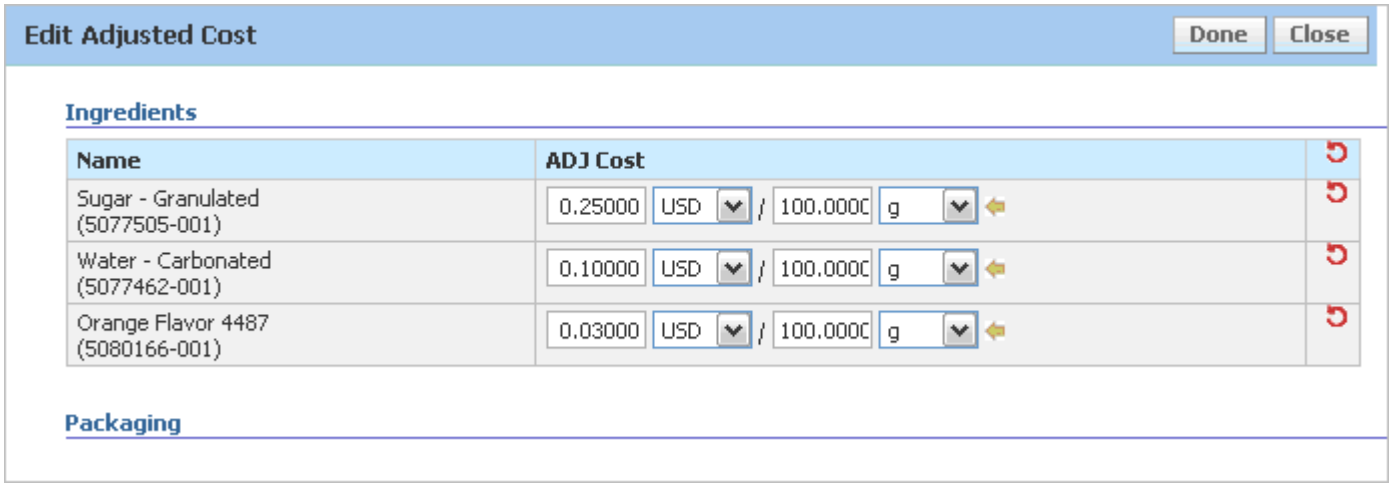


Figure 6-15: Edit Adjusted Cost dialog box



Additional Tools Found in the Input Grid

- **Steps**—If steps have been defined, then the user can assign a given material to the step in which it will be used. Please note the grid will refresh and reorder materials based on the step assigned.
- **Annotations**—You can click the annotations icon ( ) to add BOM annotations. Added annotations display in read mode and are included in printing.
- **Context**—When an ingredient is added to the Input grid as a material and the ingredient itself is the output of another formulation specification, an additional field will appear. This field allows the user to directly associate this input to the formulation that created it.

  Context is important because it provides the link between formulas. Context impacts:

  - Formulation Printing: If context is not defined, then the exploded BOM will not present lower level formulations.
  - Integration: When integrating formulation data through APIs or other forms of integration, context provides the link to formulas.

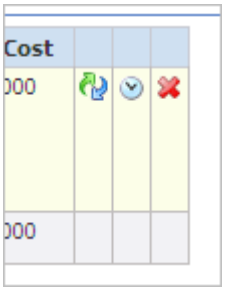
- **Basis**—A tool used to capture overrides to input ingredient data fields. The overrides are specific to a given ingredient in a given formulation specification. Therefore the override values are not associated with the input ingredient and are not available when using the input ingredient as an input to other formulation specifications. Refer to *Basis dialog box* on page 6-42 for a detailed explanation of basis.
- **Get Latest Issue**—When the user adds an ingredient specification to the inputs grid, by default the relationship is specific to the ingredients issue number, i.e. issue 001. Later if the ingredient is changed and a new issues is created (002), then some form of change management must be performed to update the formulation specification.

However if Get Latest Issue is used when creating the relationship between input ingredient and the formulation specification, the relationship is only based on specification number and workflow status. Therefore the next time the specification is viewed, the BOM will return the maximum issue number that is in a workflow status marked with the "Is Approved" system action.

- **Substitute Material**—Displays the substitution icon ( ) if substitutes have been defined on the ingredient specification. When you click the icon, GSM displays the Substitute Material dialog box. Use this dialog box to swap out materials with available selections and to update quantities.
- **Item history**—Displays the item history icon ( ). Click on the icon to view a list of BOM items, their issues, and their statuses.
- **Delete**—Click the delete icon ( ) to delete the BOM item.

Three columns containing the substitute material icon, item history icon, and the delete icon display at the end of the inputs grid, as figure 6-16 shows below:

Figure 6-16: Inputs grid columns



Outputs Section

Use the Outputs section on the Formulation tab to manage the materials that are created from a given step on a formulation specification. The Formulation tab has simplified functionality in the area of managing outputs. Some examples of features related to outputs available on the Process tab that are not available on the Formulation tab include:

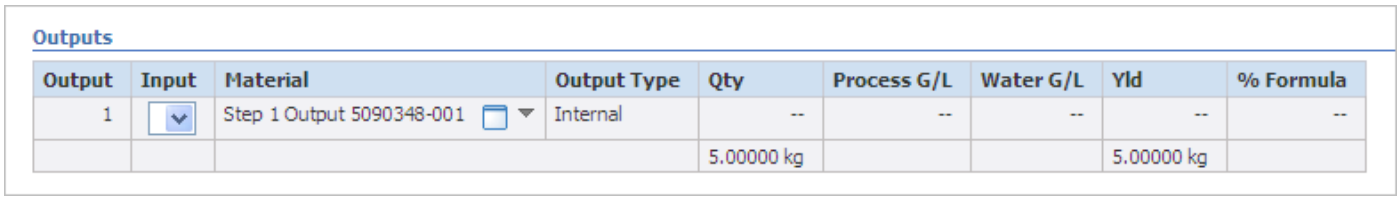
- Creating more than one output for a given step.
- Dispersing an internal output so that it can be used as an input into more than one of the following steps.
- Defining alternate outputs.

If these scenarios are important for your organization, then you will want to consider using the Process tab.

Note Outputs are automatically created when a new step is defined. For this reason you will not find an Add New button in this section.

Figure 6-17 below shows the Outputs section.

Figure 6-17: Outputs section



Key fields include:

Output—The corresponding step that this output created from.

Input—The step number where the output will be consumed. This field is only available when output type is Internal.

Material—The name of the output. When the creation of a step automatically creates an output a name is generated. The naming convention is:

Step+{Step Number}+Ouput+{Specification Number}+{Issue Number}

The name can be updated via the Output dialog box.

Output dialog box—The primary tool for managing data related to the output such as nutrition, compliance, and other rolled up data. See *Output Dialog Box* on page 6-49 for more information.

Drop-down arrow ( )—This arrow represents an extensibility point that has been leveraged to help BOM calculations treat this output. It is primarily useful when managing multiple outputs on the Process tab. By default, the outputs are variable and should adjust linearly to the formula. For example, 2 outputs each consume a half. Add two more, and all four outputs receive 25%. By choosing "Fixed," the specified quantity to the output will remain fixed regardless of adjustments made to the input BOM.

Output Type—Available types are Internal, External/Owned, and Referenced as defined in *Outputs* on page 6-2.

Qty—Total amount of inputs for that output. This field is not shown for Internal types because the quantity associated with the material is accounted for in the final output.

Process G/L—Factor applied to the initial quantity to account for output loss. Please note that this factor impacts the entire output where as the input G/L was specific to a single input.

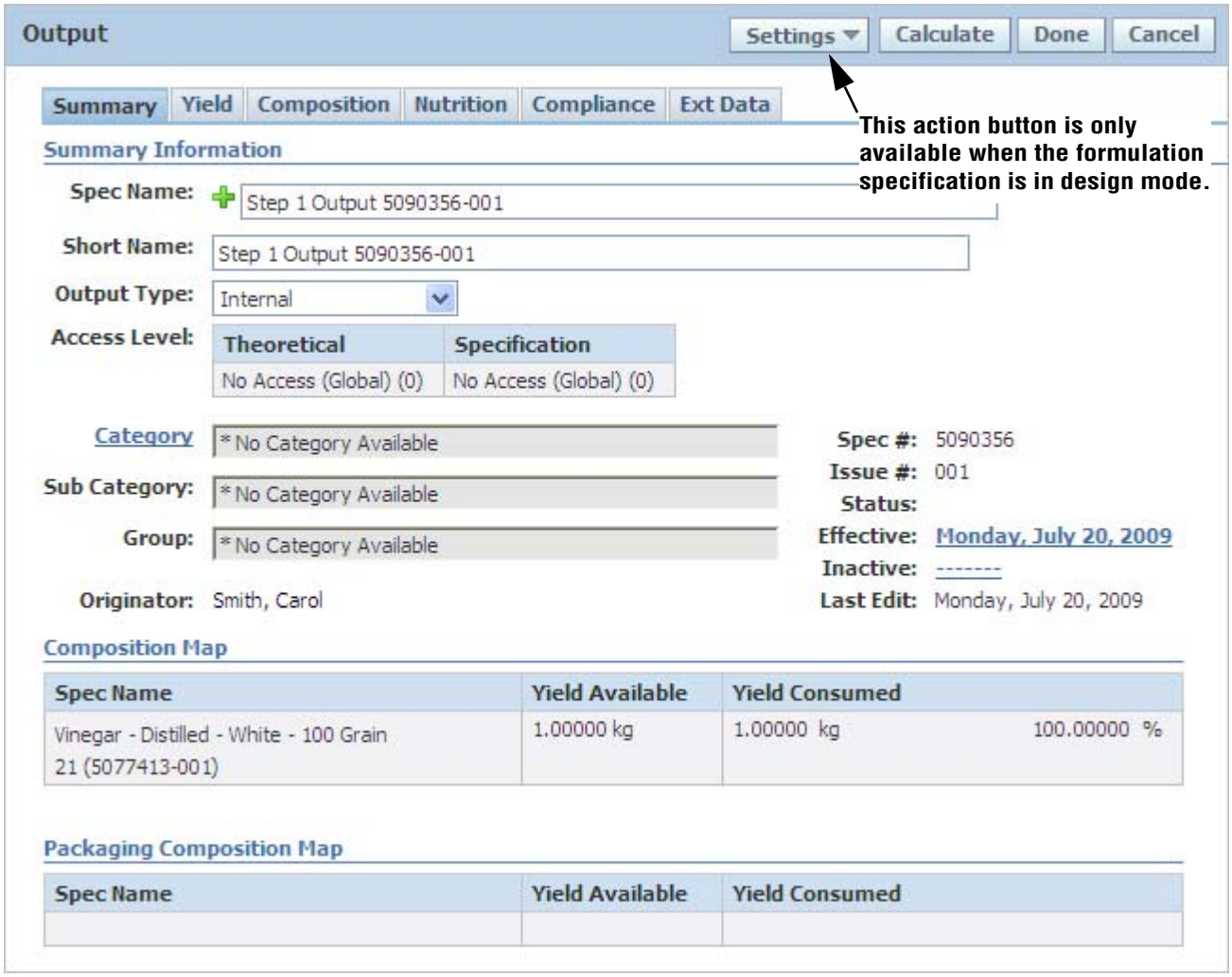
Water G/L—Factor applied if during processing, water is lost or gained.

Yld—Final output quantity after all loss has been accounted for.

% Formula—Percentage of the formula that this output represents compared to the total Formula Output.

Data associated with output that can be modified using the Output dialog box, shown in figure 6-18 below. To access the Output dialog box, click the document icon ( ). The output dialog box is described in more detail in *Output Dialog Box* on page 6-49.

Figure 6-18: Output dialog box



Steps Section

You can use the Steps section of the Formulation tab to describe procedures that must be performed to create an output material. Steps themselves are merely natural milestones in the manufacturing process. To further differentiate steps, you can add step instructions to clearly articulate the actions that are being performed during the step.

This section offers multi add capability. GSM automatically names added steps as "Step X," where X is name of step. Key fields include:

Step name—Name of step.

Step Qty—Total amount of inputs assigned to the step.

Step Yield—Total amount of inputs used in the step after gain loss has been factored in.

Use the delete icon ( ) to delete a step. You cannot delete a step that creates items being used.

Click the step instructions icon ( ) to add instructions for each step. These instructions will display on Process tab and in print details.

Process Tab

The Process tab has many of the same uses as the Formulation tab in that you can add/remove, view and update inputs, outputs, steps and the various pieces of data associated with these areas. However the Process tab does provide the user additional capabilities that are not available on the Formulation tab. Examples of these items include:

- Advanced modeling of outputs, including:
  - Creating more than one output for a given step.
  - Dispersing an internal output so that it can be used as an input into more than one of the following steps.
- Identifying alternate materials for both inputs and outputs.
- Working with packaging that associated to the formulation.
- Generally developing a formulation by step. We have found that some types of products are easier to organize and design by step. Therefore the detail provided on the Process tab is considered useful for these types of products.

The tab is primarily structured in three parts:

- **Steps Section**—This section is identical to the Steps section described on the Formulation tab. On the Process tab it acts as summary information for each step.
- **Process Navigation**—This is the gateway to the information found within each step. This tool can also be used to create, delete, and reorder steps.
- **Step Details**—Describes a given step at the most granular level. The elements found in this section make up the majority of the content for our discussion on the Process tab.

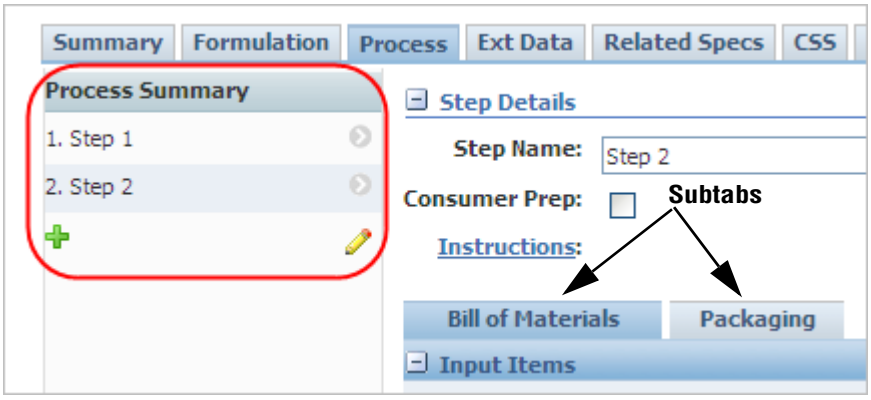
Steps Section

See Formulation tab, *Steps Section* on page 6-22.

Interacting With Process Navigation

Process Navigation displays in the left side of the page, as figure 6-19 shows below. Steps are displayed under the Process Summary heading. Click on the step to view details about the step.

Figure 6-19: Process Summary panel



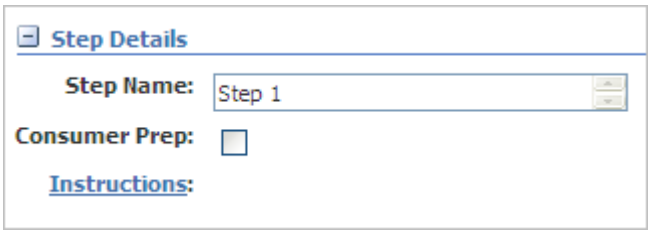
The following icons are used in process navigation:

- Add data icon ( )—Adds a step. New steps are reflected on the Formulation tab.
- Edit icon ( )—Puts process navigation in edit mode, allowing you to delete a step using the delete icon ( ) if the step meets the delete step criteria, or reorder steps using the up and down arrow icons ( ). When process navigation is in edit mode, you cannot select a different step to display in the Step Details section.

Interacting With The Step Details Section

This section represents the area where we will collect and present the most detail regarding an individual manufacturing step.

Figure 6-20: Step Details section



Key Fields:

Step Name—The name of the step.

Consumer Prep—Indicates whether the step is a consumer preparation step. The purpose for marking a step as consumer preparation is that it allows you to perform additional modeling using the external or referenced outputs created by the formulation.

The standard use case is cereal and milk. The external output for a given formulation is cereal. However the industry usually describes the nutrition based on how a consumer will prepare the item. In this case, the industry considers it common that the consumer will add a cup of whole milk to the cereal.

Therefore after the user defines the steps needed to create the output, in this

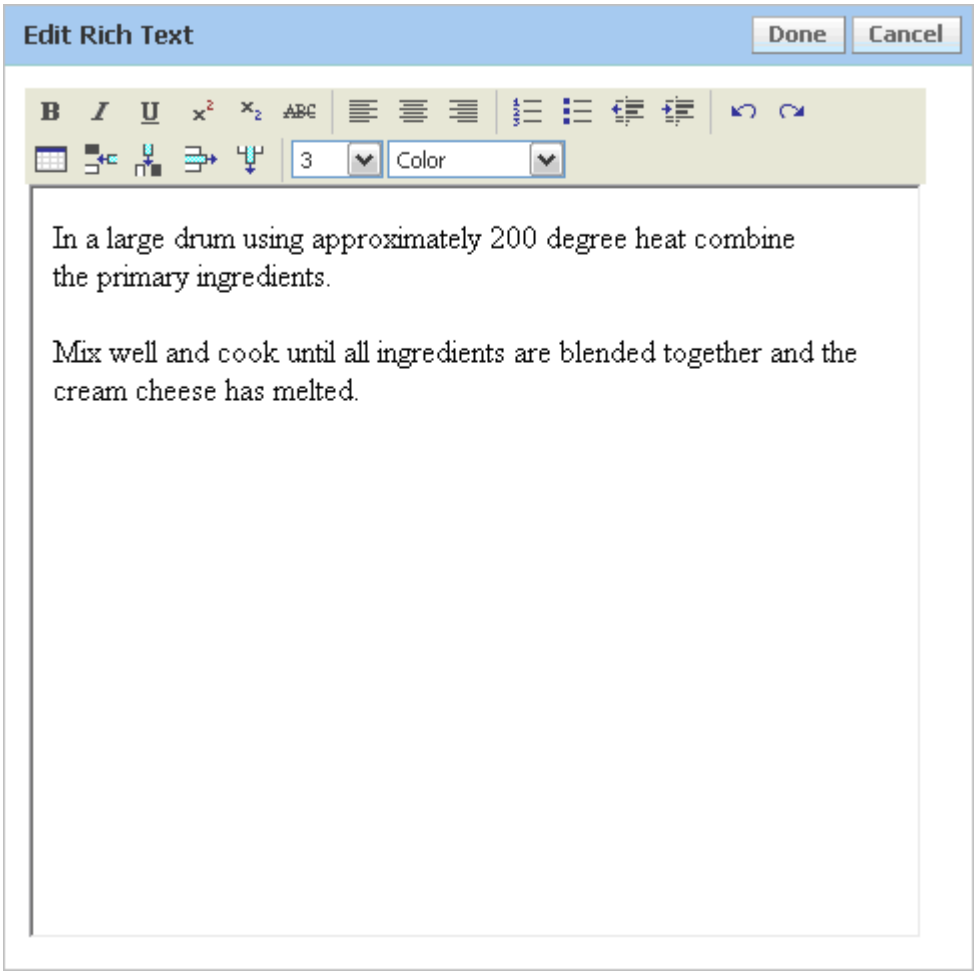
example cereal, the user will add one more step. In this step the cereal and the whole milk will be added as inputs. The output from the consumer prep step will describe the theoretical data for the item as used by the consumer.

Specific functionality provided by the Consumer Prep flag:

- A consumer preparation step can consume external outputs from the same specification.
- Any additional materials added to the consumer preparation step will not affect the general formulation specification. I.e. inputs to a consumer prep step will not appear on the Formulation tab's BOM and will not impact quantity, yield, or percentages.
- A consumer preparation step can consume a normal output. Once you mark a step as consumer preparation, you can add external outputs from the same specification. Anything you add will not affect the standard formula.

Instructions—Information describing the actions being performed during the step. Click the hyperlinked field to display the Edit Rich Text dialog box, as figure 6-21 shows below. Enter instructions about the step, and then click **Done** to close the dialog box.

Figure 6-21: Edit Rich Text dialog box

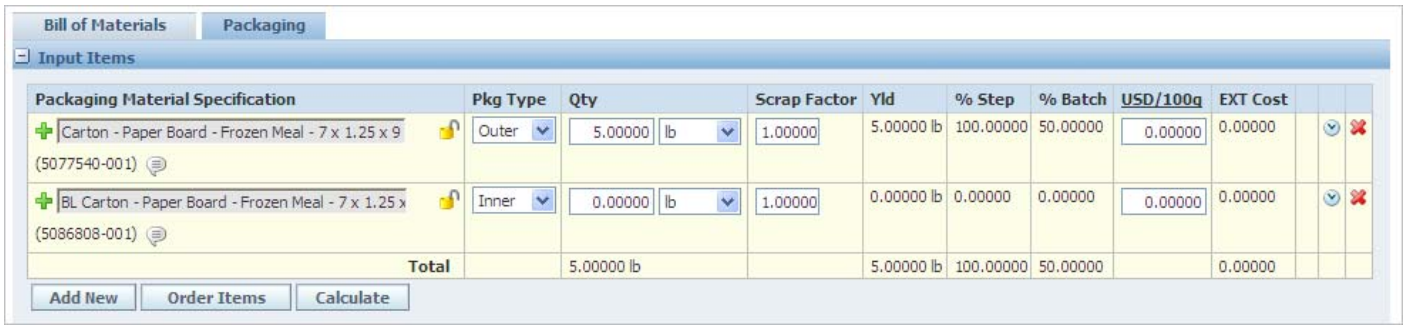


In addition, GSM displays two subtabs in the Step Details section:

- Bill of Materials—Made up of input items for ingredient and alternate input items for ingredients, as figure 6-22 shows below. Bill of Materials will be further described in this document in the section titled *Bill Of Materials Sub-Tab* on page 6-26.
- Packaging—Made up of input items for packaging and alternate input items for packaging, as figure 6-23 shows below. Packaging will be further described in this document in *Packaging Sub-Tab* on page 6-36.

Figure 6-22: Bill of Materials subtab

Figure 6-23: Packaging subtab



Bill Of Materials Sub-Tab

At initial glance the Bill Of Materials Grid appears very similar to the Formulation tab's Input Section. It is important to note that all aspect of this grid relate only to one step in the overall formulation. In this portion of the document we will describe how to use the Bill Of Materials grid to organize and present data related to the step.

Key sub-sections:

Input Items—Described below, in *Input Items Sub-Section* on page 6-27

Alternate Input Items—Described below, in *Alternate Input Items Sub-Section* on page 6-29

Output Items—Described below, in *Output Items Sub-Section* on page 6-30

Alternate Output Items—Described below, in *Alternate Output Items Sub-Section* on page 6-36

Input Items Sub-Section

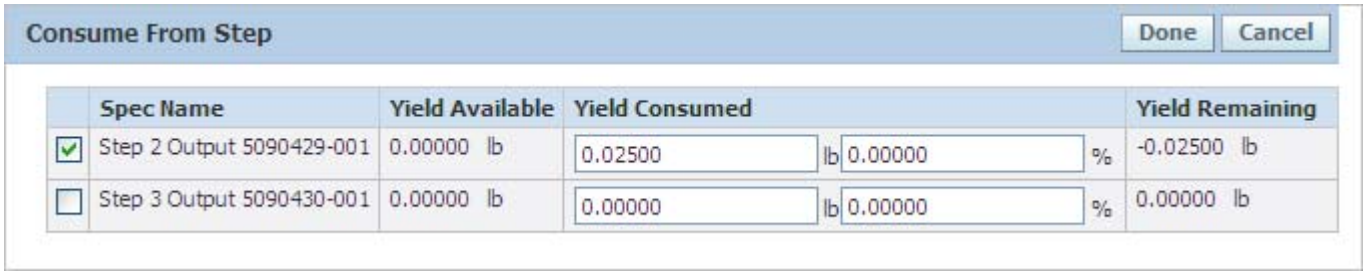
Adding Materials To The Input Items Sub-Section

For the most part, adding materials to the Input Items Sub-Section is handled in the same manner as adding items to the Formulation tab's Input Item section. Therefore please review *Adding Materials To The Inputs Grid* on page 6-11.

Additional features are available in this sub-section include:

- **Consume From Step**—Using Consume From Step we are able to link steps together to reflect how material moves from step to step. This button specifically allows you to associate the internal output from a previous step to the step you are currently defining.

Figure 6-24: Consume From Step dialog box



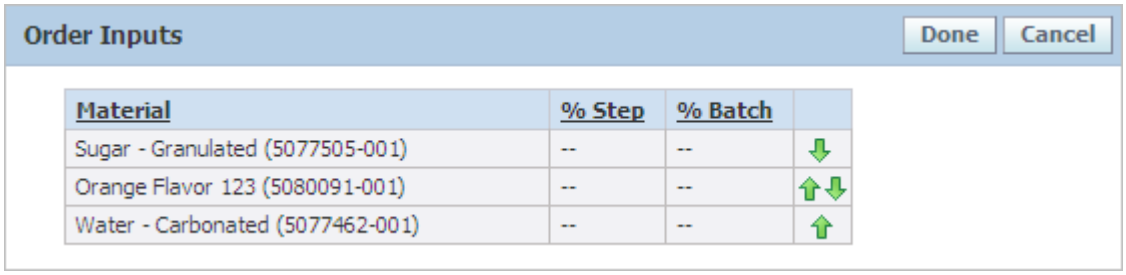
Use the following fields in this dialog box to provide amounts and pull in the specified steps' outputs.

- **Spec Name**—Name of the specification to consume
- **Yield Available**—The yielded amount from the step that created the output
- **Yield Consumed**—A portion of the yielded amount already used by another step
- **Yield Remaining**—The amount that is available for use in one or more steps

Select the step to consume, and then click **Done**. The dialog box closes, and GSM updates the Input Items section with the updated quantities.

- **Order Items**—Click to change the sort order of the inputs. GSM displays the Order Inputs dialog box, as figure 6-25 shows below.

Figure 6-25: Order Inputs dialog box



Use the up and down arrow icons ( ) to change the order of input items, and then click **Done**. GSM closes the dialog box and the new sort order is reflected in the Inputs grid.

Establishing Quantities Within The Input Items Sub-Section

Establishing quantities for the most part is similar to the methods described on the Formulation tab. Therefore please review *Establishing Quantities Within The Input Items Sub-Section* on page 6-28. However it is worth noting that all values are specific to a single step.

Additional features available in this sub-section include:

- **Percent Step**—The percent yielded for a given material in a given step as compared to the total yield for the step.
- **Consume From Step**—Quantities for consume form step items are established when adding the material to the grid. See page 6-27 for additional information.

Remaining Fields and Tools within the Input Items Sub-Section

Due to the fact that many of the fields and tools are the used by both the Formulation and Process tabs, the remaining fields will point you to the appropriate definitions.

Annotations—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Context—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Basis—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Get Latest Issue—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Substitute Material—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Item history—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

Delete—See Formulation Tab, *Additional Tools Found in the Input Grid* on page 6-19

USD/100g—See Formulation Tab, *Working With Cost In The Inputs Grid* on page 6-18

EXT Cost—See Formulation Tab, *Working With Cost In The Inputs Grid* on page 6-18

Quantity—See Formulation Tab, *Establishing Quantities Within The Inputs Grid* on page 6-15

G/L (Gain/Loss)—See Formulation Tab, *Establishing Quantities Within The Inputs Grid* on page 6-15

Yield—See Formulation Tab, *Establishing Quantities Within The Inputs Grid* on page 6-15

Percent Batch—See Formulation Tab, *Establishing Quantities Within The Inputs Grid* on page 6-15

Alternate Input Items Sub-Section

Use the Alternate Input Items subsection to define an alternate item for a BOM item (when the Bill of Materials subtab is selected) or a packaging item (when the Packaging subtab is selected). Each alternate material is related to an original material and allows for a substitution factor. This subsection uses the get latest revision capability.

Figure 6-26: Alternate Input Items subsection (for BOM)

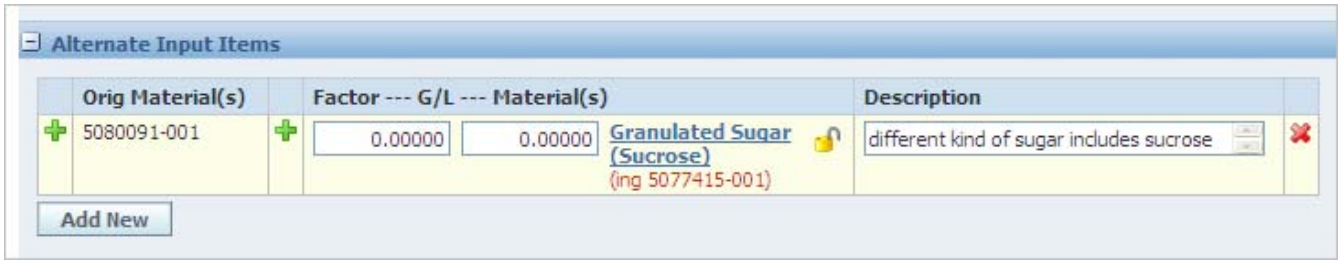
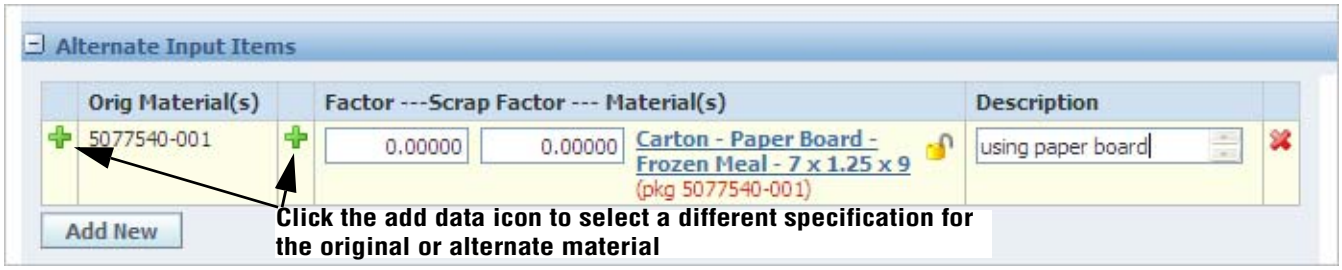


Figure 6-27: Alternate Input Items subsection (for Packaging)



Key fields include:

Orig Materials—The original BOM item.

Factor—Factor of the original quantity that will be used with new material.

G/L—Factor applied to the initial quantity to account for loss. This field displays for BOM items only.

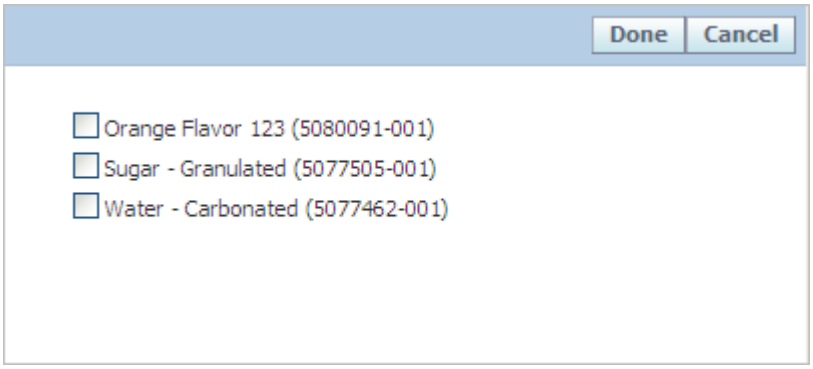
Scrap Factor—Percentage of the quantity that will be lost. This field displays for packaging items only.

Materials—The alternate material.

Description—Free text comments about the alternate item.

To add an alternate item, click **Add New**. GSM displays the input items dialog box, as figure 6-28 shows below.

Figure 6-28: Alternate input items dialog box (BOM example)



Select the input item(s) you are designating an alternate for, and then click **Done**. The dialog box closes, and your selections are added to the Alternate Input Items grid. Provide additional details for the alternate item using the fields defined above.

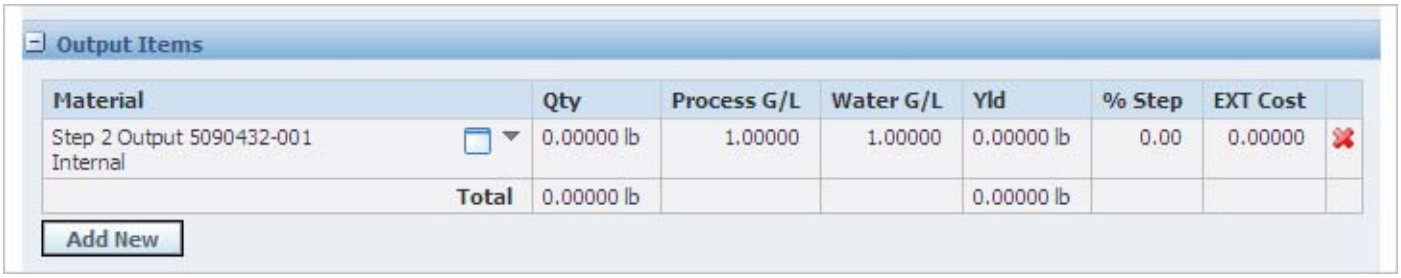
You can now continue to the Output Items and Alternate Output Items subsections. These sections apply to the entire step and are independent of the Bill of Material and Packaging subtabs.

Output Items Sub-Section

The Output Items subsection displays all the outputs that come from the current step.

This sub-section is especially important if you need to model disassembly, i.e. You place an orange in a machine and the results are an orange peel, orange slices, and orange juice. In this example the orange is an input and the remaining items are outputs.

Figure 6-29: Output Items subsection



Key fields include:

Material—The name of the output.

- When the user clicks on the document icon ( ), GSM displays the Output dialog box, shown in figure 6-48 below. The Output dialog box is used to describe nutrition, compliance, and other rolled up data, as described in *Output dialog box* on page 6-49 through page 6-62.
- Drop-down arrow ( )—This arrow represents an extensibility point that has been leveraged to help BOM calculations treat this output. By default, the outputs are variable and should adjust linearly to the formula. For example, 2 outputs each consume a half. Add two more, and all four outputs receive 25%. By choosing "Fixed," the specified quantity to the output will remain fixed regardless of adjustments made to the input BOM.

Qty—Total amount of inputs for that output. This field is not shown for Internal types because the quantity associated with the material is accounted for in the final output.

Process G/L—Factor applied to the initial quantity to account for loss.

Water G/L—Factor applied if during processing, water is lost or gained.

Yld—Final output quantity after all loss has been accounted for.

% Step —Percentage of the step that this output makes.

EXT Cost—Calculated cost for the output quantity.

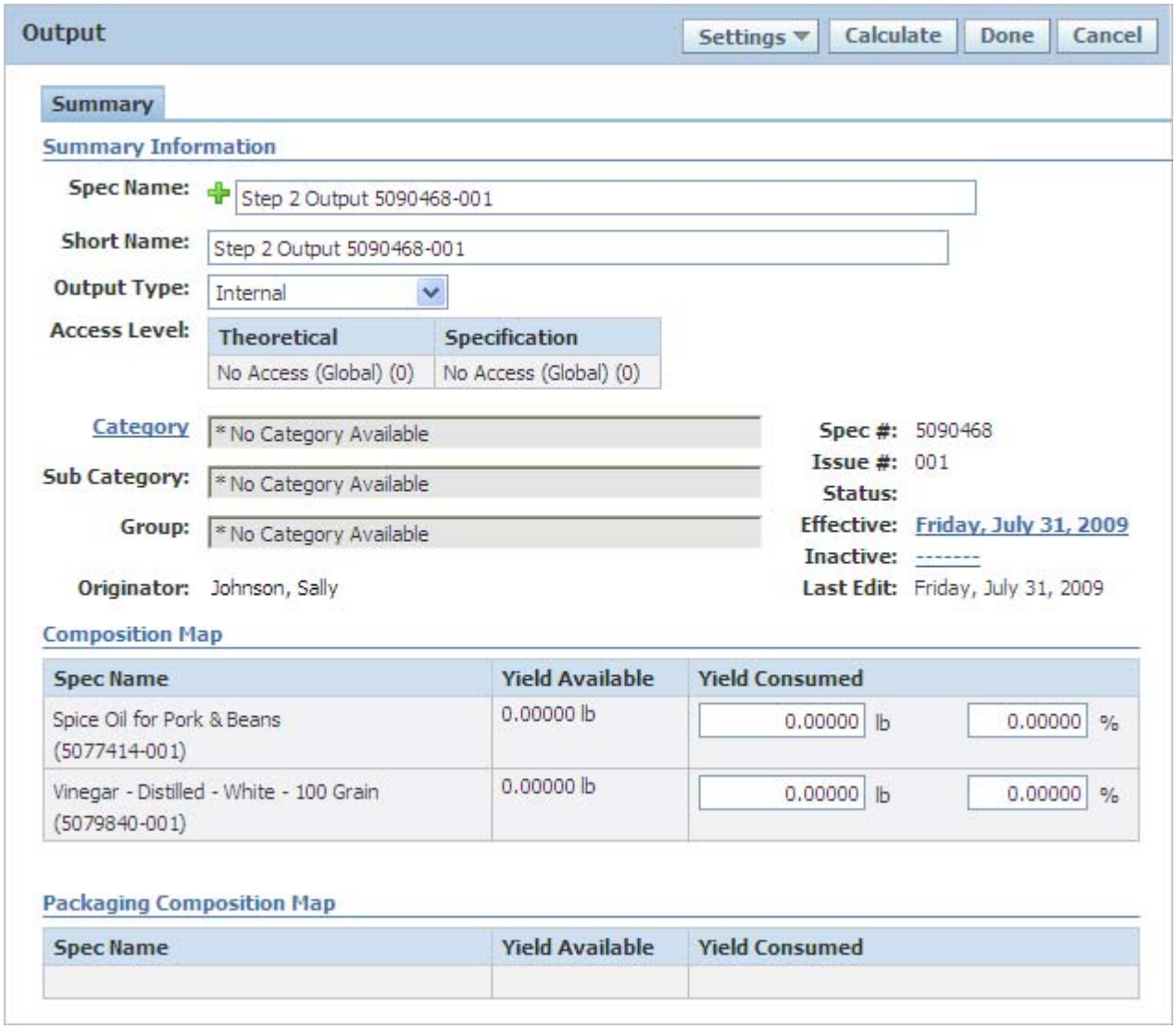
The following column displays at the end of the Output Items grid:

Delete—Click the delete icon ( ) to delete the output item. GSM displays confirmation dialog box. Click **OK** to delete the item. The item is removed from the grid.

The following button is found at the bottom of the Output Items grid:

Add New—Click to add a new output. GSM displays the Output dialog box, as figure 6-30 shows below. The edit all feature lets you make updates as you enter quantities.

Figure 6-30: Output dialog box



You can add multiple outputs from a single step.

Note The Yield Consumed can be less than the Yield Available when an additional output is modeled. Therefore, use the Composition Map to describe the quantity or percentage of each input needed to make a given output.

Packaging inputs can be mapped and follow the same concept as material inputs.

Refer to *Summary Tab* on page 6-50 for more details on this dialog box.

Adding Materials To The Outputs Grid

By default, when a step is created an output is also created for that step. Therefore if you work with products that only produce one output per step you will rarely need to work with this feature.

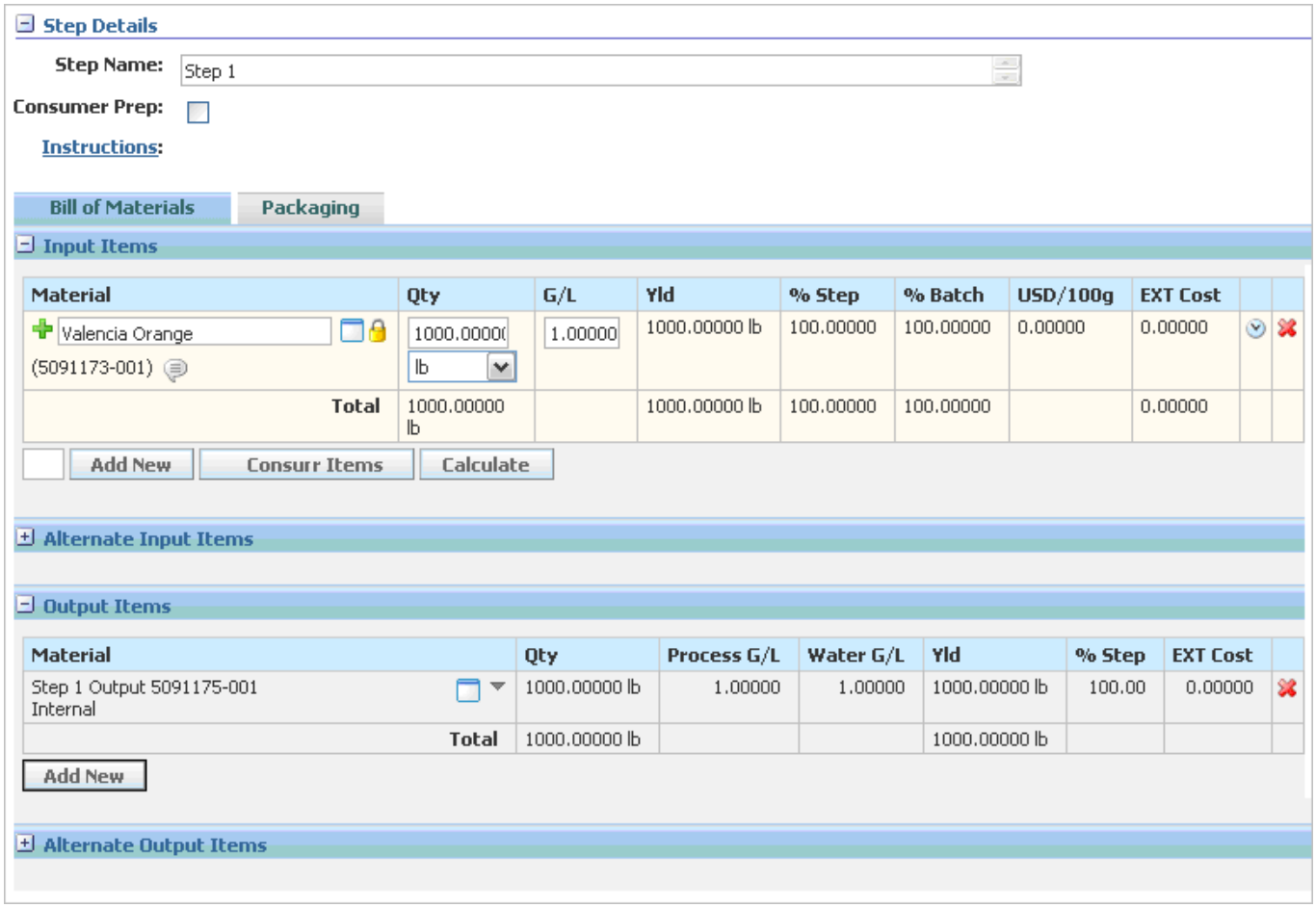
On the other hand, if you often find yourself describing how materials are disassembled or describing how multiple items are created from a single process, then this feature will help you model your products.

An important concept to understand when working with multiple outputs is related to the initial output. It is assumed that input materials will initially be assigned to the first output. Therefore all subsequent outputs reduce the amount of material associated with the initial output. In GSM we describe the first output as variable (or deselected Fixed) using the drop down feature described in the Key Fields above.

These concepts will become clearer as we review an example:

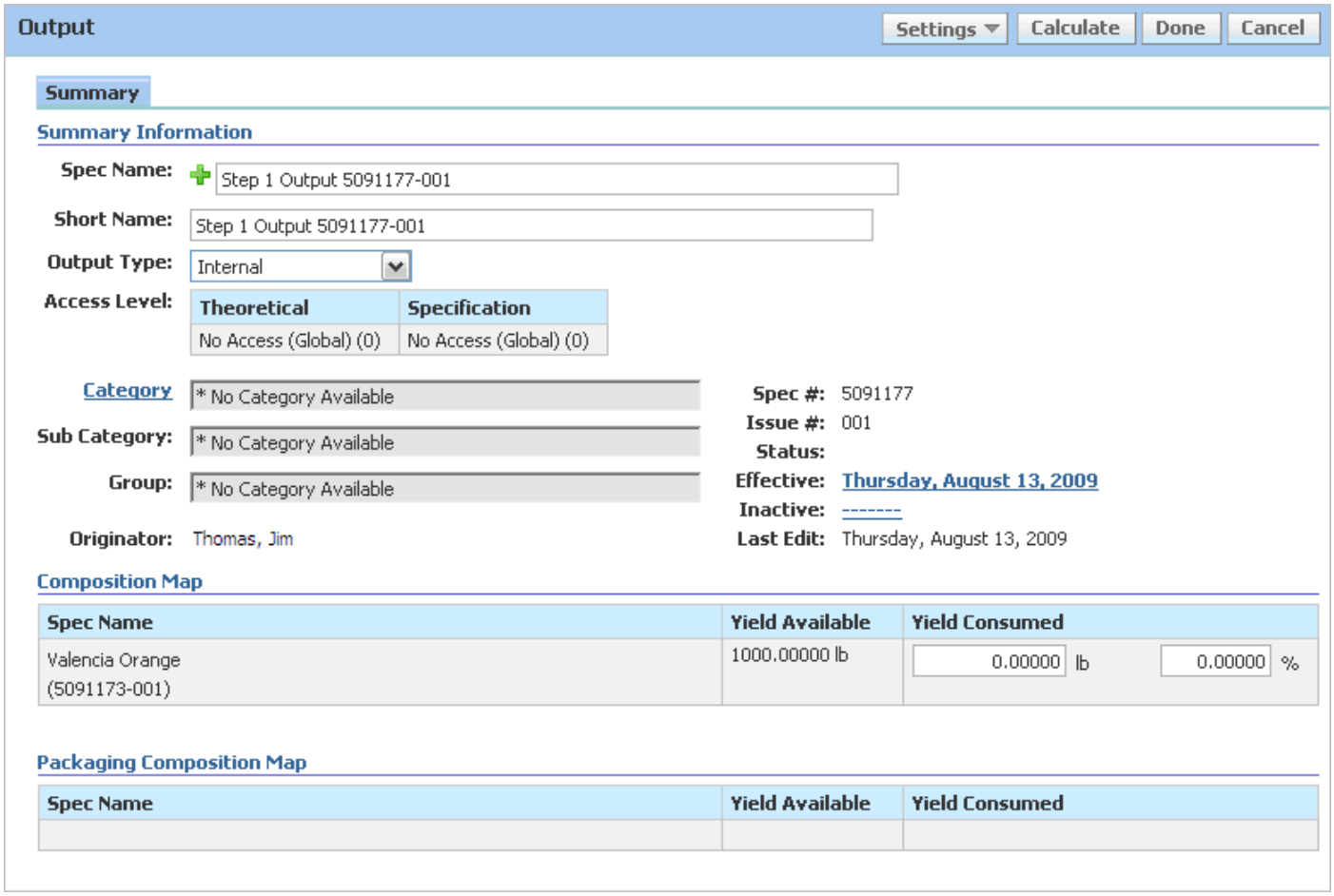
1 Prior to clicking **Add New** it is expected that you will have input materials defined and the automatically generated output. Note in this example all 1000lb of oranges is placed in the initial output.

Figure 6-31: Oranges example



2 Click **Add New** to create the second output and you will be presented with the Output Dialog Box.

Figure 6-32: Output dialog box

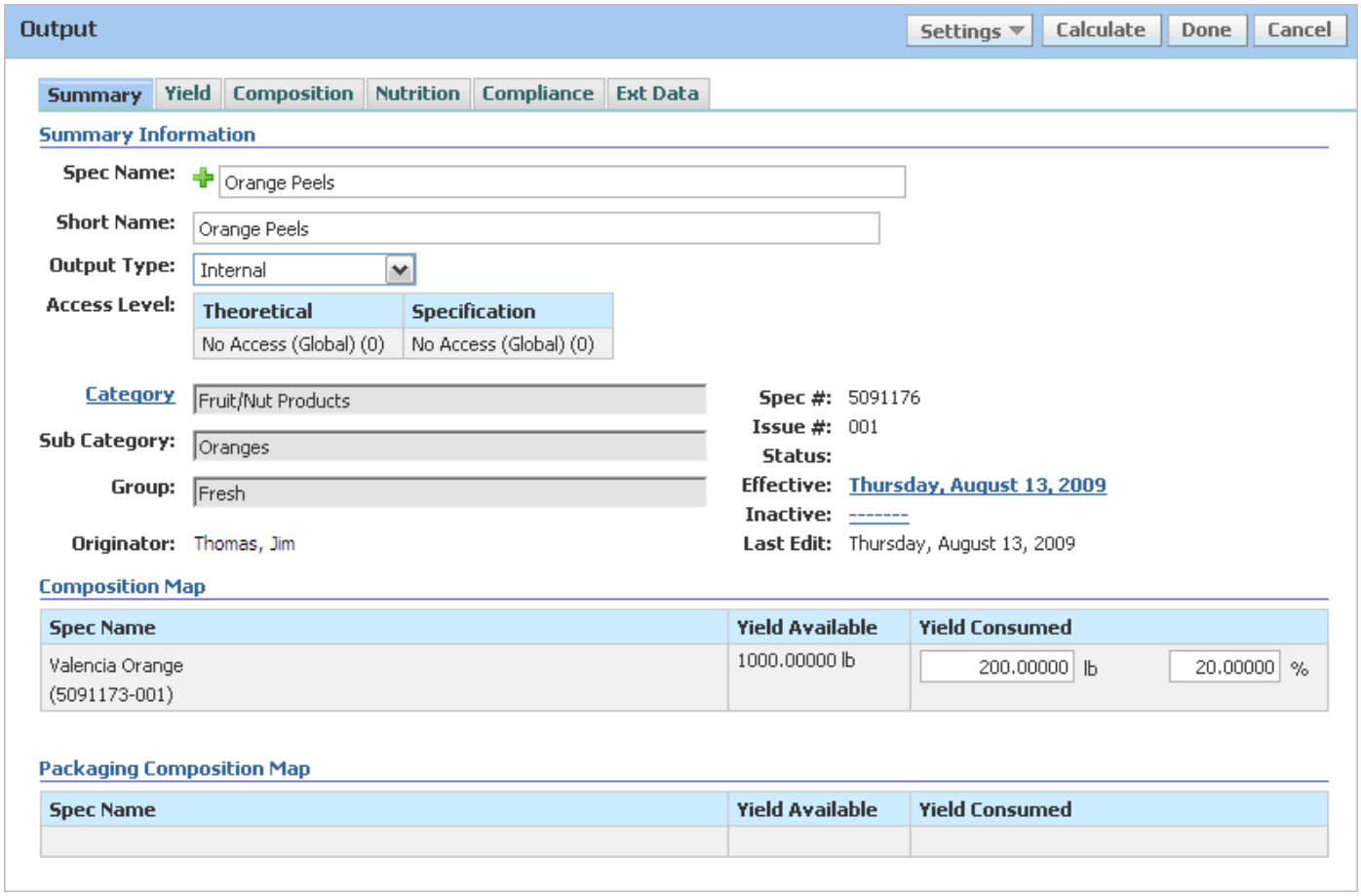


3 Populate the Yield Consumed. At this point you are assigning the portion of the inputs to be taken from then initial input and assigned to the output you are working with.

Note that once the Yield Consumed is entered and you click out of the field, BOM Calculation is performed. Also the remaining tabs associated with the Output Dialog Box appear.

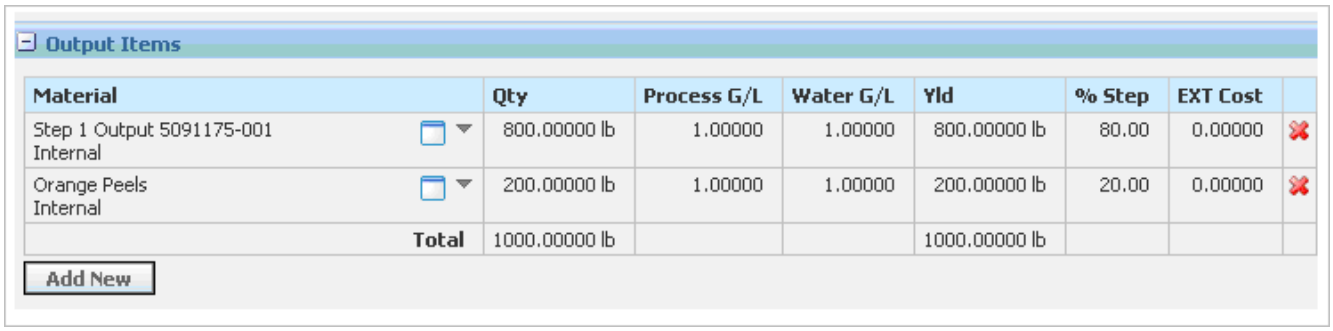
In this example only one input exists. If more inputs were present then the user would need to define by input the amount of material that contributes to this output. This level of detail helps the application model theoretical data.

Figure 6-33: Yield consumed



4 Upon clicking **Done** the output is now presented in the output subsection. You may also notice that it is very useful to take the time to properly name your outputs.

Figure 6-34: Output subsection



Alternate Output Items Sub-Section

This section allows you to define an output that could be used instead of the one you created in the step. This subsection uses the get latest revision capability.

Figure 6-35: Alternate Output Items subsection

Key fields include:

Orig Materials—The original output item.

Factor—Factor of the original quantity that will be used with new material.

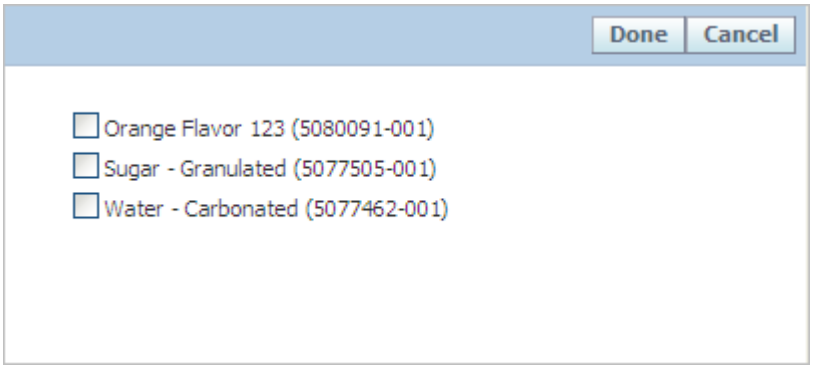
G/L—Factor applied to the initial quantity to account for loss. This field displays for BOM items only.

Materials—The alternate material.

Description—Free text comments about the alternate item.

To add an alternate item, click **Add New**. GSM displays the output items dialog box, as figure 6-36 shows below.

Figure 6-36: Alternate input items dialog box (BOM example)



Select the output item(s) you are designating an alternate for, and then click **Done**. The dialog box closes, and your selections are added to the Alternate Output Items grid. Provide additional details for the alternate item using the fields defined above.

Packaging Sub-Tab

The Packaging Sub-Tab allows users to describe Packaging Material and Printed Packaging Material specifications used in a manufacturing process. Some important items to note regarding packaging:

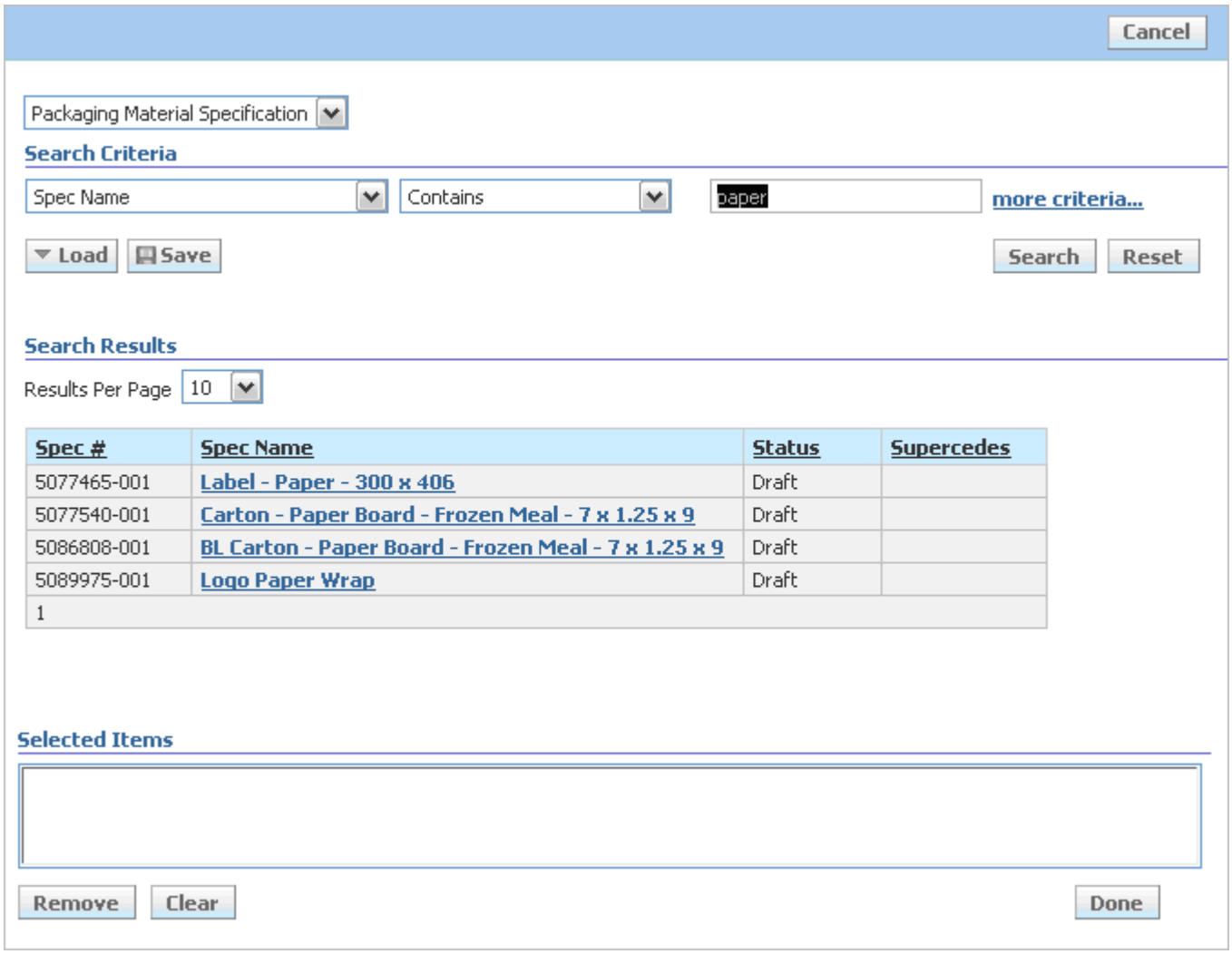
- It is commonly recommended to model packaging used to ship products to customers on the trade specification. This provides the user the ability to define a material using output ingredients and reuse it across many different trade specifications. It is on the various trade specifications that you distinguish the product via packaging.
- Packaging on a formulation specification is used to describe how an output ingredient is packaged. The output of a formulation specification cannot be a packaging material or printed packaging material specification.

Input Items Sub-Section

Adding Materials To The Input Item Sub-Section

Unlike other areas of the formulation specification, there is only one path for adding items to this sub-section and that is by clicking the **Add New** button. Upon doing so you are presented with a standard search screen. The only major difference is the ability to select packaging material or printed packaging material specifications in the top left corner. See figure 6-37 below:

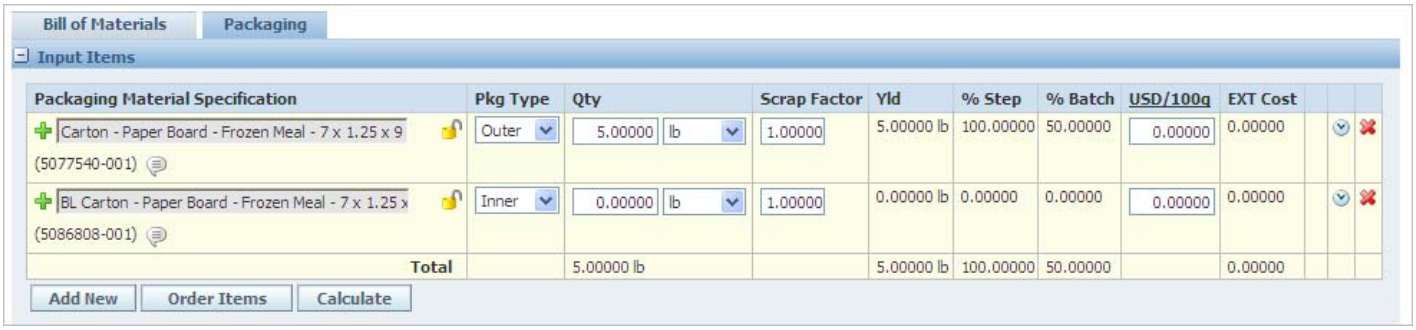
Figure 6-37: Packaging search page



The fields in this section are carried over from the Inputs section on the Formulation tab. As you add additional steps and details on this tab, the Formulation tab reflects those changes.

This section behaves much like the Input Items section on the Formulation tab, using the quick entry and edit all features.

Figure 6-38: Input Items section, Packaging subtab



Key fields include:

Packaging Material Specification—Packaging material specification that is being added as an input item for the formulation specification. This field can contain additional icons:

- By default, the BOM items are added with a locked icon (, meaning the specification is tied to an exact specification/issue combination. If you want to use the get latest revision feature, unlock the specification ( ). This action tells GSM to go and get the latest revision.
- You can click the annotations icon ( ) to add annotations. Added annotations display in read mode and are included in printing.

Pkg Type—Type of packaging. The four choices are: Inner, Outer, Intermediate and Label. See *Packaging Material Specifications* on page 11-1 for more information.

Qty—Amount of the packaging that goes into the formula.

Scrap Factor—Percentage of the quantity that will be lost. This field displays for packaging items only.

Yld—Actual amount of the packaging used in the formula.

% Step—That packaging's percentage as it relates to the step.

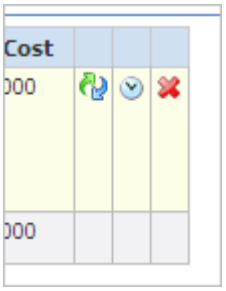
% Batch—Percentage that packaging makes up in the total.

USD/100g—This cost is loaded from the cost library which can be loaded via an API. The preferences describing the default cost data to load are managed via Profiles and Preferences, Formulation Preferences under the Cost Preferences section. Also, within GSM, you can change cost using the Setting action button, Cost Preferences section. If a cost override has been entered, the override icon ( ) displays.

EXT Cost—Calculated cost for the input quantity.

Three columns display at the end of the inputs grid, as figure 6-39 shows below:

Figure 6-39: Inputs grid columns



Substitute material—Displays the substitution icon ( ) if substitutes have been defined on the packaging specification. When you click the icon, GSM displays the Substitute Material dialog box. Use this dialog box to swap out materials with available selections and to update quantities.

Item history—Displays the item history icon ( ). Click on the icon to view a list of input items, their issues and their statuses.

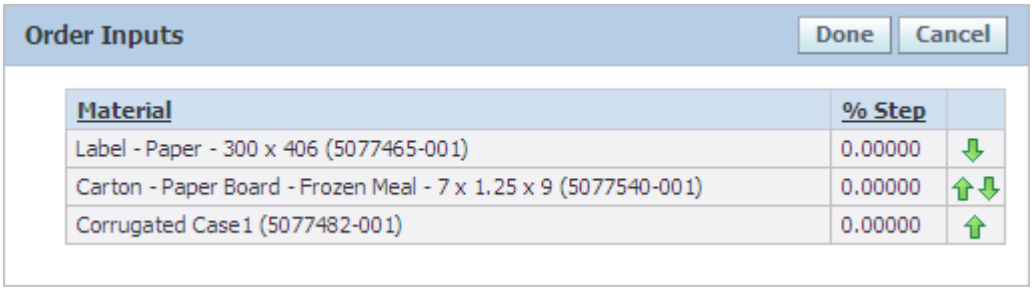
Delete—Click the delete icon ( ) to delete the input item. The step must meet the delete step criteria for the icon to appear.

The following buttons are found at the bottom of the inputs grid:

Add New—Click to display the packaging specification search dialog box, where you can select a specification for the step.

Order Items—Click to change the sort order of the inputs. GSM displays the Order Inputs dialog box, as figure 6-40 shows below.

Figure 6-40: Order Inputs dialog box, for packaging



Use the up and down arrow icons ( ) to change the order of input items, and then click **Done**. GSM closes the dialog box and the new sort order is reflected in the Inputs grid.

Calculate—Click to perform a manual calculation.

Ext Data Tab

The Ext Data tab includes the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29

Related Specs Tab

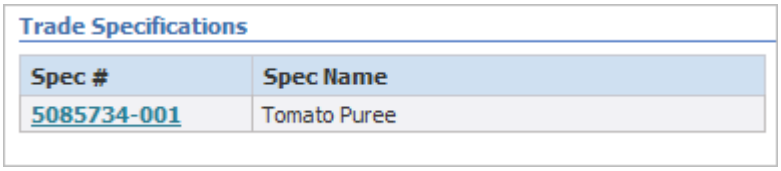
The Related Specs tab contains the following sections:

- Trade Specifications section— Discussed below, at *Trade Specifications Section* on page 6-40
- Associated Specifications section—For discussion of this field, please see *Associated Specifications Section* on page 3-9
- Master Specifications section—For discussion of this field, please see *Master Specifications Section* on page 3-9

Trade Specifications Section

The Trade Specifications section contains the list of trade specifications linked to a formulation specification.

Figure 6-41: Trade Specifications section



CSS Tab

For discussion of this tab, please see *CSS Tab* on page 3-10.

Supporting Documents Tab

The Supporting Documents tab contains the following sections:

- **Supporting Documents section**—The document types available are Attachments/Procedures, URL and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12
- **DRL Documents section**—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18
- **Testing Protocols section**—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21
- **Nutrient Profile section**— Discussed below, at *References Tab* on page 6-41

References Tab

The References tab contains the following sections:

- Activities section—For discussion of this commonly used section, please see *Activities Section* on page 3-25
- Specification Dependencies section—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27
- Related Documents section—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

Additional Tools

Overview of Basis

You create a basis on an instance of a formulation specification. You can provide information on the basis that supplements the specification, or you can provide custom data on the basis for the current formulation specification.

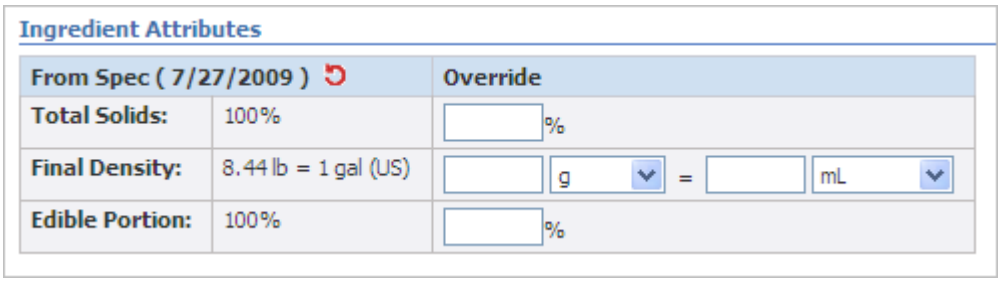
The system creates a basis automatically when you add items to the Inputs section of the formulation specification. You can access a basis from either the Formulation or Process tab. To open a basis, click the document icon ( ) in the Material column of the inputs grid. GSM displays the Basis dialog box, as described below.

Basis dialog box

The refresh feature allows the user to pull revised or more current specification data into the basis for the formulation specification.Use the Basis dialog box, shown in figure 6-43 below, to apply bases to your inputs. Two methods of refresh are available:

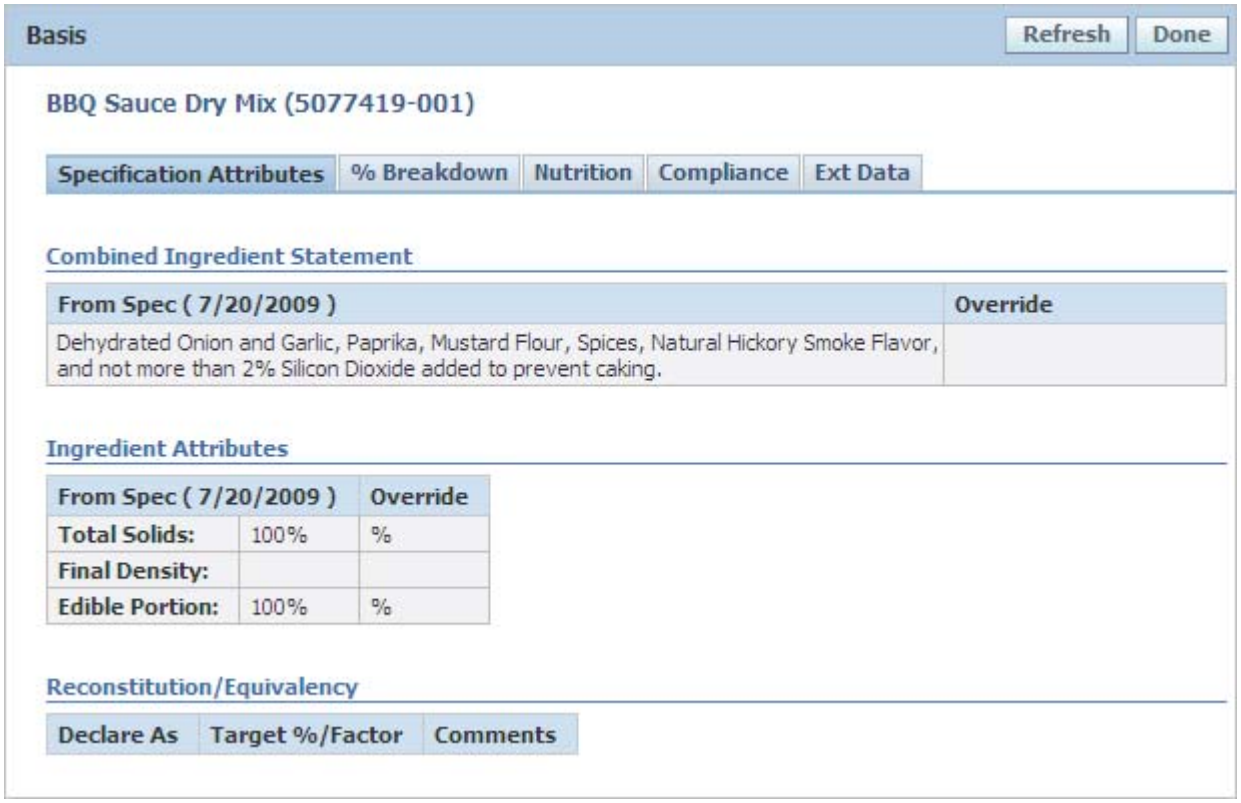
1. Click **Refresh** at the top right of the dialog box to perform a basis refresh. Using the refresh feature, you can update all of the information about a specific formula item on your formulation specification. GSM prompts you to confirm the update. When you select **OK**, the system pulls the information from the specifications for all data elements.
2. Use a sections refresh icon ( ) to pull current specification data for that one section, not the whole specification. GSM pulls the requested information from the specification and displays it in the section, as figure 6-42 shows below. After working with bases, click **Done** to close the Basis dialog box.

Figure 6-42: Refresh icon in section header



Once you close the Basis dialog box and return to the main tab, you can use the **Refresh** action button to pull current specification data for the entire BOM. The system prompts you to confirm the global update. When you select **OK**, the system pulls the information from the specifications for all items in your formulation specification. This is only available in edit mode.

Figure 6-43: Basis dialog box



The Basis dialog box consists of the following tabs:

Specification Attributes—Described below, in *Specification Attributes Tab* on page 6-43

% Breakdown—Described below, in *% Breakdown Tab* on page 6-44

Nutrition—Described below, in *Nutrition Tab* on page 6-45

Compliance—Described below, in *Compliance Tab* on page 6-46

Ext Data—Described below, in *Ext Data Tab* on page 6-62

Specification Attributes Tab

This tab gives attributes of the ingredient specification and includes the following sections:

- Combined Ingredient Statement—Described below, in *Combined Ingredient Statement Section* on page 6-43
- Ingredient Attributes—Described below, in *Ingredient Attributes Section* on page 6-44
- Reconstitution/Equivalency—Described below, in *Reconstitution/Equivalency Section* on page 6-44

Combined Ingredient Statement Section

The data in the From Spec column is pulled directly from the specification from which you created the formulation specification.

Ingredient Attributes Section

This section provides ingredient attributes.

Key fields include:

Total Solids—Percentage of the specification that is not water.

Final Density—Conversion factor applied when converting the specification from mass to volume.

Edible Portion—Percentage of the material that is edible.

Reconstitution/Equivalency Section

You can set up reconstitution/equivalency rules to assist in the management of the reconstitution process in the listed ingredient order (LIO) feature. These rules define how the water percentage of a given ingredient affects the label naming of a product. For example, you could set up a rule by which, if the percentage of water in an ingredient called "reconstituted orange juice" meets or exceeds a preset level, the name of that ingredient changes to "orange juice."

To add a new reconstitution/equivalency rule, click **Add New** under the Reconstitution/Equivalency section. GSM adds to the grid a new row for you to fill out. Key fields include:

Declare As—The name that GSM will assign to the product after you have performed the defined reconstitution.

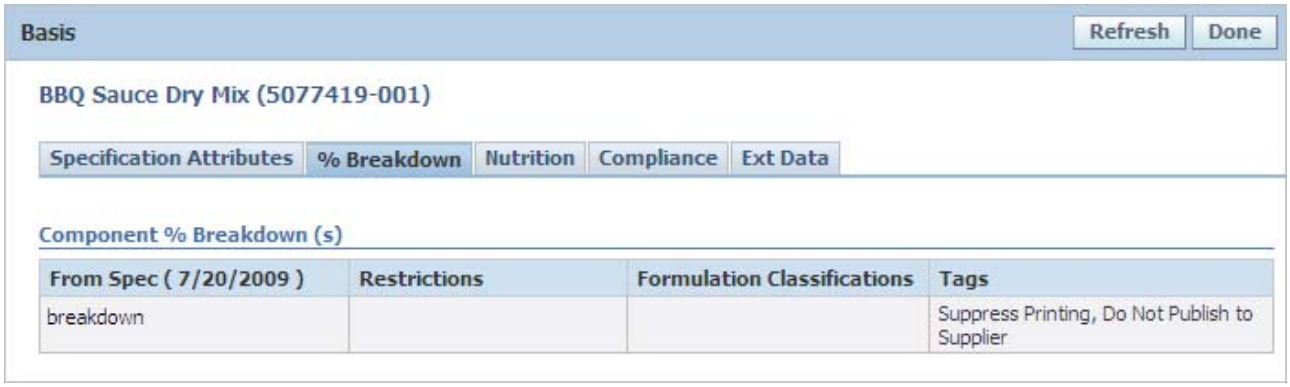
Target % / Factor—The adjustment amount required to perform the reconstitution.

Target % / Factor UOM—The method for calculating the reconstitution.

% Breakdown Tab

The % Breakdown tab defines the contents of an ingredient specification. Percent breakdowns are composed of breakdown components and their composition of the total ingredient. In the Component % Breakdown(s) section, shown in figure 6-44 below, you can modify breakdowns that exist on the specification or add new breakdowns for use in listed ingredient order (LIO).

Figure 6-44: Basis dialog box, % Breakdown tab



Component % Breakdowns Section

The Component % Breakdowns section is the only section on the % Breakdown tab. Use this section to define the contents of an ingredient specification using the following fields:

From Spec—The value that exists for that field on the ingredient specification.

Restrictions—This is used to help categorize different versions of the breakdowns for usage in the Listed Ingredient Order (LIO) tool.

Formulation Classifications—Formula classifications can be used to enforce security for individual specifications. Classifications can be managed in the Admin Tool and are tied to user groups. Only users in the associated groups can view formulas that have a formulation classification.

Tags—Breakdowns can be tagged. Tags help identify breakdowns and most tags help define how you want the system to react to the breakdown. Available tags are listed on *Tags:* on page 3-23.

Nutrition Tab

In the Nutrition tab of the Basis dialog box you can modify the nutritional information that is stored on the specification, as shown infigure 6-45 below.

You can edit the existing nutritional information by providing a custom value or you can add new nutrients. You can add nutrients from the standard nutrient list, NSM, or from the data that is stored in the Food Composition Library.

Note The Food Composition Library will need to be configured as a part of your implementation.

Figure 6-45: Basis dialog box, Nutrition tab

The Nutrition tab consists of the Nutrient Composition section.

Nutrient Composition Section

This section shows the nutrient composition that is stored on the specification.

From Spec—The nutrients that exist on the specification.

Overrides—You can enter a new value for the nutrient and the Gain/Loss factor column.

Gain/Loss Factor—You can specify a gain loss factor to be applied to the original nutrient value.

Compliance Tab

In the Compliance tab you can enhance or modify specification information related to compliance. You can add or modify the following compliance items:

- Complies With
- Allergens - Present
- Allergens - May Contain
- Allergens - Does Not Contain
- Intolerances (Sensitivities) - Present
- Intolerances (Sensitivities) - May Contain
- Intolerances (Sensitivities) - Does Not Contain
- Additives - Present
- Additives - May Contain
- Additives - Does Not Contain

Figure 6-46: Basis dialog box, Compliance tab

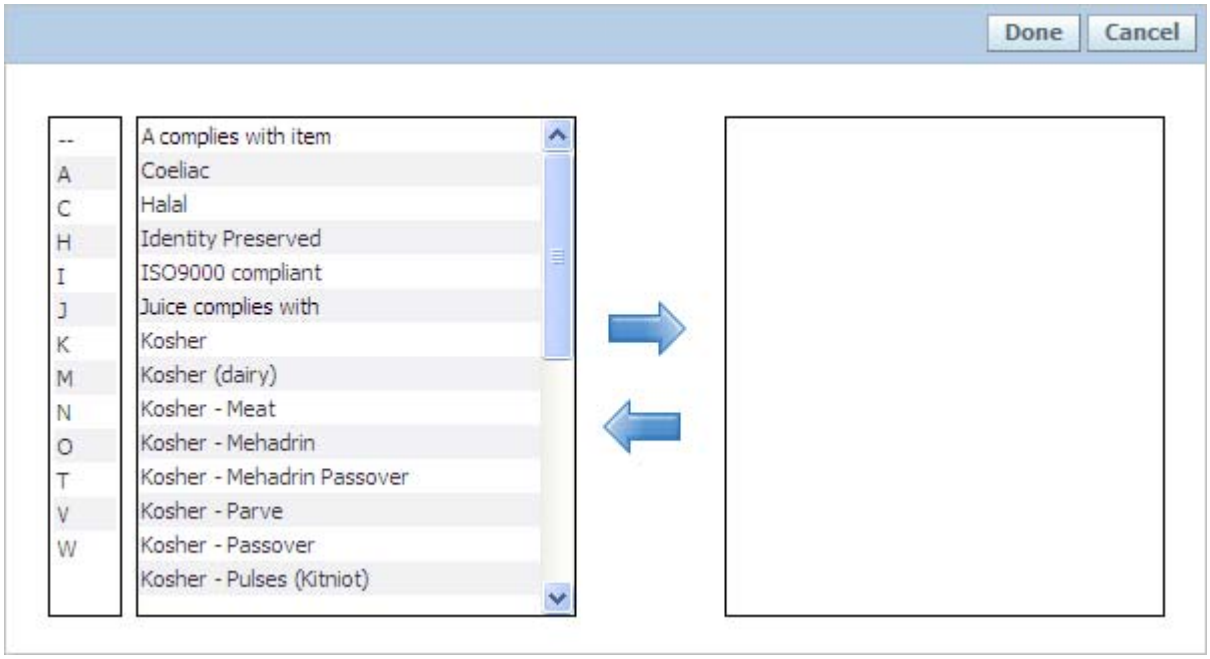
Key sections in the Compliance tab include:

- Complies With
- Allergens
- Additives
- Intolerances

Adding Complies With Information

You can add new Complies With items by clicking the add data icon ( ). A multiselect dialog box opens with available Complies With items listed on the left side. If compliance items are currently in the specification, the dialog box lists them in the box on the left side, as shown in figure 6-47, below.

Figure 6-47: Complies With dialog box



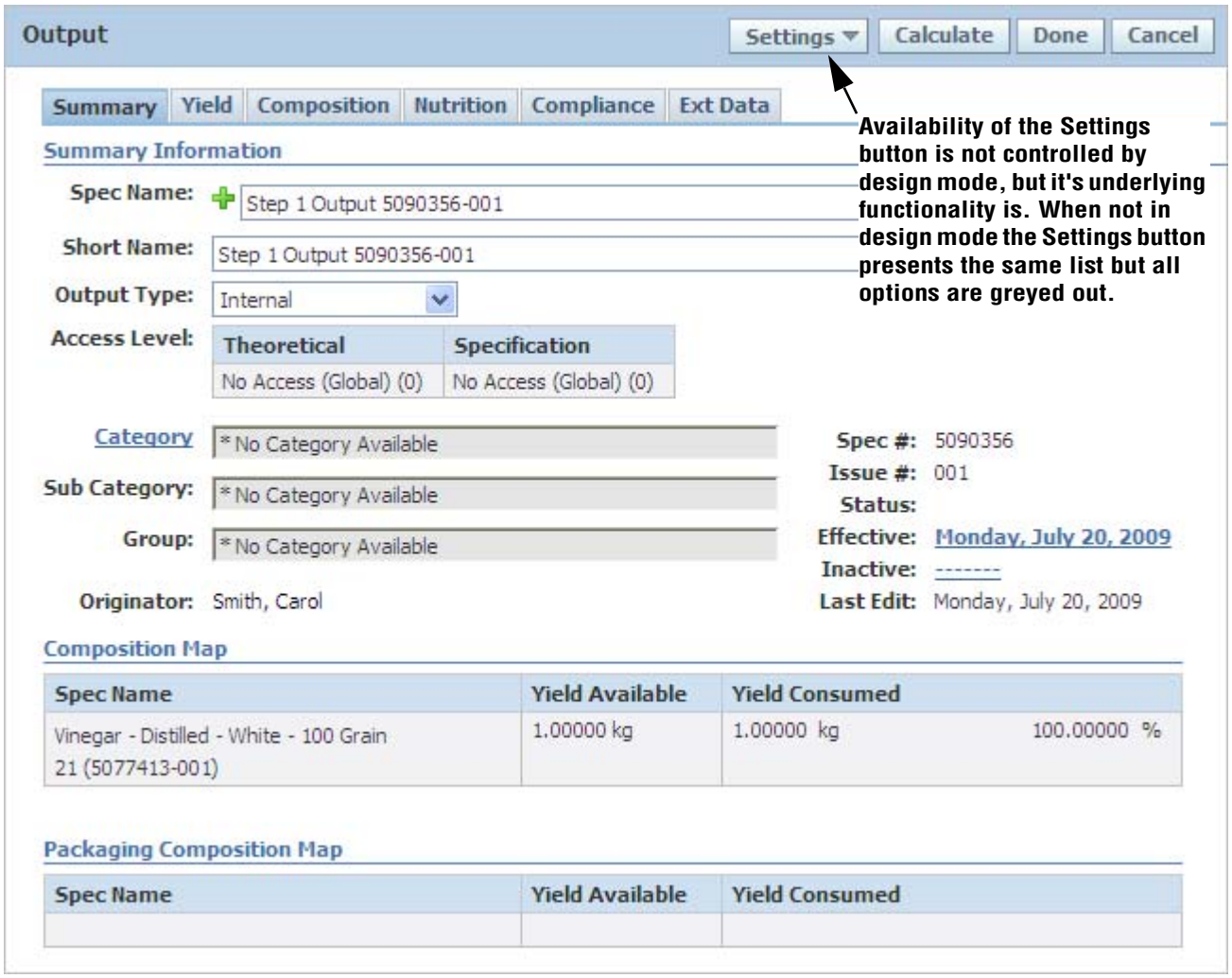
Note "Complies With" items are positive by default and can only be made negative via script. For the formulation specification to be marked as "compliant" based on the rollup, compliance items marked as "negative" in Data Admin only have to be declared on one item; those not marked as negative must be declared on all formula items.

To add new items, select them and then click the add selected data icon ( ). The dialog box moves the selected items to the box on the right. To remove items, select them and click the remove selected data icon ( ). Once you have completed your list of "complies with" items, click **Done**. The dialog box closes, leaving you on the Compliance tab.

Output Dialog Box

Data associated with output that can be modified using the Output dialog box, shown in figure 6-48 below. To access the Output dialog box, click on the document icon ( ).

Figure 6-48: Output dialog box



The output dialog displays the output created from the formulation specification. It contains the following tabs:

- Summary—Described below, at *Summary Tab* on page 6-50
- Yield—Described below, at *Yield Tab* on page 6-53
- Composition—Described below, at *Composition Tab* on page 6-56
- Nutrition—Described below, at *Nutrition Tab* on page 6-59
- Compliance—Described below, at *Compliance Tab* on page 6-61
- Ext Data—Described below, at *Ext Data Tab* on page 6-62

Summary Tab

The Summary tab, shown in figure 6-48 above, shows the identity information about the output, including name, specification number, and specification issue number. If the output is owned, the tab shows the workflow status of the parent formulation specification. If the output is referenced, the tab shows the status from the ingredient specification.

The Summary tab contains the following sections:

- Summary Information—Described below, in *Summary Information Section* on page 6-50
- Composition Map— Described below, in *Composition Map Section* on page 6-52
- Packaging Composition Map—Described below, in *Packaging Composition Map Section* on page 6-52

The Output dialog uses the following action buttons:

- **Settings**—Displays options related to pushing data from the theoretical output to the output ingredient. If items are selected then data will be pushed when the formulation specification is saved.
- **Batch Tuning**—Allows users to increase or decrease the yielded quantity through various options. The tuning affects only the inputs tied to the output being tuned.
- **Calculate**—Runs BOM calculation and performs the approximate yield and extended attribute calculations.
- **Save and Close**—Runs the BOM calculation and performs the approximate yield and extended attribute calculations and closes the dialog box.
- **Close**—Closes the dialog box without saving any data to the specification.

Summary Information Section

The Summary Information section contains the identity information about the output, including:

Specification—The name of the output item. By default, the system automatically names the output "Step X Output [Spec #]" where "X" is the number of the step and [Spec #] represents the system assigned number given to the output item. This can be edited by the user. When an output is marked as External this will be the name given to the ingredient specification as well as the specification number. Select the add data icon ( ) to reference an existing ingredient specification. When a specification is referenced this field displays a read only view of the specification name.

Short Name—Short name of the output item. By default, the system automatically fills in this field with "Step X Output [Spec #" where "X" is the number of the step and [Spec #] represents the system assigned number given to the output item. This field can be edited by the user and when the output is marked as external it will be the short name of the ingredient specification. When a specification is referenced this field displays a read only view of the referenced specification short name.

Output Type—Captures whether the output is Internal, External, or Referenced and if it is classified as product, by-product, or waste.

Access Level—Used by object level contextual security to help determine if the user has access to the data on the output item and ingredient specification. This grid displays two values:

a Theoretical Access Level—This value is rolled up from the access level of the ingredient specifications used to create it. Theoretical access level will always roll up using the highest available access level. For example, if Spec A [100], Spec B [400], and Spec C [300] were used to create output ABC the theoretical access level would be 400. This access level is used when deciding which custom data on the output item the user can see. Theoretical access level is always calculated by the system regardless whether the formulation specification is in design mode or not.

b Specification Access Level—This is the read only view of the External or Referenced Ingredient specification's access level. By default when an output item is typed as external, the theoretical access level is pushed to the specification. This value can be overridden on the ingredient specification itself. For example, with output ABC, even though the theoretical access level is 400, its corresponding material specification can be set to 200.

Note After the specification access level is set it can still be reset by the system. This happens if the output composition is changed resulting in a different theoretical access level than it previously had. At this time, the new access level value will be pushed to the ingredient specification regardless whether the formulation specification is in design mode or not. For example, if Spec D [500], was added to Output ABC the specification access level of 400 will be replaced with 500 when the formulation specification is saved.

If you are not familiar with access level and object level security in general, refer to the *Agile Product Lifecycle Management for Process Administrator User Guide* for more information.

Category—The category of the output item. This category selection uses the ingredient specification category listing. When an output is marked as External this will be the category given to the ingredient specification. When an output is referenced this is a read only view of the referenced specification's category.

Subcategory—The subcategory of the output item. This category selection uses the ingredient specification category listing. When an output is marked as External this will be the category given to the ingredient specification. When an output is referenced this is a read only view of the referenced specification's category.

Group—The group of the output item. This category selection uses the ingredient specification category listing. When an output is marked as External this will be the category given to the ingredient specification. When an output is referenced this is a read only view of the referenced specification's category.

Originator—Displays the first and last name of the user who created the output item. When an output is marked as External this will be the originator given to the ingredient specification.

Spec #—Displays the system defined number for the output item and/or ingredient specification.

Issue #—Displays the system defined issue number for the output item and/or ingredient specification. Internal and External outputs can only be issued when the formulation specification is issued.

Status—Displays the workflow status of the output item. If the output is internal or external it shares the same workflow and status as the formulation specification. The output item's workflow status will be updated when the formulation specification's status is updated.

Effective—Date the output item becomes effective. By default the system automatically assigns the date the output was created.

Inactive—Date the output item could inactive.

Last Edit—Last edit date of the output item or specification.

Composition Map Section

This section shows what amount of each ingredient input goes into the output. The Name column displays the same information that is displayed when a BOM item is displayed on a formulation specification.

Packaging Composition Map Section

This section shows what amount of each packaging input goes into the output. The Name column displays the same information that is displayed when a BOM item is displayed on a formulation specification.

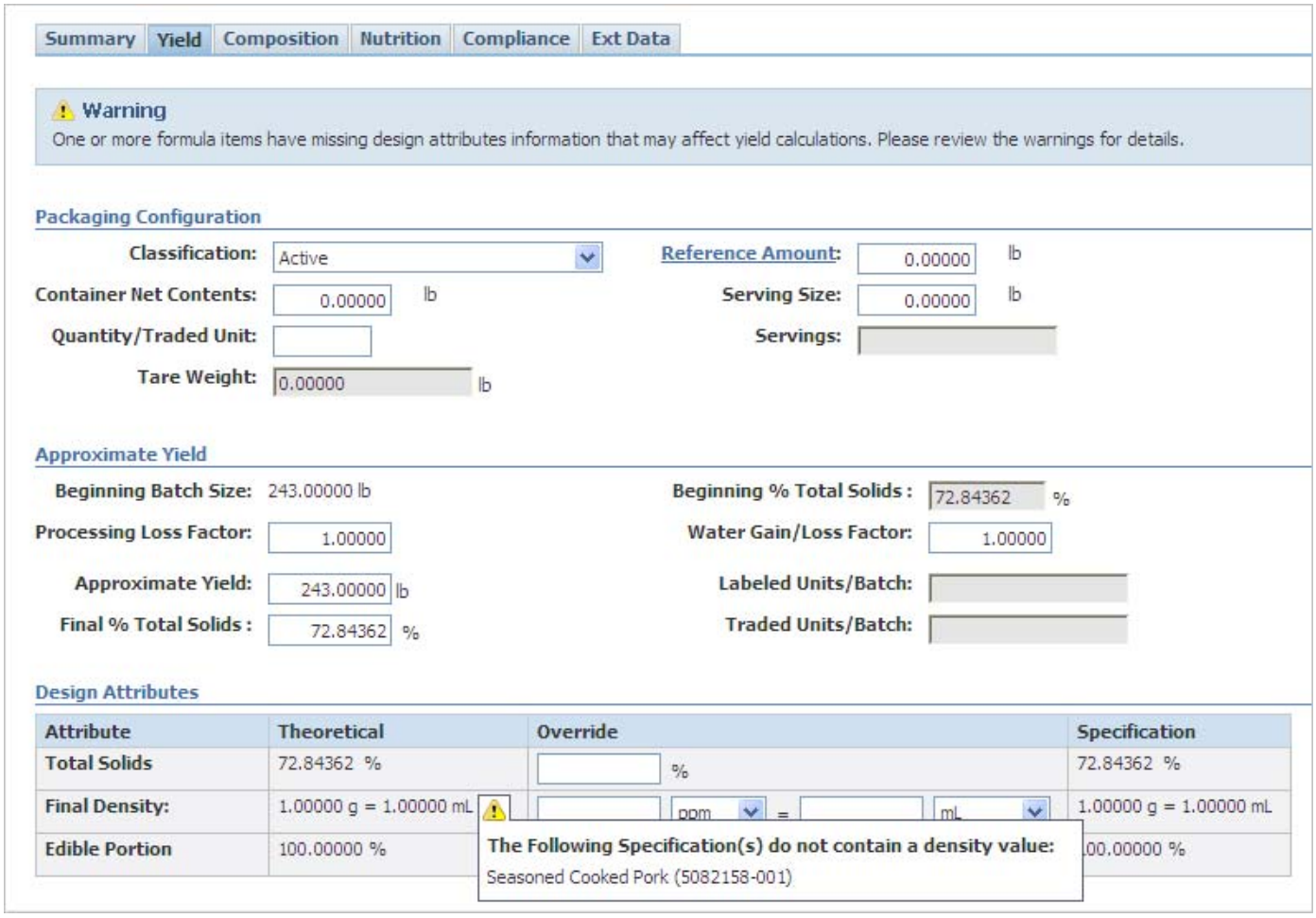
Yield Tab

The Yield tab, shown in figure 6-49 below, contains the packaging configuration and approximate yield information as it relates to the output and formulation specification.

The Yield tab contains the following sections:

- Packaging Configuration—Described below, in *Packaging Configuration Section* on page 6-53
- Approximate Yield—Described below, in *Approximate Yield Section* on page 6-54
- Design Attributes—Described below, in *Design Attributes Section* on page 6-56

Figure 6-49: Output dialog, Yield tab



Packaging Configuration Section

In the Packaging Configuration section you can enter high-level packaging information about this formulation. With this section, shown in figure 6-50 below, you can populate your output with reference amount and classification data that would be used by Label Claims. You can also set the net weight and serving size and see the calculated tare weight for your output material.

Figure 6-50: Packaging Configuration section

Key fields in the Packaging Configuration section include:

Classification—Type of food product. The system uses this information when you run Label Claims Determination against the specification.

Container Net Contents—The weight, volume, or share of total of the contents, excluding the container.

Quantity/Traded Unit—The number of consumer units in each traded unit.

Reference Amount—The amount customarily consumed for this type of product.

Approximate Yield Section

In the Approximate Yield section, shown in figure 6-51 below, you can enter process-level loss and water gain loss information and calculate the approximate yield for the formulation. This section also shows you the calculated % Total Solids and Density values and gives you the ability to manually override them.

Note If the relative density of any one of the formula items in the current formulation is undefined, the system cannot calculate the final density value.

If the total solids value of any one of the formula items in the current formulation is undefined, the system cannot calculate the final and beginning percent total solids values.

Figure 6-51: Approximate Yield section

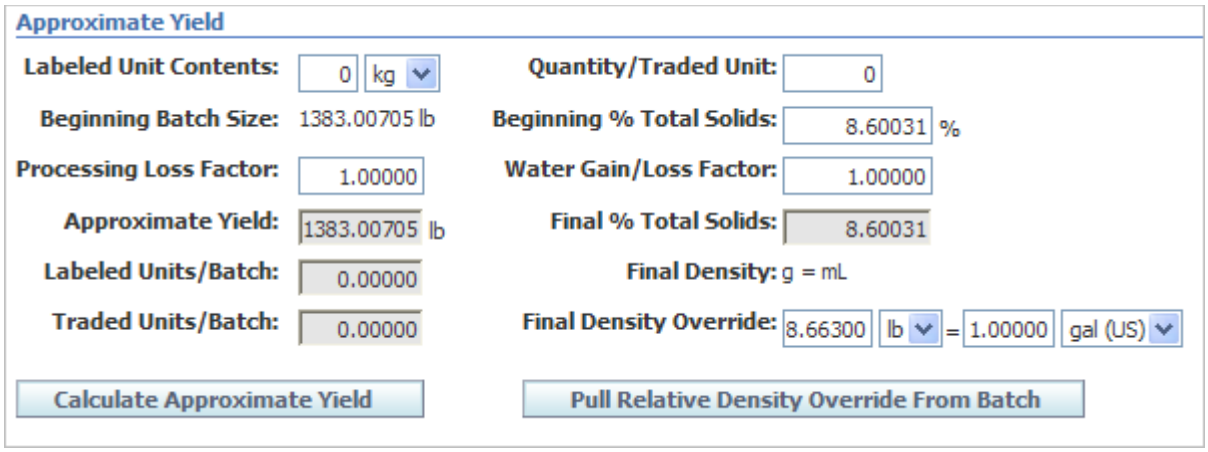
Once you have adjusted the processing loss factor and the water gain/loss factor, click **Calculate** to have the system calculate the new yield information.

Paths include:

- **Moisture Loss** —Path is used when the water/gain loss factor is known. The user would input the water/gain loss factor and click the **Calculate** button. This action will calculate the Approximate Yield amount and Final % Moisture/Total Solids.
- **% Yield**—Path is used when the approximate yield is known. The user would input the approximate yield amount and click the **Calculate** button. This action will calculate the Water Gain/Loss Factor and Final % Moisture/Total solids fields will calculate.
- **Target Moisture**—Path is used when the Final % Moisture is known. The user would input the final % moisture amount and click the **Calculate** button. This action would calculate the Approximate Yield amount and the Water/Gain Loss factor.

The Approximate Yield section contains the yield data for a formulation specification. This section is configurable. One configuration captures % moisture; the other captures % solids, as shown in the figures below.

Figure 6-52: Approximate Yield section



Key fields include:

Labeled Unit Contents— The amount per consumer unit

Beginning Batch Size— The batch size calculated from the specification

Processing Loss Factor— Estimated total loss for the process

Approximate Yield— The calculated yield based on the batch size, processing loss, and water gain/loss factor

Labeled Units/Batch— The calculated number of consumer units per batch

Traded Units/Batch— The calculated number of traded units per batch

Quantity/Traded Unit—The quantity of labeled units per traded unit

Beginning % Total Solids— The percent of total solids, not accounting for water gain or loss

Water Gain/Loss Factor— Estimated gain/loss factor for water

Final % Total Solids— Percent of total solids after adjusting for water gain/loss. This value is used in other areas of Global Specification Management

Final Density— The calculated density of the batch. This value is used in other areas of Global Specification Management

Final Density Override— Enables you to override the final density. If declared, this value is used instead of the value in the Final Density field in other areas of Global Specification Management.

Design Attributes Section

The Design Attributes section displays Total Solids, Final Density, and Edible Portion. The value used in the Total Solids field is pulled from the Final % Total Solids value. This section includes three columns:

- **Theoretical**—Shows rolled up data from the formulation specification. If any of the BOM items are missing data elements that are used for rollups, the error icon ( ) is displayed. Click on the icon for more information about offending specification.
- **Override**—Allows the user to enter a value different than the rolled up value.
- **Specification**—Shows the data that already exists on the specification.

If the user provides an override for Total Solids, Final Density, or Edible Portion, that value is stored to the ingredient specification.

Figure 6-53: Design Attributes section

Design Attributes

Attribute	Theoretical	Override	Specification
Total Solids	78.00000 %		
Final Density:			
Edible Portion	100.00000 %		100.00000 %

Composition Tab

The Composition tab contains the regulatory BOM, composition listing, and generated breakdown that will be written to the ingredient as the regulatory breakdown.

The tab consists of the following sections:

- Regulatory BOM—Described below, in *Regulatory BOM Section* on page 6-57
- Theoretical Breakdown—Described below, in *Theoretical Breakdown Section* on page 6-58
- Regulatory Breakdown—Described below, in *Regulatory Breakdown Section* on page 6-58

Note To view the Composition tab, users must have the formula classifications associated with all regulatory % breakdowns for the formula items. An error message displays for users without access.

Only the specification name will display to a user who does not have permissions (WFA and BU security) to read a formula item.

Figure 6-54 shows the Composition tab.

Figure 6-54: Output dialog, Composition tab

Summary | Yield | Composition | Nutrition | Compliance | Ext Data

Regulatory BOM

Item	Formulation
Seasoned Cooked Pork	**82.30453%**
Vinegar - Distilled - White - 100 Grain	**17.69547%**
- Comp 1	50.00000%
- Comp 2	50.00000%

Theoretical Breakdown

Item	Formulation
Comp 1	8.84774%
Comp 2	8.84774%
Seasoned Cooked Pork	82.30453%

Regulatory Breakdown

Description:
Restrictions:
Formulation Classifications: All GSM Users
Tags: Suppress Printing, Do Not Publish to Supplier, Regulatory
Automatically Refresh: ☑

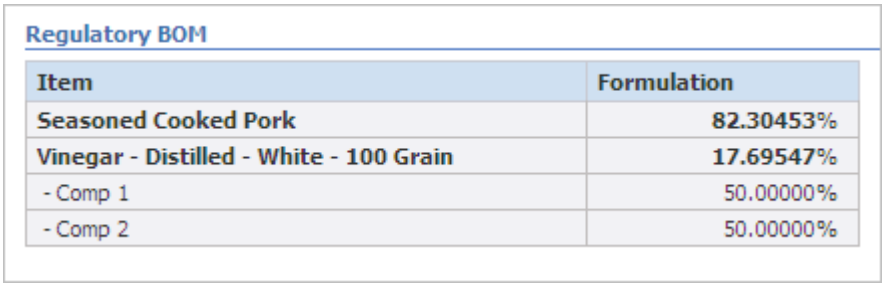
Component	Description	Country Of Origin	Complies With	Formulation	Total Solids	Function	Critical
Comp 2				8.84774%	2.00000%		☐
Comp 1				8.84774%	10.00000%		☐
Seasoned Cooked Pork				82.30453%	87.00000%		☐
				100.00001%			

Regulatory BOM Section

This section displays a label composition-like version of the formulation as it relates to the output. This view includes any % breakdown information for items in the formulation. Only the % breakdown that is tagged with the “Regulatory” tag will be included in this view.

The declaration method for this view mimics the (X,Y) method from LIO. If a regulatory breakdown does not exist or only uses range values, the specification name is used. The data in this section is read-only and will not be included when written to the ingredient specification. It will be printed with the formulation specification/output material print.

Figure 6-55: Regulatory BOM section



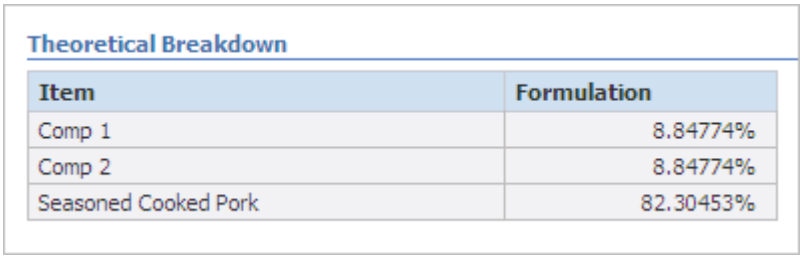
Regulatory BOM

Item	Formulation
Seasoned Cooked Pork	**82.30453%**
Vinegar - Distilled - White - 100 Grain	**17.69547%**
- Comp 1	50.00000%
- Comp 2	50.00000%

Theoretical Breakdown Section

This section displays the combined view of the data in the Regulatory BOM section. It includes % breakdown items from the regulatory BOM and combines like items.

Figure 6-56: Theoretical Breakdown section



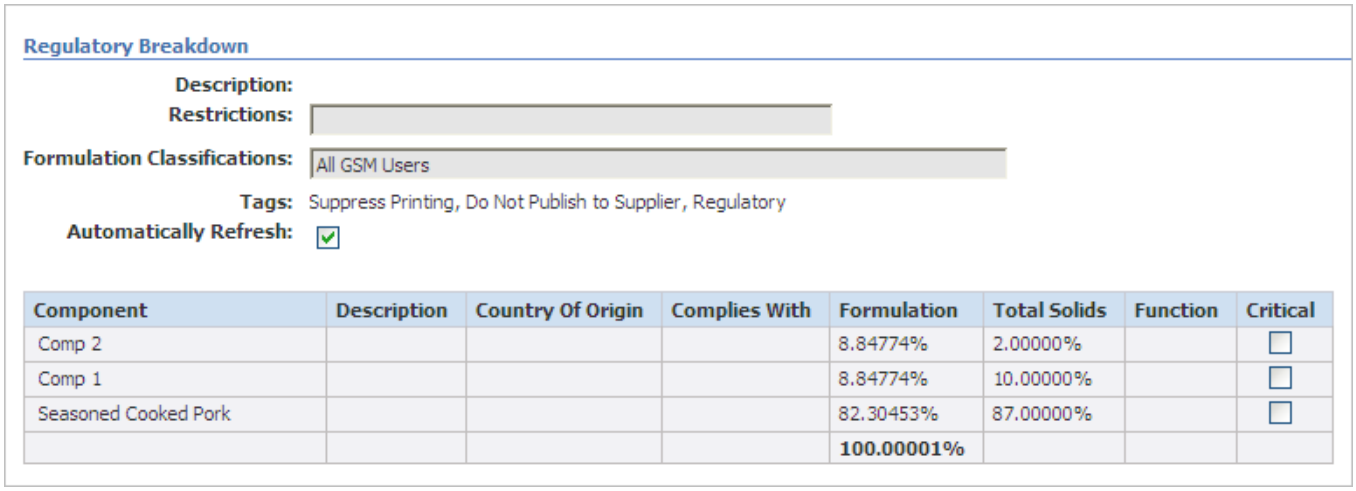
Theoretical Breakdown

Item	Formulation
Comp 1	8.84774%
Comp 2	8.84774%
Seasoned Cooked Pork	82.30453%

Regulatory Breakdown Section

This section displays the breakdown built by GSM based on the regulatory BOMs of the input items for the formulation specification.

Figure 6-57: Regulatory Breakdown section



Regulatory Breakdown

Description:
Restrictions:
Formulation Classifications: All GSM Users
Tags: Suppress Printing, Do Not Publish to Supplier, Regulatory
Automatically Refresh:

Component	Description	Country Of Origin	Complies With	Formulation	Total Solids	Function	Critical
Comp 2				8.84774%	2.00000%		
Comp 1				8.84774%	10.00000%		
Seasoned Cooked Pork				82.30453%	87.00000%		
				100.00001%			

Nutrition Tab

This tab displays the rolled up nutrient information as it relates to the output and formulation specification. The tab consists of one section: Nutrient Composition.

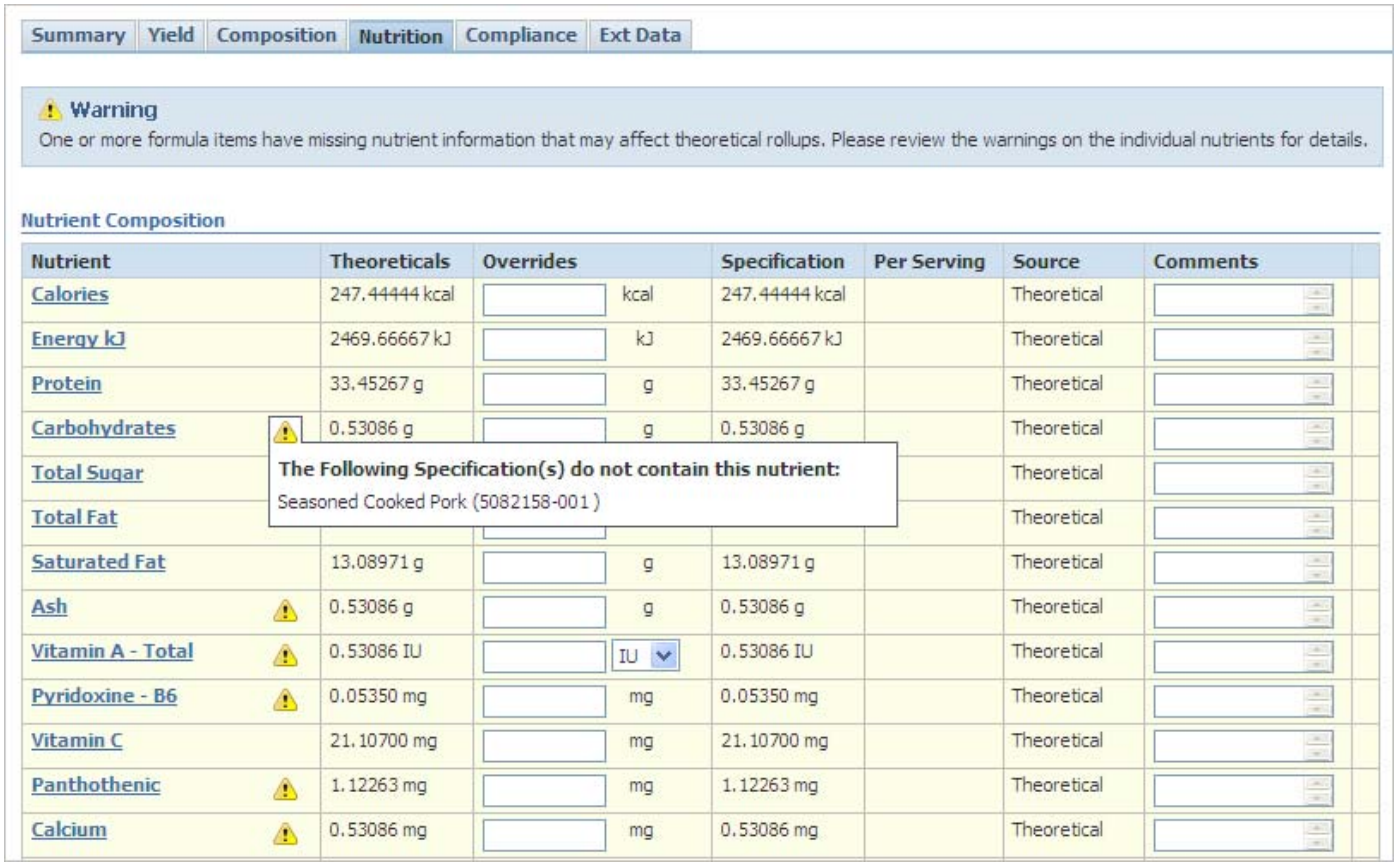
Nutrient Composition Section

All of the nutrients that are present in BOM items are automatically included in this section.

If you click on an individual nutrient, GSM displays the nutrient composition dialog box, which contains the formula items where the nutrient is present.

When child specifications do not have specified nutrients, the rolled up value may be incorrect. Warning icons ( ) display next to nutrients in error conditions, as figure 6-58 shows below.

Figure 6-58: Output dialog, Nutrition tab



The nutrient composition follows previously defined functionality around overrides, namely:

Theoreticals—This column shows the rolled up data from the formulation specification.

Overrides—This column allows you to enter a value different than the rolled up value.

Specification—This column shows the data as it exists on the specification.

Per Serving—This column displays a value calculated from the value to be stored on the specification and the serving size (from the Packaging Configuration section). This is an un-rounded value.

Source—The original location of the nutrition. If the user provides an override the rolled up value, the user must pick a source. Otherwise it defaults to theoretical.

Comments—Free text comments around the nutrition.

The default source for all rolled up items is “Theoretical.” If you provide an override, the source is blanked out. If you delete an override value, the source defaults back to “Theoretical.” “Theoretical” cannot be selected from the list.

You cannot remove items from the grid if the items are rolled up from the child items. However, if you added an item to the specification or to the Output dialog box, you can remove the item using the delete icon ( ).

Click **Add New** to add new nutrient items. GSM displays the nutrient item list in a dialog box. You can then enter a value in the Overrides field for the new item.

Click **Import** to add nutrient items that are tied to existing food composition items, FCL items, ingredient specifications, or nutrient profiles.

Click **NSM** to import nutrient items from nutrient analyses or composites.

Compliance Tab

This tab displays the rolled up compliance information for the output and formulation specification.

All of the compliance items (allergens, additives, intolerances, complies with) that are present in child items are displayed by default.

If you click on a compliance item, a composition dialog box displays. The dialog box contains formula items where the compliance items are and are not present. The following columns are included:

Theoreticals—Shows the rolled up data from the formulation specification.

Overrides—Allows you to enter a value different than the rolled up value.

Specification—Shows the data as it exists on the specification.

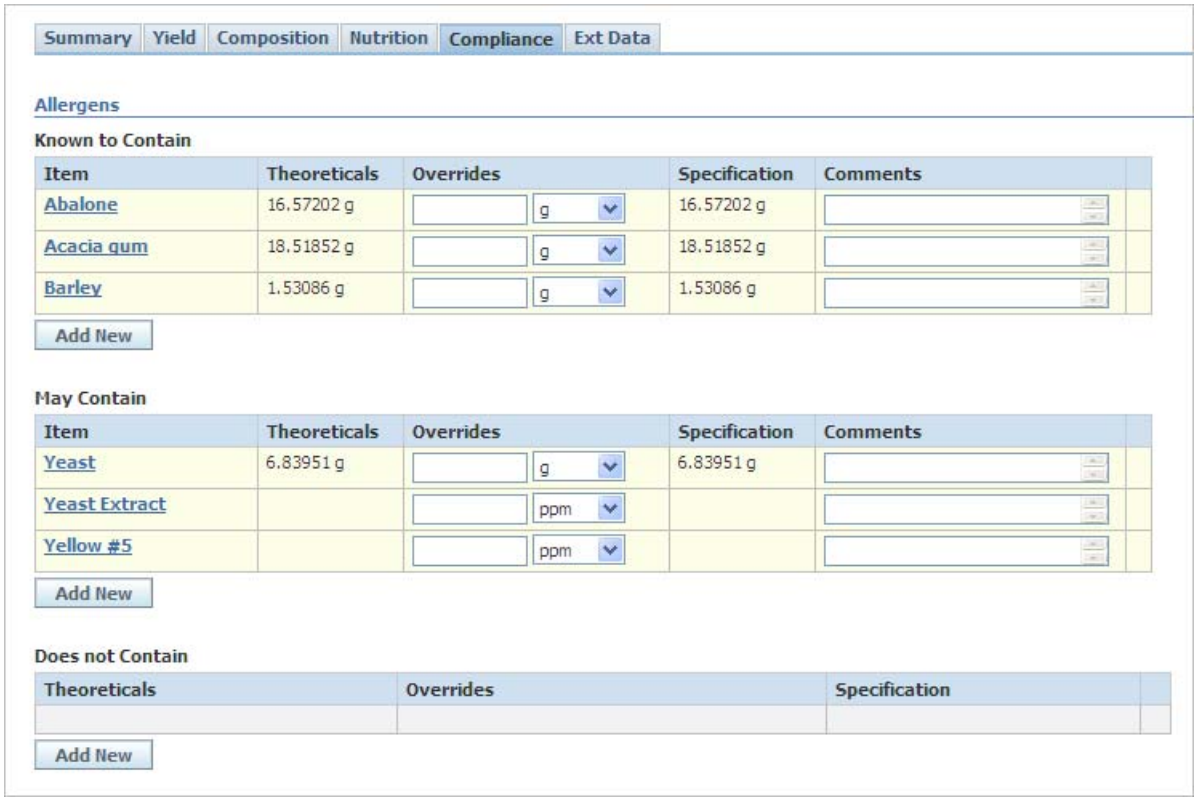
Comments—Free text comments.

Click **Add New** to add compliance items to the grid. Refer to *Adding Complies With Information* on page 6-48 for instructions.

You cannot remove items from the grid if the items are rolled up from the child items. If you added an item to the specification or to the Output dialog box, you can remove the item using the delete icon ( ).

The Complies With section displays whether the item is compliant or non-compliant. You can click the complies with item to view a dialog box showing the formula items where the compliance items are present.

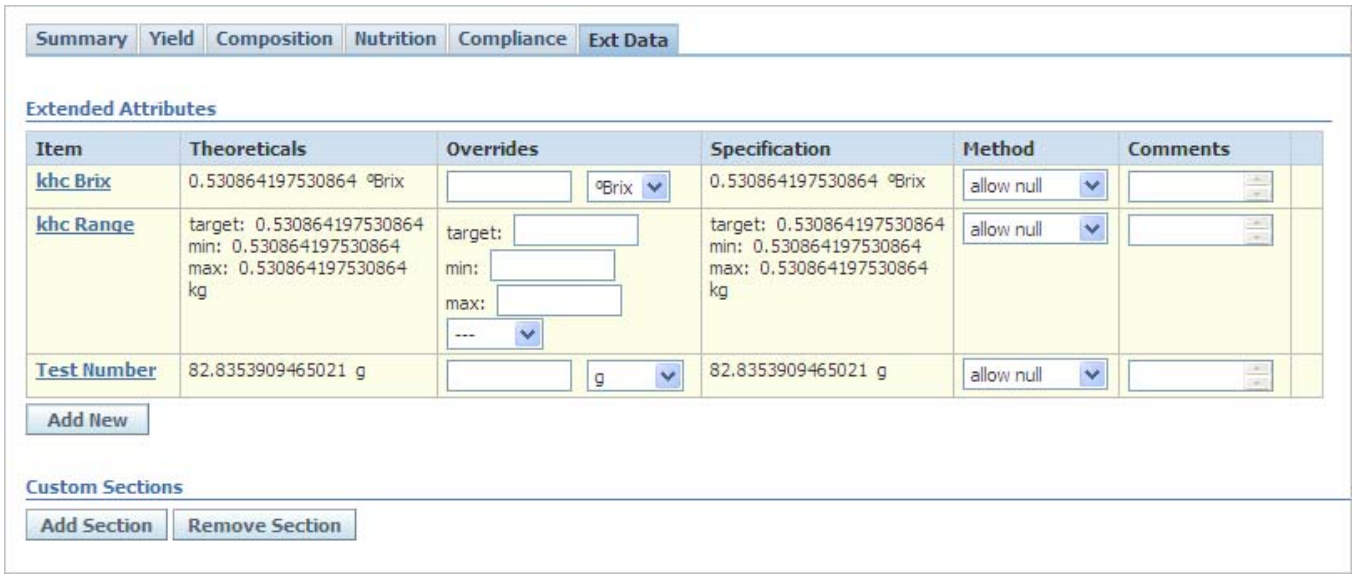
Figure 6-59: Output dialog, Compliance tab



Ext Data Tab

This tab includes the rolled up custom data information for the output and formulation specification. Distinct custom data (tagged with the "Is Design Attribute" tag in ADMN) which are present on formula items are included. Two sections are included: Extended Attributes and Custom Sections.

Figure 6-60: Output dialog, Ext Data tab



Note When rolling up distinct extended attributes added to the Output dialog box, only the security classification on the extended attribute will be used. The security classification on the custom section where the extended attribute may have existed on the raw material will be ignored.

Extended Attributes Section

In the Extended Attributes section, you can select from a list a number of extended attributes related to the formulation. This list is the aggregate of the extended attributes listed at the BOM item level on the basis.

Once you have selected the extended attribute values, GSM automatically rolls them up from the BOM items to the formulation level, taking into account the following:

- Formulation composition
- Gain/loss factor for each BOM item within each step
- Processing gain/loss factor at the batch level
- Water gain/loss factor at the batch level

Note The only types of extended attributes that can be rolled up are numeric and quantitative range.

You can choose a rollup method of "allowing null" to allow GSM to roll up data even though data may be missing at the BOM item level. You can also choose "not allowing null," in which case GSM will not roll up the data if there is missing data at the BOM item level.

The following columns are included:

Item—When clicked, displays the extended attribute composition dialog box. The dialog box shows the formula item where the attribute is present.

Theoreticals—Shows the rolled up data from the formulation specification.

Overrides—Allows the user to enter a value different than the rolled up value.

Specification—Shows the data as it exists on the specification.

Method—This value defines how to treat the occurrence of nulls when the system is trying to roll up the extended attribute value. "Allow Null" will provide the user a value even if all specifications in the formula do not have the extended attribute defined. "Do Not Allow Null" will not return a value if any of the formula items do not have the extended attribute defined.

Comments—Comments about the extended attribute.

Click **Add New** to add extended attributes. If an attribute has already been rolled up, it cannot be added again.

You cannot remove items from the grid if the items are rolled up from the child items. It you added an item to the specification or to the Output dialog box, you can remove it using the delete icon ( ).

Custom Sections Section

This section displays custom sections for the formula item. Custom sections can be added to the output popup just like anywhere else.

If a custom section is being added that has a distinct extended attribute that already exists in the rollup section, it will not be added.

Custom sections do not get rolled up, only the distinct extended attributes from the BOM items will be rolled up and displayed in the simple extended attribute section of the output popup.

Custom sections that are added to the output popup will be pushed to the ingredient specification just like the other output data.

Snapshots

When a formulation specification is in edit mode you have the ability to create snapshots using the Snapshot action button.

This feature allows you to take and store a picture of your formulation specification at any time during the development process. Using snapshots, you can capture incremental changes that are made during the formulation process and then revert to them later.

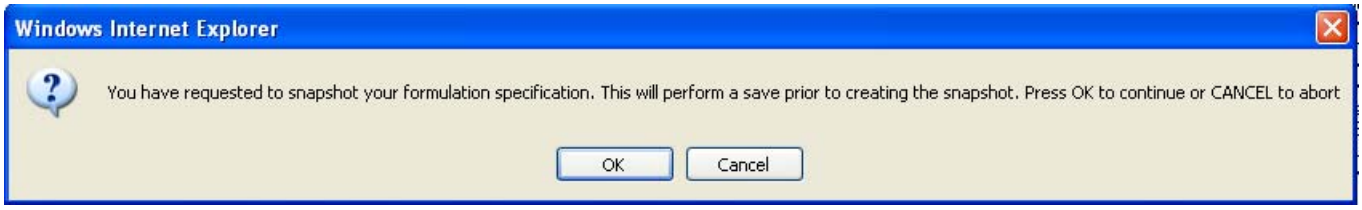
To create a snapshot:

1. Once you have an instance of a specification that you want to snapshot, click **Snapshot** in the upper right corner of the application. The Snapshots dialog box opens, as figure 6-61 shows below.

Figure 6-61: Snapshots dialog box

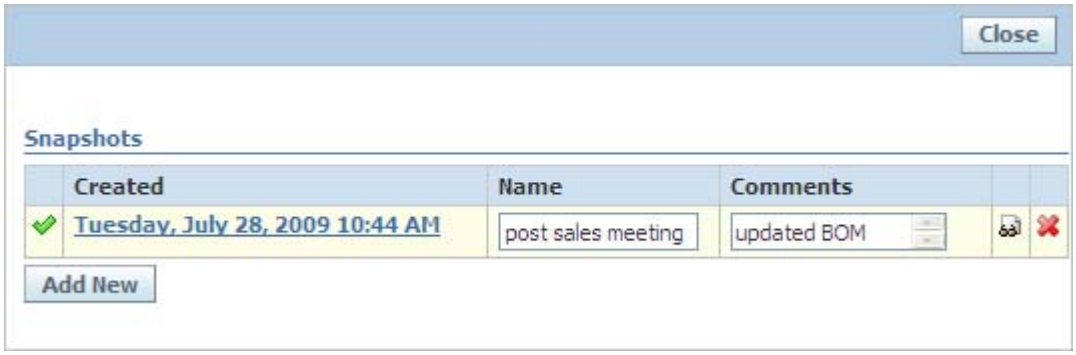
2. Click **Add New**. GSM displays the following confirmation message.

Figure 6-62: Snapshot confirmation



3 Click **OK** to save the specification and take the snapshot.
4 Type a new snapshot name in the **Name** field and any details about the snapshot in the **Comments** field, as figure 6-63 shows below.

Figure 6-63: Snapshots detail



To restore a snapshot:

1 Click **Snapshot** in the upper right corner of the application. GSM opens the Snapshots dialog box, which lists saved snapshots.
2 Click the linked creation date and time of the snapshot displayed in the Created column. GSM restores the selected snapshot.

To preview a snapshot:

1 Click **Snapshot** in the upper right corner of the application. GSM opens the Snapshots dialog box, which lists saved snapshots.
2 Click the view details icon ( ) of the snapshot. GSM displays a dialog box showing snapshot details.

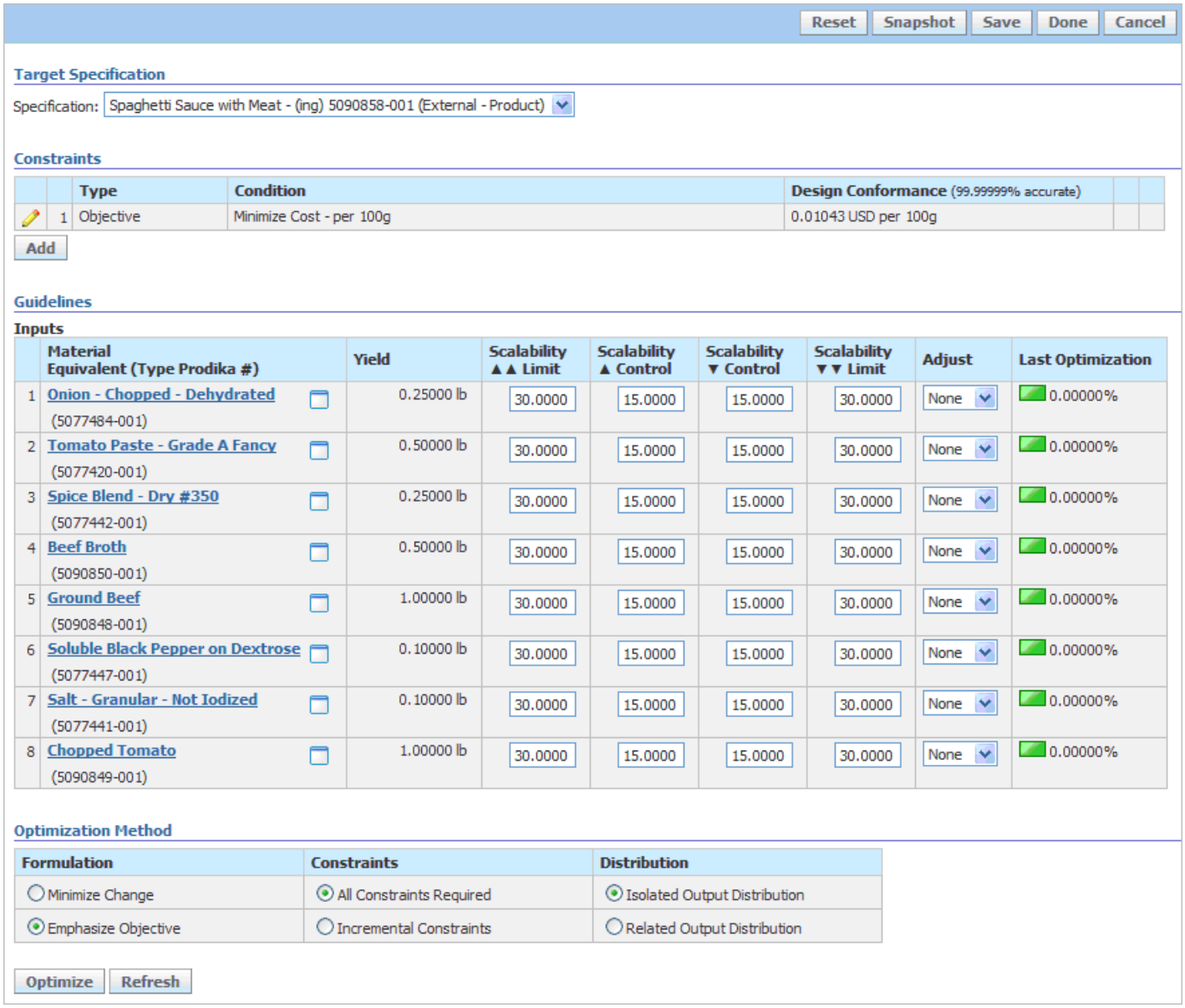
Optimization

Optimization can be used to adjust an output of a formulation specification based on any number of constraints related to ingredient costs, nutrients, and extended attributes. It uses a linear optimization algorithm to generate the most optimal formulation based on the constraints, guidelines, and optimization methods.

Optimization is started from the action menu of a formulation specification and opens the optimization scenario in a popup. As shown in figure 6-64, the Optimization tab is composed of the following sections:

- Target Specification
- Constraints
- Guidelines
- Optimization Method

Figure 6-64: Optimization tab



Target Specification Section

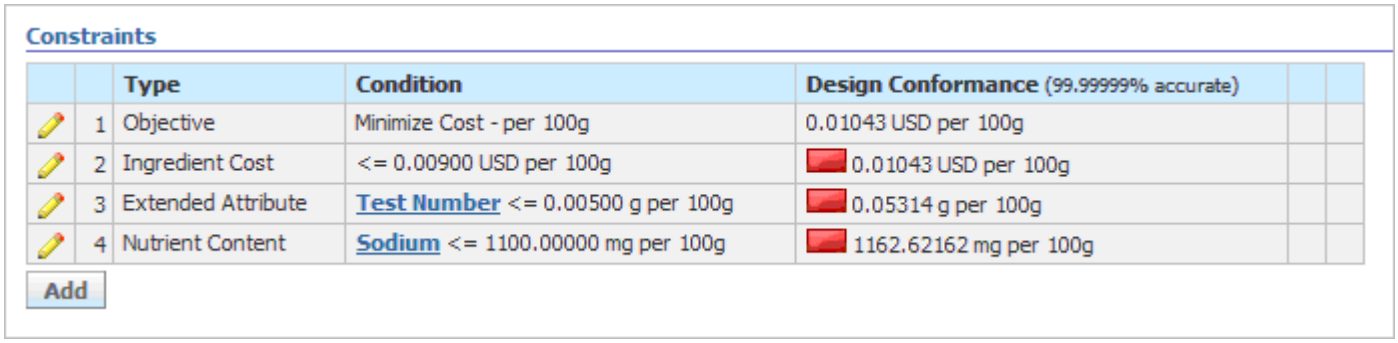
The Target Specification section allows you to pick the output of the formulation specification the optimization engine will try to optimize.

Figure 6-65: Target Specification section

Constraints Section

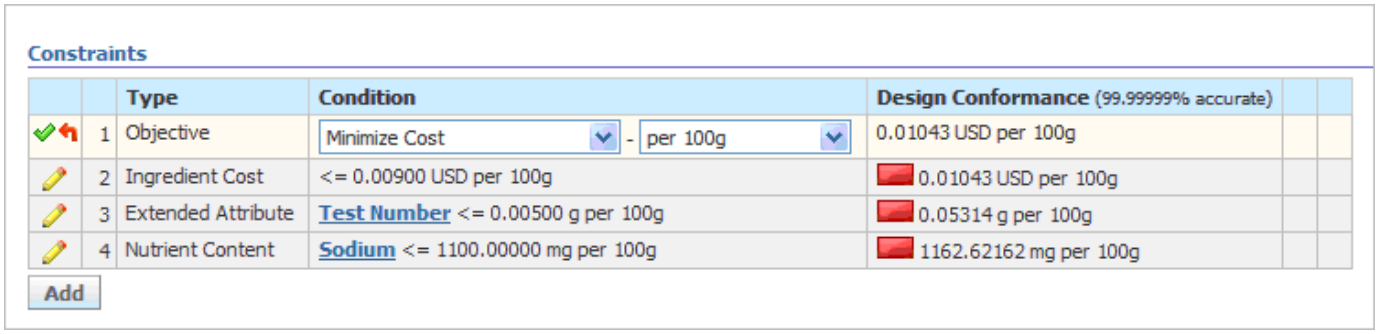
In the Constraints section you can build rules for the optimization engine to use when searching for an optimal formulation. The Constraint table includes a Type, Condition, and Design Conformance column. In the Type column you can describe what kind of constraint you are adding and in the Condition column you can describe the details about the constraint. The optimizer calculates the value in the Design Conformance column based on data that is on the specification and shows what level of conformance your specification is in currently with regard to that constraint. Figure 6-66 shows the Constraints section.

Figure 6-66: Constraints section



The first rule that you must define is the objective constraint. The system automatically includes the objective constraint place holder. This objective is the main goal for your optimization scenario. To edit the objective place holder constraint, click the edit icon ( ) on your objective constraint, as shown in figure 6-67.

Figure 6-67: Edit mode



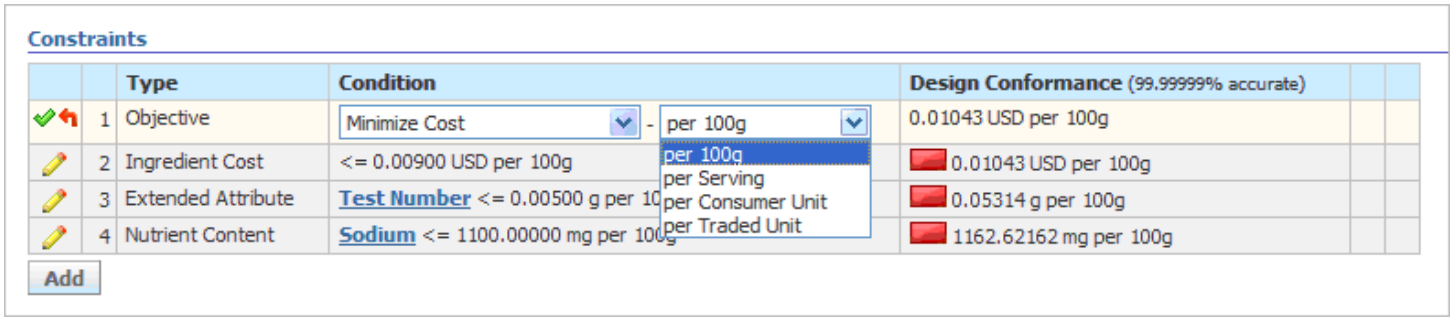
You can configure the objective constraint to any one of the following, which are further explained below:

- Minimize Cost
- Minimize/Maximize a Nutrient
- Minimize/Maximize an Extended Attribute

Minimize Cost—Optimize based on the cost of your formulation.

GSM can display this information per 100g, per Serving, per Consumer Unit, or per Traded Unit.

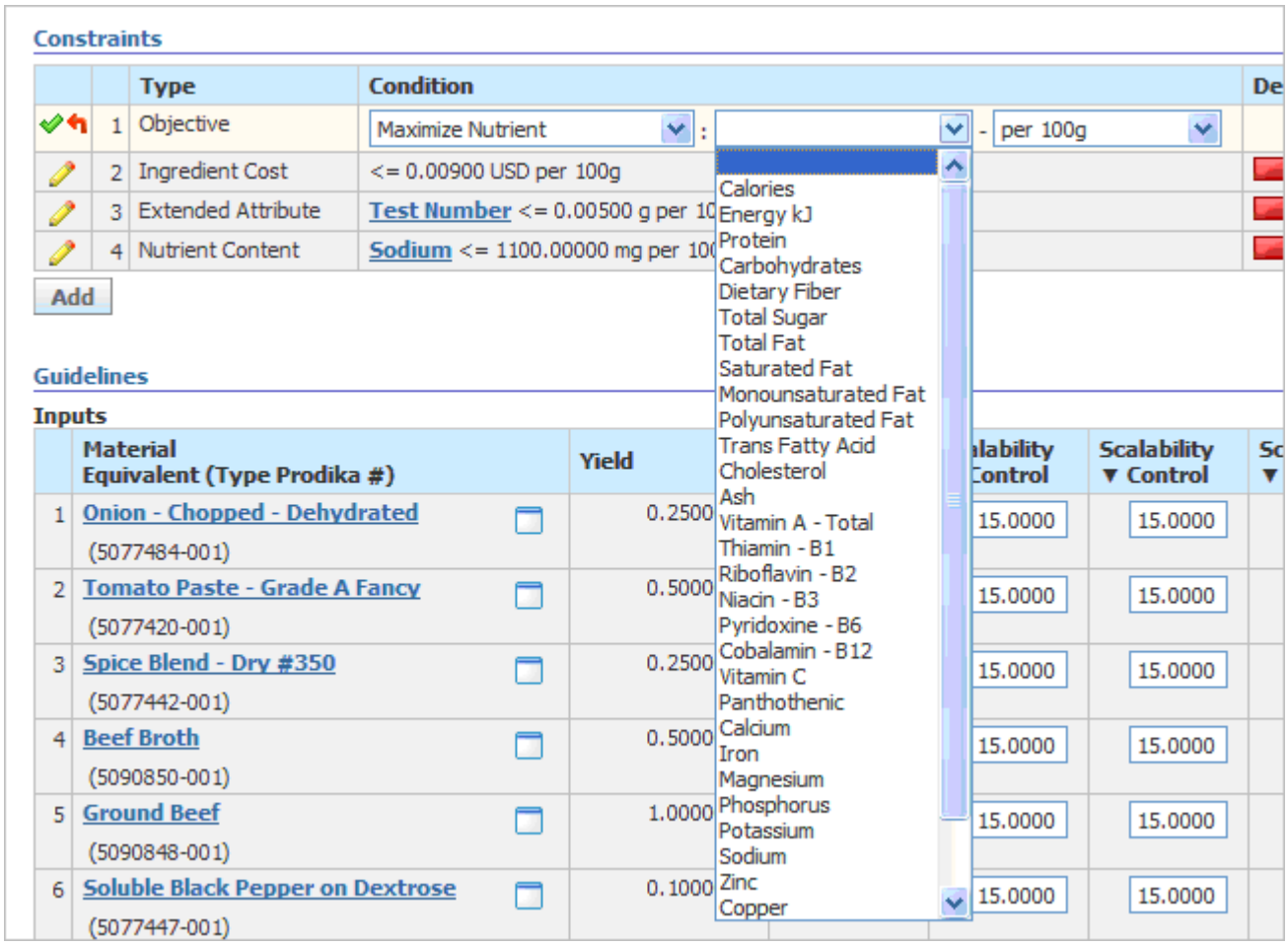
Figure 6-68: Drop-down selection



Minimize/Maximize a Nutrient—Optimize based on minimizing or maximizing a selected nutrient.

GSM pulls the nutrient list from the selected output. You can display this information per 100g, per serving, per consumer unit, and per traded unit.

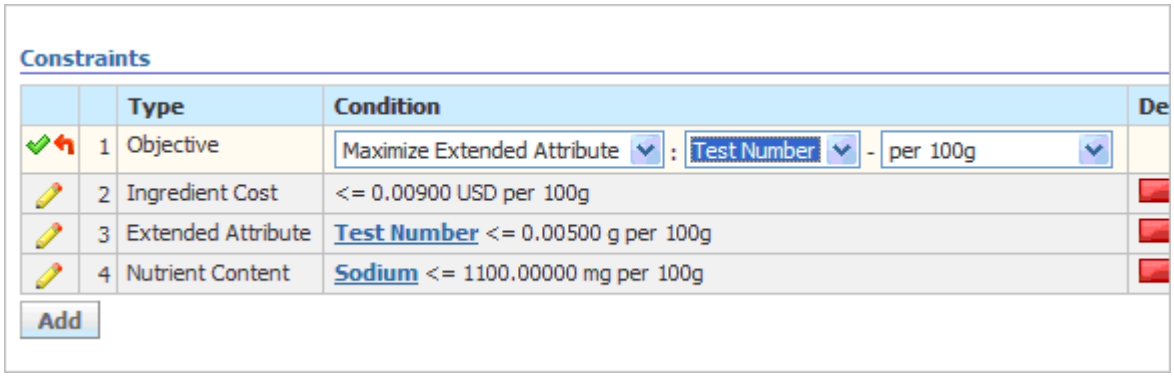
Figure 6-69: Nutrient list



Minimize/Maximize an Extended Attribute—Optimize based on minimizing or maximizing a selected extended attribute.

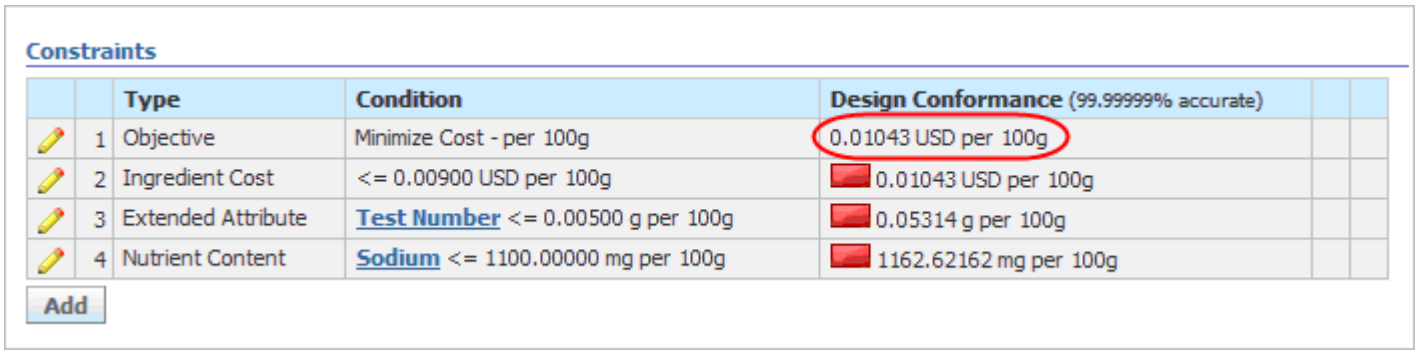
GSM pulls the theoretical extended attribute list from the selected output. You can display this information per 100g, per serving, per consumer unit, and per traded unit.

Figure 6-70: Extended attribute list



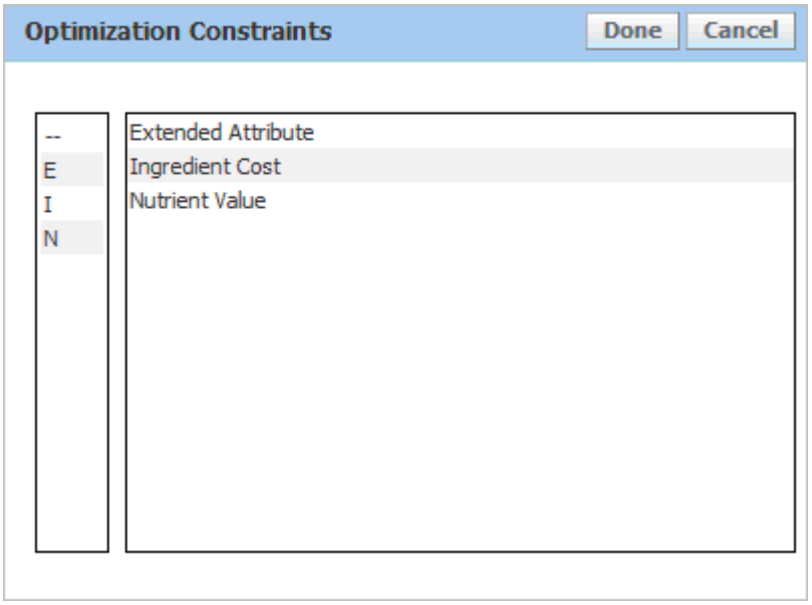
Once you have selected your optimization objective, click the apply changes icon ( ) to save your objective. GSM displays the current value for the objective in the Design Conformance column, as shown in figure 6-71 below.

Figure 6-71: Constraints section



After you have defined the objective of your optimization scenario, you can begin to build constraints to help the optimization engine produce a solution that is in line with your requirements. To add a new constraint, click **Add New**. A dialog box opens, as shown in figure 6-72 below, from which you can select the type of constraint you want to add.

Figure 6-72: Selecting a constraint



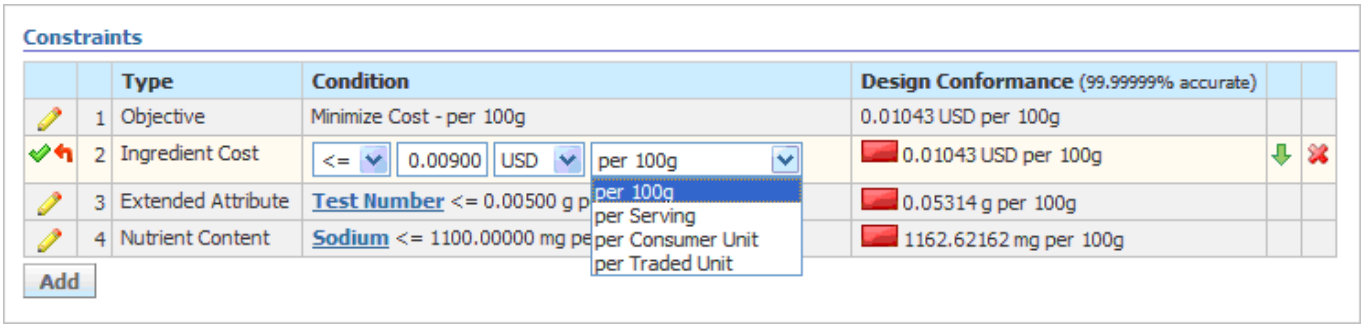
GSM supports the following constraint types:

- Ingredient Cost
- Nutrient Content
- Extended Attribute

Ingredient Cost

Using the Ingredient Cost constraint type, you can set up a condition to monitor the total ingredient cost associated with your formula, as shown in figure 6-73 below.

Figure 6-73: Ingredient Cost constraint



The Ingredient Cost constraint is composed of:

Operator—Logical operator used for comparison purposes. Options are:

- = (equal)
- <= (less than or equal)
- >= (greater than or equal)

Value—The value for cost that you want to optimize to.

UOM—The unit of measure for the cost.

Display as—GSM can display this information per100g, per Serving, per Consumer Unit or per Traded Unit.

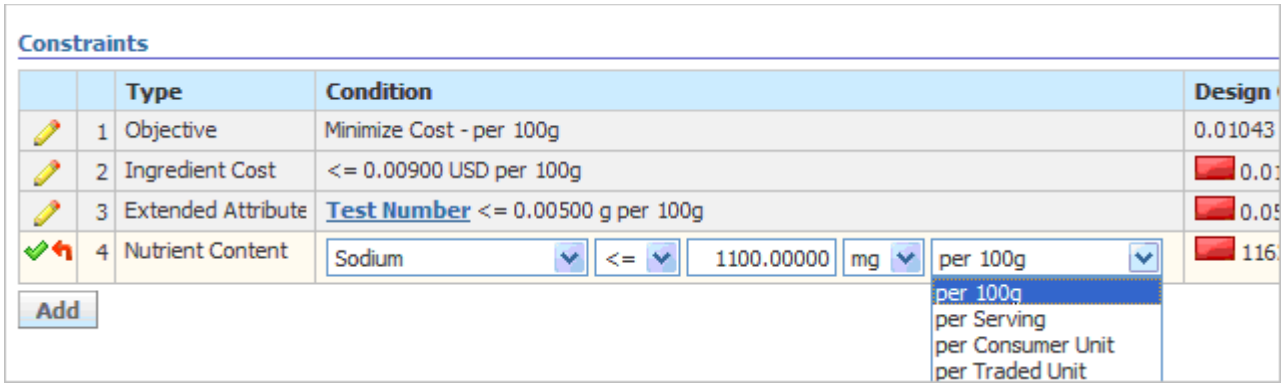
Design Conformance—The current value of the constraint and an icon signifying if the constraint is met.

When you have finished creating the Ingredient Cost constraint, click the apply changes icon ( ) to save your row. GSM redisplays the row showing the current value in the Design Conformance column.

Nutrient Content

Using the Nutrient Content constraint type, you can set up a condition to monitor the amount of a selected nutrient associated with your formula, as shown in figure 6-74 below.

Figure 6-74: Nutrient Content



The Nutrient Content constraint is composed of:

Nutrient—The nutrient you want to constrain. GSM pulls the list of nutrients from the theoretical nutrients on the selected output.

Operator—Logical operator used for comparison purposes. Options are:

- = (equal)
- <= (less than or equal)
- >= (greater than or equal)

Value—The value for nutrient that you want to optimize towards.

UOM—The unit of measure for the nutrient.

Display as—GSM can display this information per 100g, per Serving, per Consumer Unit, or per Traded Unit.

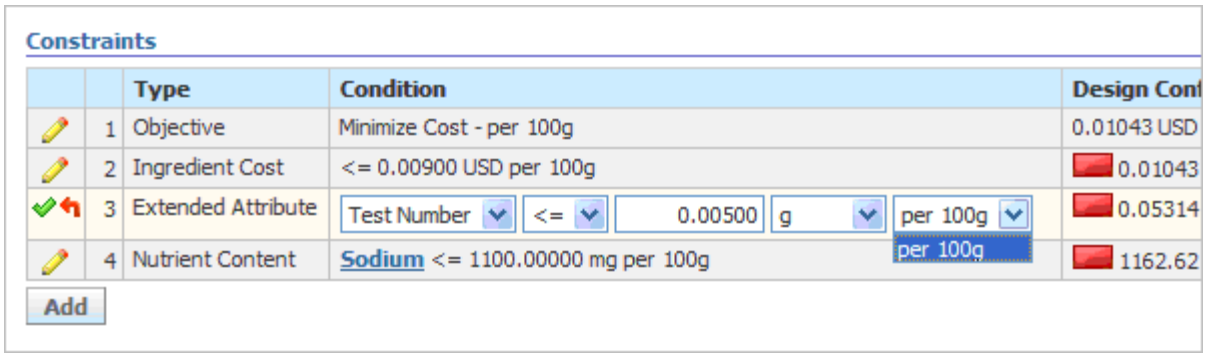
Design Conformance—The current value of the constraint and an icon signifying if the constraint is met.

When you have finished creating the Nutrient Content constraint, click the apply changes icon ( ) to save your row. GSM redisplays the row showing the current value in the Design Conformance column.

Extended Attribute

Using the Extended Attribute constraint type, you can set up a condition to monitor the amount of a selected extended attribute associated with your formula, as shown in figure 6-75 below.

Figure 6-75: Extended Attribute constraint



The Extended Attribute constraint is composed of:

Extended Attribute—The extended attribute to constrain. GSM pulls the list of extended attributes from the theoretical extended attributes on the output dialog.

Operator—Logical operator used for comparison purposes. Options are:

- = (equal)
- <= (less than or equal)
- >= (greater than or equal)

Value—The value for extended attribute that you want to optimize towards.

UOM—The unit of measure for the extended attribute.

Display as—GSM can display this information per 100g.

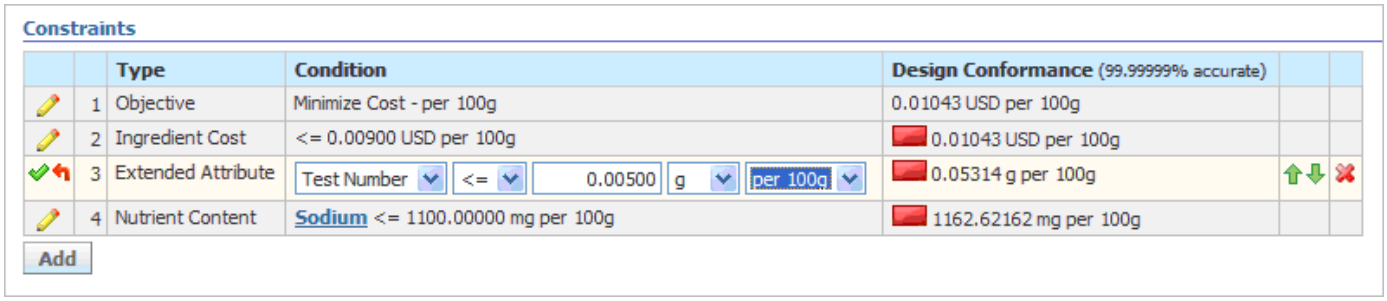
Design Conformance—The current value of the constraint and an icon signifying if the constraint is met.

When you have finished creating the Extended Attribute constraint, click the apply changes icon ( ) to save your row. GSM redisplays the row showing the current value in the Design Conformance column.

Ordering

Once you have created all of the constraints to guide the optimization engine, you can order them using the re-order row icons ( ) at the right side of each constraint row. Click the re-order row upwards icon ( ) to move the constraint toward the top of the list and the re-order row downwards icon ( ) to move it toward the bottom of the list. The order of constraints represents the rank (priority) of the constraints during optimization (see figure 6-76, below).

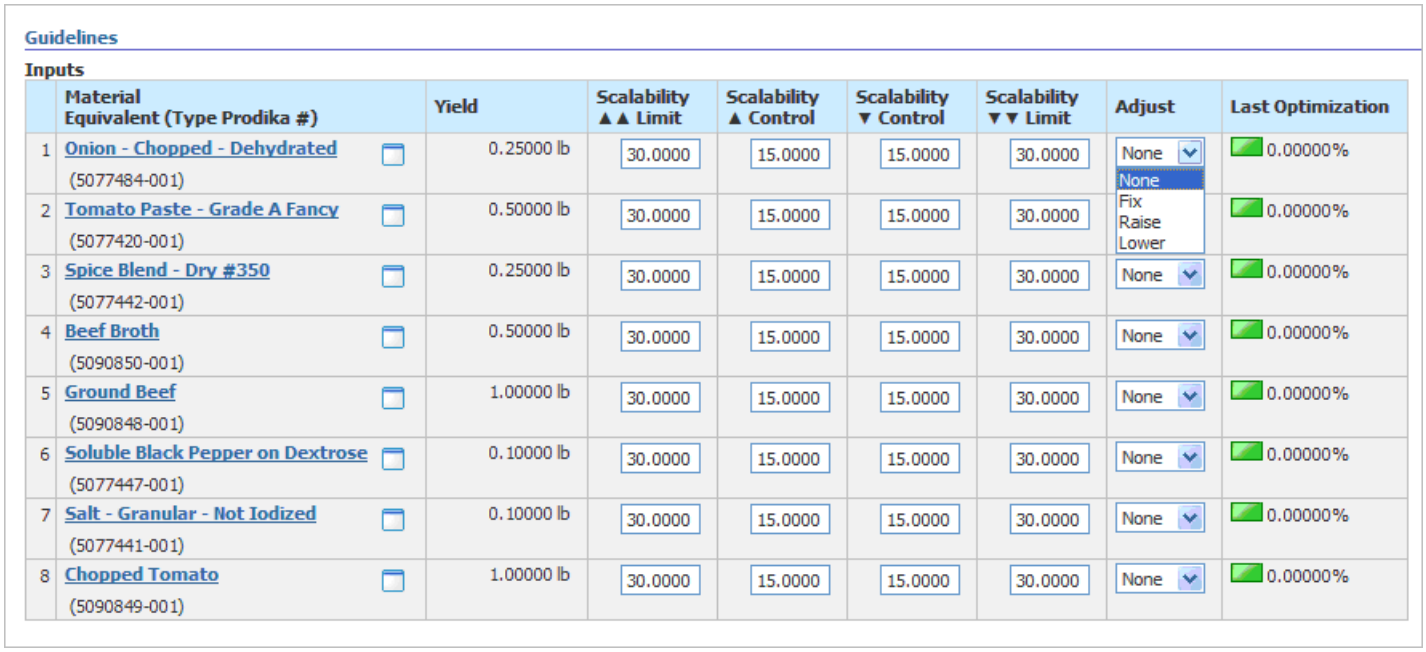
Figure 6-76: Ordering constraints



Guidelines Section

In the Guidelines section you can give the optimization engine additional information about how far it can go with certain items to reach a solution. You can supply the necessary information using scalability factors and the Adjust column. The Guidelines section (see figure 6-77) is always in edit mode so you can quickly adjust guidelines on a formula item.

Figure 6-77: Guidelines section



Scalability factors set upper and lower controls and limits on the optimization engine. The Scalability Control columns tell the optimization engine the range of adjustment that you are comfortable with. The Scalability Limit columns tell the optimization engine the biggest adjustment that you will enable it to make. In the Adjust column you can give the optimization engine even more granular information about how to handle each item during the optimization scenario. The available options in the Adjust drop-down list are:

Fix—Do not change this item's yield.

Raise—Do not change this item's yield in a negative manner.

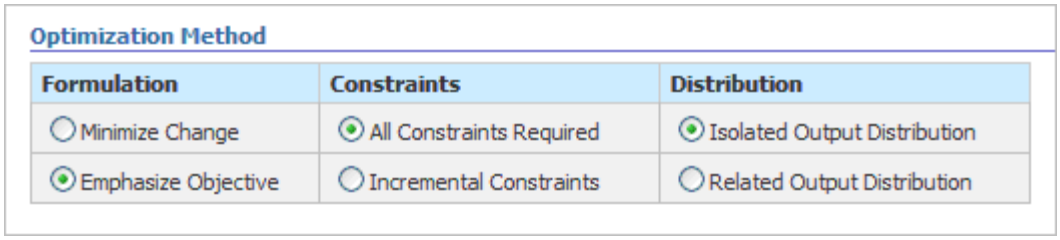
Lower—Do not change this item's yield in a positive manner.

The Last Optimization column shows the percent change due to the last optimization performed.

Optimization Method Section

In the Optimization Method section, shown in figure 6-78, you can further tailor the optimization scenario to meet your goals. You have control over the method that is used from a formulation standpoint, a constraint standpoint, and a distribution standpoint.

Figure 6-78: Optimization Method section



Formulation Column

The Formulation section is where you determine to what degree the optimization engine will use the scalability factors set in the Guidelines section. You can set it to either "Minimize Change" or "Emphasize Objective."

Minimize Change—The optimization engine changes the formula as little as possible and uses the scalability controls as the boundaries.

Emphasize Objective—The optimization engine uses the scalability limits in addition to the scalability controls as the boundaries.

Constraints Column

The Constraints section is where you determine to what degree the optimization engine will use the constraints set in the Optimization Method section. You can set it to either "Incremental Constraints" or "All Constraints Required."

Incremental Constraints—The optimization engine will meet as many of the constraints as possible. It processes the constraints based on their rank. The optimization scenario stops when a constraint fails to meet the defined criteria.

All Constraints Required—The optimization engine will meet every constraint defined.

Distribution Column

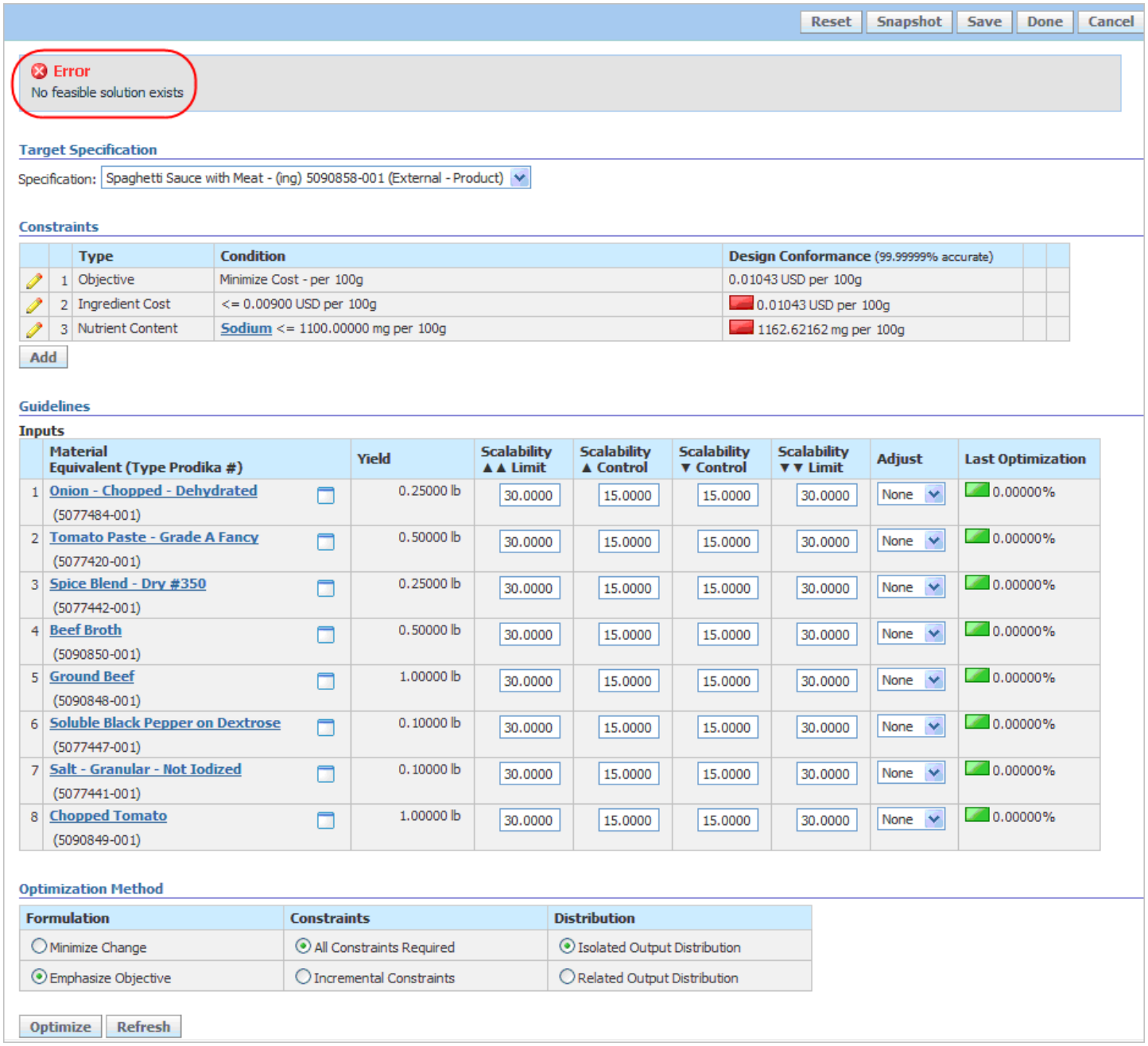
The Distribution section is where you determine how the results will be applied to the optimized formula. You can set it to either "Isolated Output Distribution" or "Related Output Distribution."

Isolated Output Distribution —The optimization engine will apply formula changes to the selected output only.

Related Output Distribution—The optimization engine will apply formula changes to all of the formulation outputs in the same manner.

Once you have defined all of the constraints, adjusted the necessary guidelines, and defined the optimization method, you can start your optimization scenario by clicking **Optimize** at the bottom of the page.

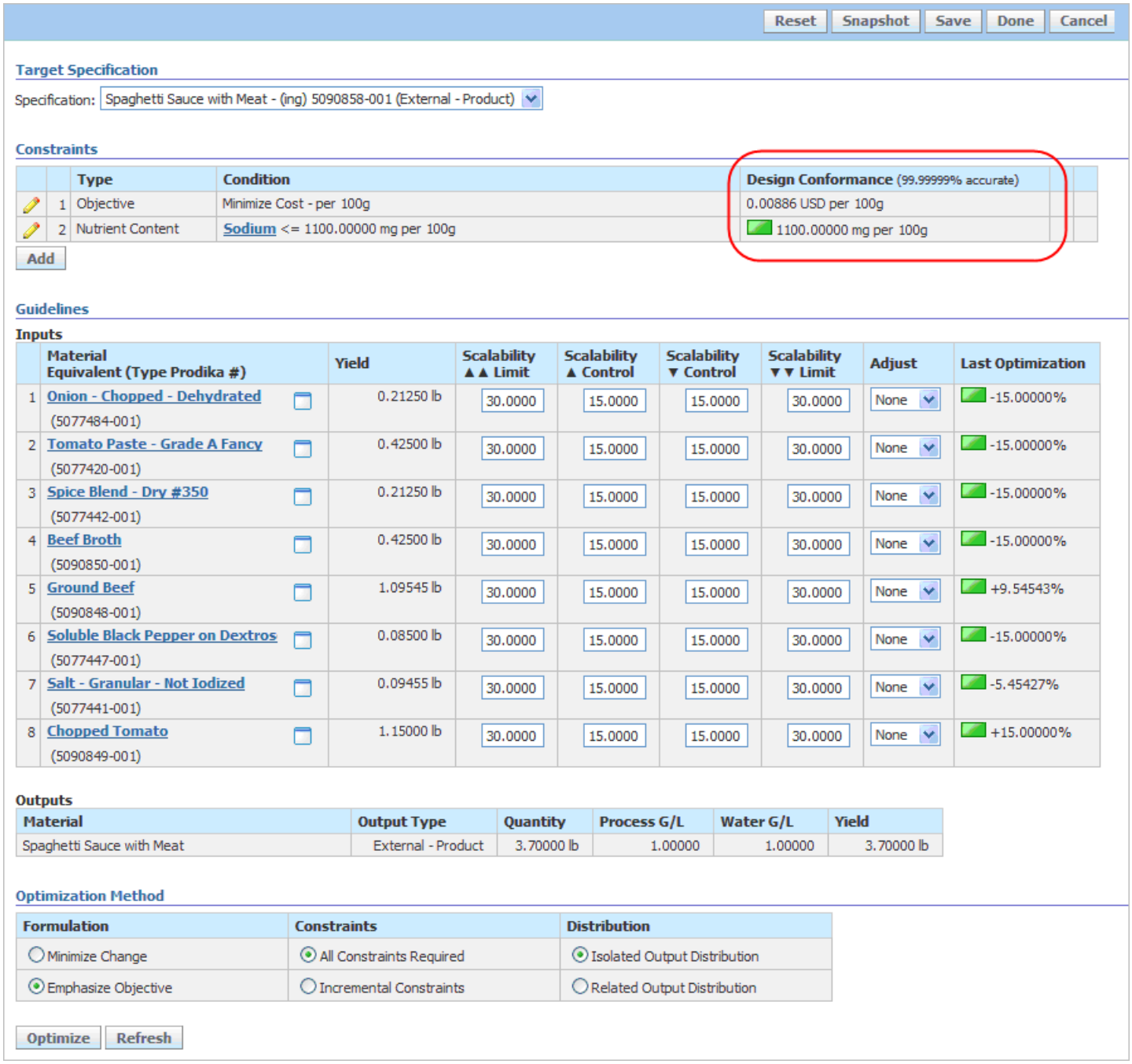
Figure 6-79: Constraints section with optimization error message



The optimization engine will try to provide a solution to the optimization problem with the rules that you have defined. If the constraints are too aggressive, the optimization engine will be unable to find a feasible solution and will return an error message, as shown in figure 6-79.

If the optimization engine cannot find a feasible solution, make your constraints less restrictive and optimize again. When GSM has obtained an optimized solution, the system displays the changes that it has made in order to achieve the optimized solution, as shown in figure 6-80.

Figure 6-80: Optimized solution



To reset the optimization scenario to the original formulation, click **Refresh**.

The **Refresh** button will pull the original information from the formulation specification as it relates to the selected output.

Optimization Action Buttons

Optimization action buttons are defined below and shown in figure 6-81:

Reset—Pulls the original information from the formulation specification as it relates to the selected output and clears all constraints and guideline adjustments.

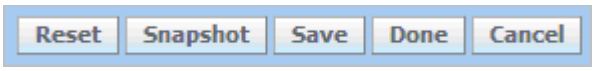
Snapshot—Stores the optimized formula as a snapshot on the original formulation specification.

Save—Saves the optimization scenario without adjusting the original formulation.

Done—Pushes the optimized formula (if one exists) to the formulation specification based on the selected distribution method and returns the user to the formulation specification. If no optimized formula exists, this will simply close the optimization popup.

Cancel—Closes the optimization popup.

Figure 6-81: Optimization action buttons



CHAPTER 7

Menu Item Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding menu item specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Build Tab*
- *Packaging Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Menu Item Specifications page consists of the following tabs:

- *Summary Tab* on page 7-3
- *Build Tab* on page 7-4
- *Packaging Tab* on page 7-5
- *Compliance Tab* on page 7-6
- *Related Specs Tab* on page 7-10
- *Supporting Documents Tab* on page 7-11
- *References Tab* on page 7-11
- *Approval/Audit Trail Tab* on page 7-11

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current menu item specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

Key sections in the Summary tab include:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2
- Menu Item Description—Discussed below, at *Menu Item Description Section* on page 7-3
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5

Menu Item Description Section

This section provides fields that you can use to categorize and classify menu items. Additionally, it has enriched text fields that enable descriptions of menu items, packaging, and appearance, as well as sensory descriptions.

Figure 7-1: Menu Item Description section

Build Tab

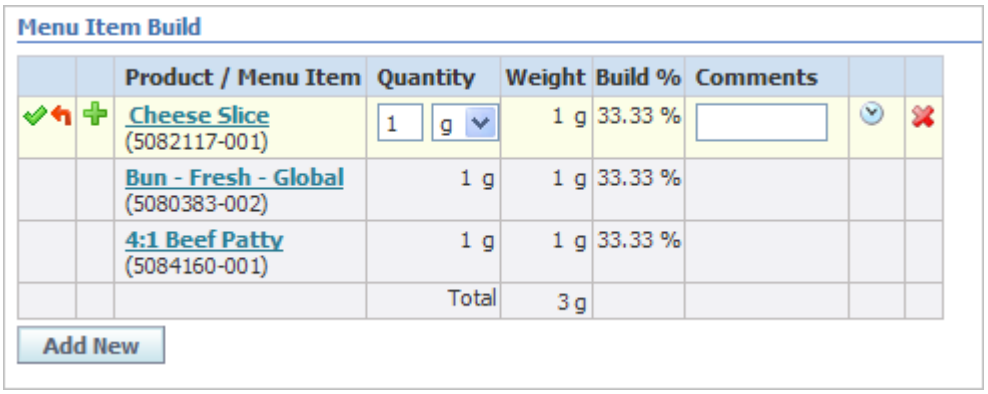
The Build tab consists of two sections:

- Menu Item Build section
- Alternate Products/Menu Items section

Menu Item Build Section

The Menu Item Build section contains the products or menu items that make up a menu item. You can adjust the quantity and comments around that item in the build when the specification is in edit mode. GSM calculates the weight and build percentage when you click the apply changes icon ( ) in that row.

Figure 7-2: Menu Item Build section detail showing one item, in edit mode



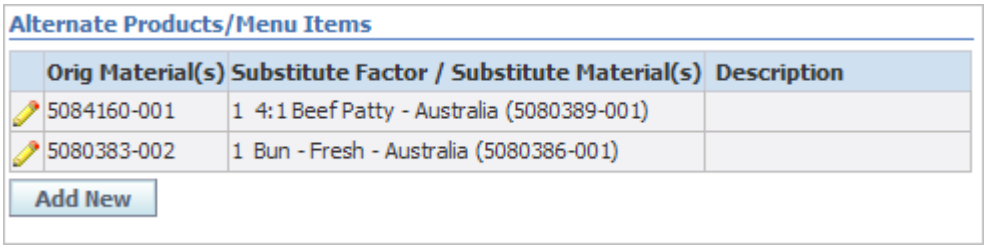
The units of measure (UOMs) for the build quantities may vary. By default, mass-based units of measure are available for each product specification. If the product specification has a relative density, then volume-based UOMs are also available. If the product specification also has a unit conversion factor, then a unit/count unit of measure will be available. You can use unit/count units of measure when referring to menu items that are represented in the build.

Alternate Products/Menu Items Section

The Alternate Products/Menu Items section contains the product and menu item specification data that you can use as a substitute for one of the items in a build. You can replace each item in the primary build with one or more alternate items.

In this section you can define alternate products or menu items that may be used. You can replace each item in this section with one or more alternate items. You assign to each alternate a substitution factor to denote how users doing formulation work should use the alternate item to replace the original.

Figure 7-3: Alternate Products/Menu Items section



Packaging Tab

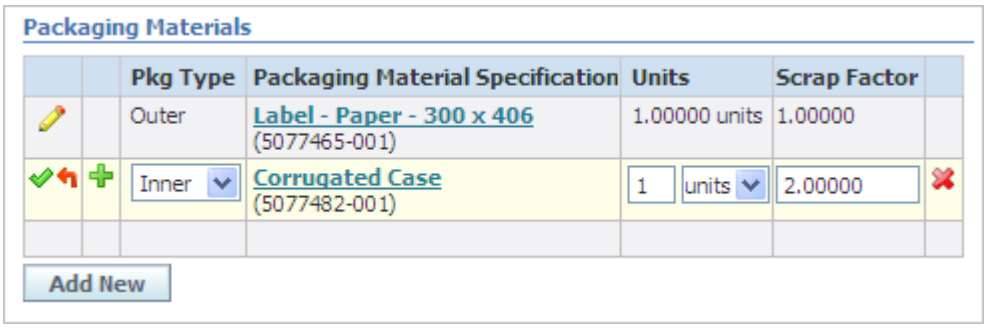
The Packaging tab contains information related to the packaging of a specific menu item specification and consists of two sections:

- Packaging Materials
- Alternate Packaging

Packaging Materials Section

In this section you can describe the packaging associated with this specification by associating and categorizing packaging and printed packaging specifications.

Figure 7-4: Packaging Materials section



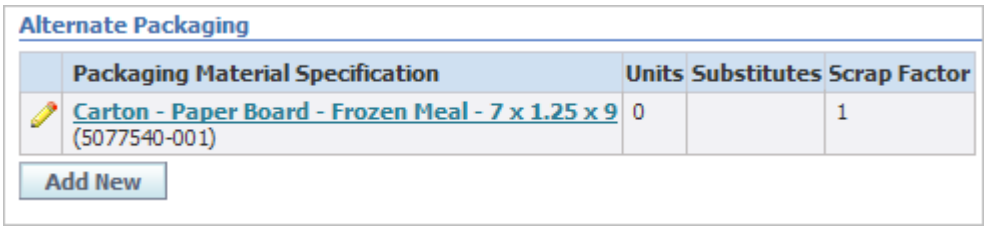
Key fields include:

Pkg Type—Enables you to categorize how the packaging is applied to this item, for example, whether the packaging is considered inner, intermediate, or outer packaging.

Alternate Packaging Section

The Alternate Packaging section contains information related to any acceptable alternative packaging options.

Figure 7-5: Alternate Packaging section



Compliance Tab

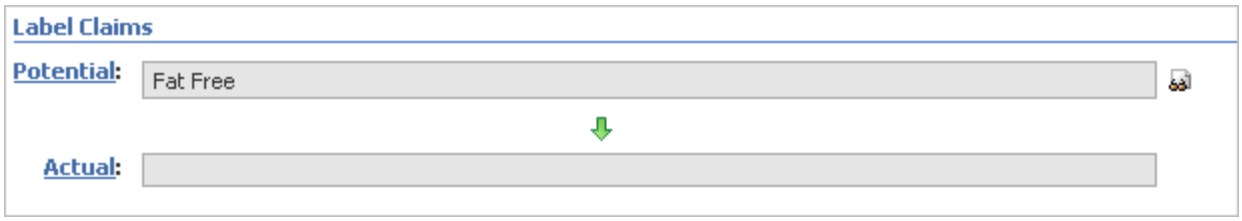
The Compliance tab includes the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29
- Label Claims—Discussed below, at *Label Claims Section* on page 7-6
- Compliance Information—For discussion of this commonly used section, please see *Compliance Information Section* on page 3-6
- Allergens, Intolerances, and Additives—For discussion of this commonly used section, please see *Additives, Allergens, and Intolerances Sections* on page 3-7

Label Claims Section

The Label Claims section contains the label claims linked to a menu item specification, as figure 7-6 shows below. The label claims values and calculation rules are maintained by an administrator

Figure 7-6: Label Claims section



Key fields include:

Potential—Select all of the possible label claims for the finished good. This field can be populated two ways. You can either click on the linked label **Potential**, or calculate the label claims by using label claims determination. To calculate label claims, select the label claims determination icon ( ). GSM opens the label claims determination popup, shown in figure 7-8, on page 7-9. See *Label Claims Determination* on page 7-7 for more information.

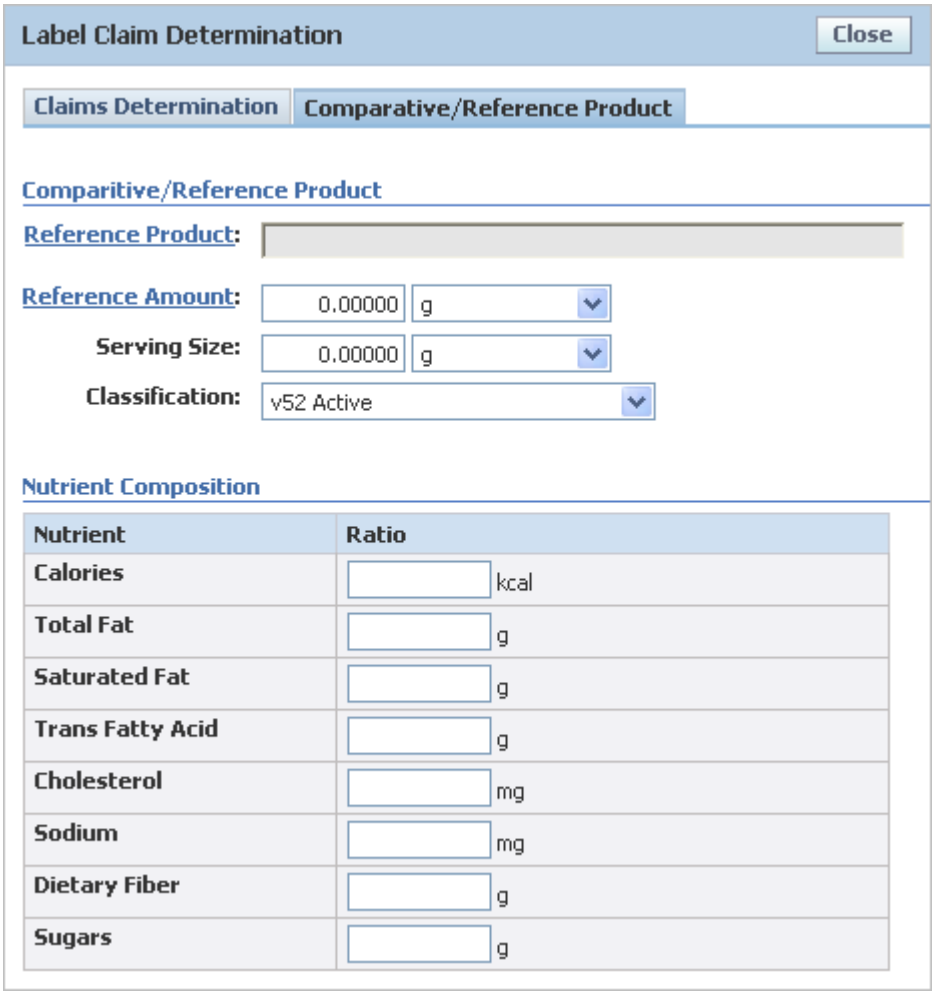
Actual—Select the actual label claims declared on the finished good. This field can be populated two ways. You can either click on the linked label **Actual** or use the copy field icon ( ). When you click the copy field icon, GSM displays a multi select dialog box containing all values in the potential label claims field. You can use the dialog box choices to populate the actual field only with potential options.

Label Claims Determination

Using the label claims determination feature, you can interrogate a product for claims applicability based on a centralized group of rules segregated by label claims authority.

1. Click the label claims determination icon ( ). GSM opens the Label Claim Determination dialog box.
2. Some claims require another product to compare to, such as Low Fat. The system can evaluate comparative claims if you provide additional nutrient information that describes the comparative product. Select the Comparative/Reference Product tab and fill in the appropriate information. See figure 7-7 below.

Figure 7-7: Label Claim Determination dialog box, Comparative/Reference Product tab



3. On the Claims Determination tab, from the **Label Claim Authority** drop-down list, select a specific rule group to use for considering claims applicability.

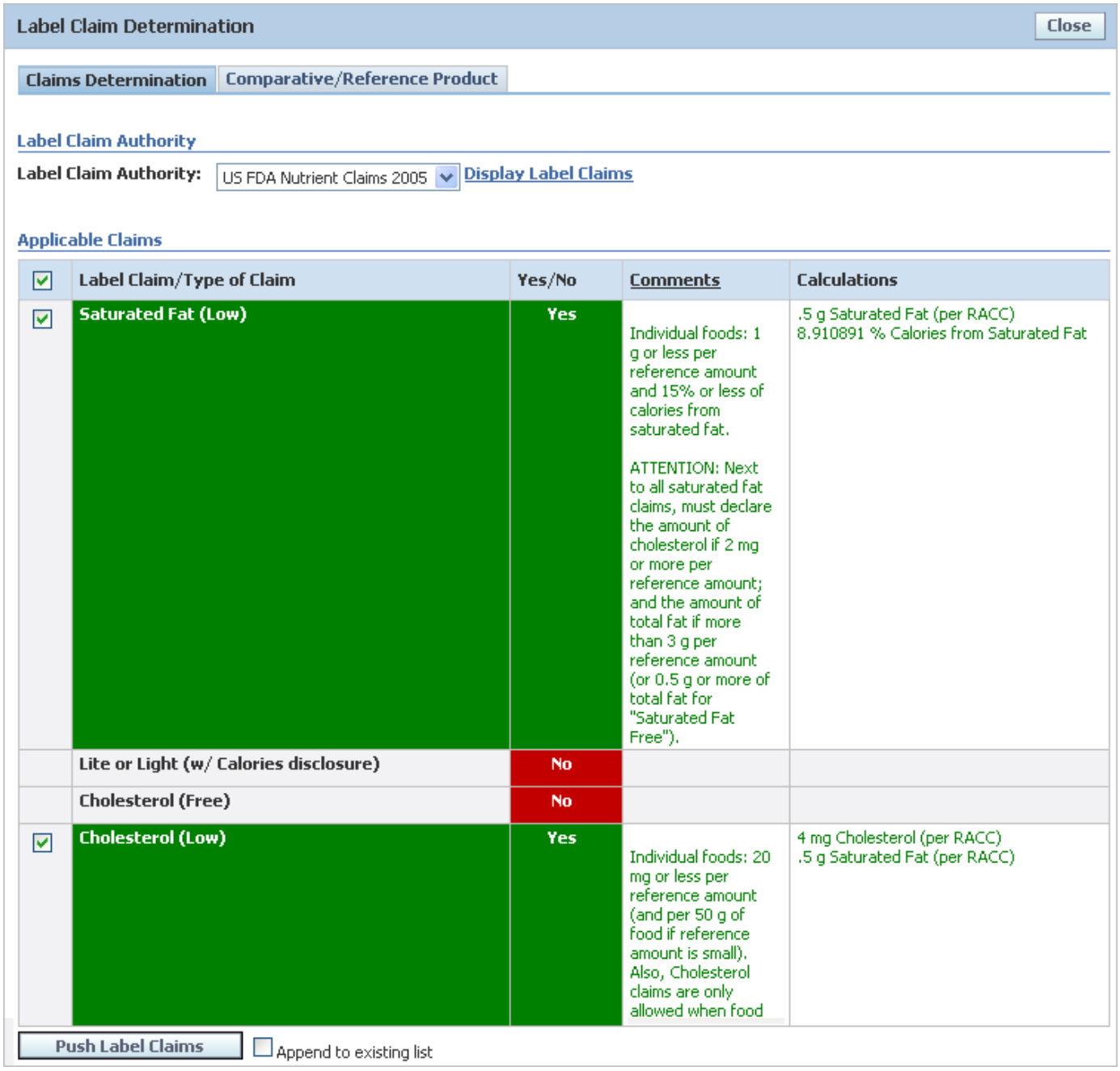
4 Click **Display Label Claims** to display the Applicable Claims table.

The system evaluates label claims against rules that you previously defined. All selected claims based on the label claims authority appear in the Applicable Claims table with color coding to show whether the claim may be made for the product.

When the system evaluates a claim as compliant, the Comments column displays supporting information for the claim along with one or more user-defined values supporting the assessment in the Calculation(s) column, as shown in figure 7-8. If the system finds that the claim is invalid, no such information appears in the Comments column.

5 Select the claims you want to push to the specification. All compliant claims are automatically selected. You can unselect any claims you do not want to push to the specification. Once you have all the claims selected click the **Push Label Claims** button at the bottom of the grid. This action will close the dialog window and populate the potential label claims field with the selected claims. This action will replace all existing potential label claims in the field; if you would like to just append to the list make sure the "Append to existing list" checkbox is selected. See figure 7-8 below.

Figure 7-8: Label Claims Determination dialog box



Related Specs Tab

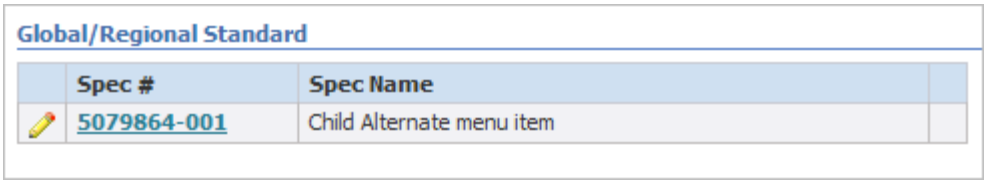
The Related Specs tab contains the following sections:

- Global/Regional Standard—Discussed below, at *Global/Regional Standard Section* on page 7-10
- Alternate Standards—Discussed below, at *Alternate Standards Section* on page 7-10
- Master Specifications—For discussion of this commonly used field, please see *Master Specifications Section* on page 3-9

Global/Regional Standard Section

The Global/Regional Standard section contains any specifications that are global/regional standards related to the menu item specification. You can associate only one global/regional standard to each specification.

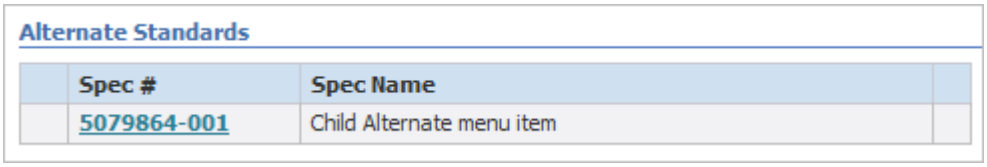
Figure 7-9: Global/Regional Standard section



Alternate Standards Section

The Alternate Standards section lists any alternate standard specifications for the menu item specification. GSM locates and displays any alternates that are linked to any other specification that references the current specification as a global/regional standard.

Figure 7-10: Alternate Standards section



Supporting Documents Tab

The Menu Item Specification Supporting Documents tab consists of four sections:

- **Supporting Documents** —The document types available are Product Facts Sheet, Attachments/Procedures, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- **DRL Documents**—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- **Testing Protocols**—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.
- **Nutrient Profile**— Discussed below, at *Nutrient Profile Section* on page 7-11.

Nutrient Profile Section

In this section you can create new nutrient profiles or associate the menu item specification to existing nutrient profiles.

Figure 7-11: Nutrient Profile section

Nutrient Profile

Profile #	Nutrient Profile	Active Profile	Effective Date	Status
5077592-001	Nutrient Profile: Tomato Puree, 8.6% Total Solids	☐	Monday, October 04, 2008	Approved
5077592-002	Nutrient Profile: Tomato Puree, 8.6% Total Solids	☐	Tuesday, October 05, 2008	Draft

Note Nutrient profiles are considered separate documents from the menu item specification and have independent workflows.

References Tab

The Menu Item Specifications References tab consists of three sections:

- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27
- Activities section—For discussion of this commonly used section, please see *Activities Section* on page 3-25
- Related Documents—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 8

Nutrient Profiles

This chapter presents an overview of the capabilities of Global Specification Management regarding nutrient profiles. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Nutrition Panel Tab*
- *Label Composition Tab*
- *Ext Data Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Nutrient Profile page consists of the following tabs:

- *Summary Tab* on page 8-2
- *Nutrition Panel Tab* on page 8-4
- *Label Composition Tab* on page 8-13
- *Ext Data Tab* on page 8-13
- *Related Specs Tab* on page 8-13
- *Supporting Documents Tab* on page 8-14
- *References Tab* on page 8-14
- *Approval/Audit Trail Tab* on page 8-14

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your nutrient profile.
- **Create Copy**—Create a new copy of the current nutrient profile. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **LIO**—Create a new LIO profile, automatically linking the nutrient profile. The ingredient specification must be selected manually. The LIO button only displays if the Formulation and Compliance (F&C) bundle has been installed.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a nutrient profile, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

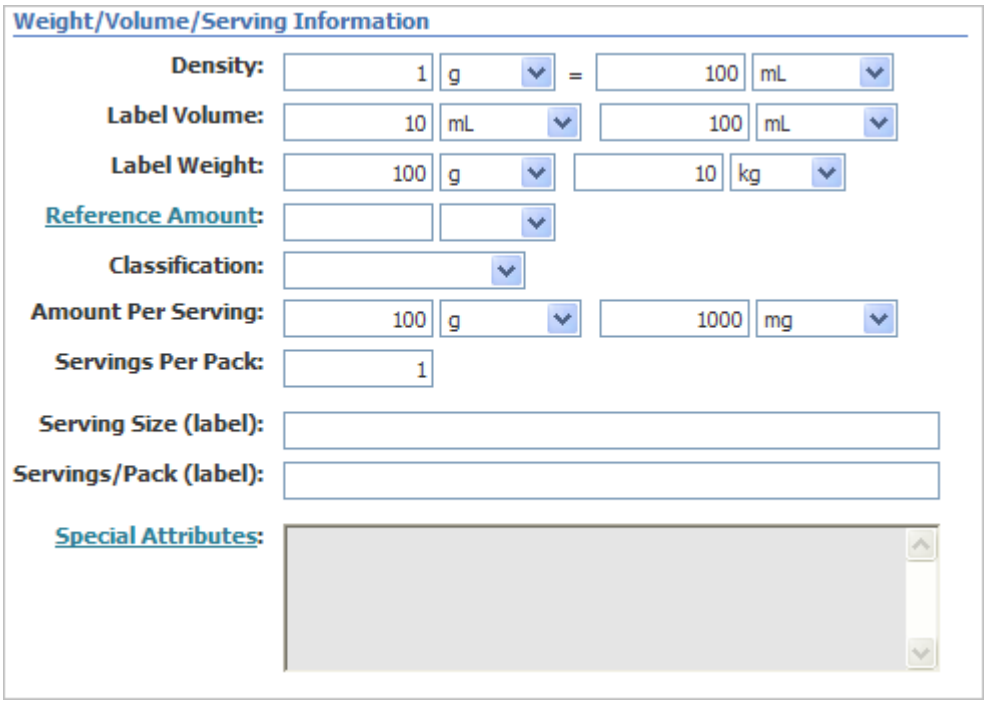
Summary Tab

The Nutrient Profile Summary tab consists of the following five sections:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Weight/Volume/Serving Information—Discussed below, at *Weight/Volume/Serving Information Section* on page 8-3.
- Ingredient Statements—Discussed below, at *Ingredient Statements Section* on page 8-4.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Weight/Volume/Serving Information Section

Figure 8-1: Nutrient Profile Weight/Volume/Serving Information section



Key fields in this section include:

- **Density**—Captures the density, which value is used in volumetric nutrient declarations. You can define nutrients per 100 g or per 100 ml. Density is used in the conversion between these two.
- **Label Volume**—The volume that is intended to show up on the label. There are two entry fields, to accommodate two units of measure, for example, 1 gal (US) 5 fl oz (US).
- **Label Weight**—The weight that is intended to show up on the label. There are two entry fields, to accommodate two units of measure, for example, 3 lb 8 oz (US).
- **Reference Amount**—Also known as Reference Amount Customarily Consumed (RACC), the value in this field is the typical amount that someone consumes in one sitting. Click the **Reference Amount** link to search for a RACC set forth by an authority such as the U.S. Food and Drug Administration. This data is used in determining label claims.

- **Classification**—Used to determine label claim eligibility. This is also used to filter label claim determination rule comments so the user can view only the comments that pertain to the selected classification.
- **Amount Per Serving**—Used to determine the Per Serving values on the nutrition panel.
- **Serving Size (label) Serving/Pack (label)**—Used for labeling.
- **Special Attributes**—Choose from a prepopulated list of special attributes maintained by your administrator.

Ingredient Statements Section

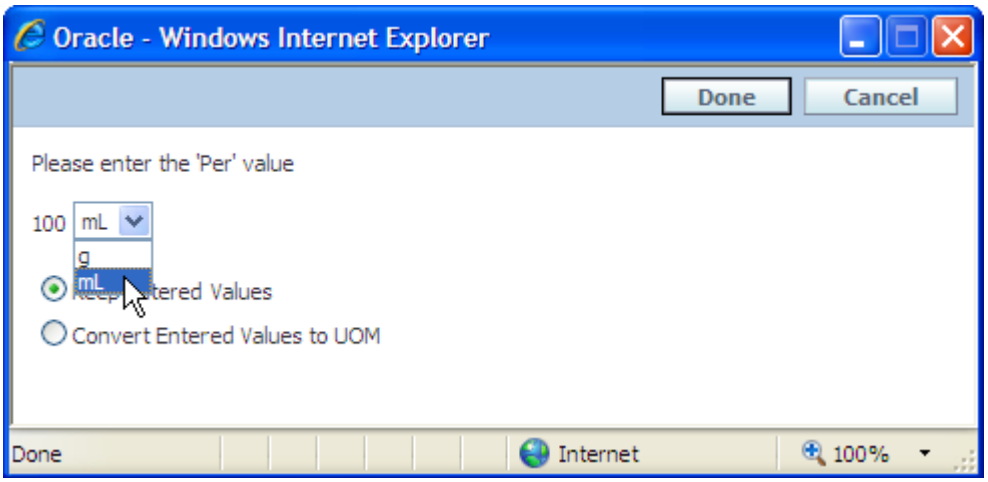
The Ingredient Statements section contains the ingredient statement for general use in labeling.

Nutrition Panel Tab

Nutrient Profile Section

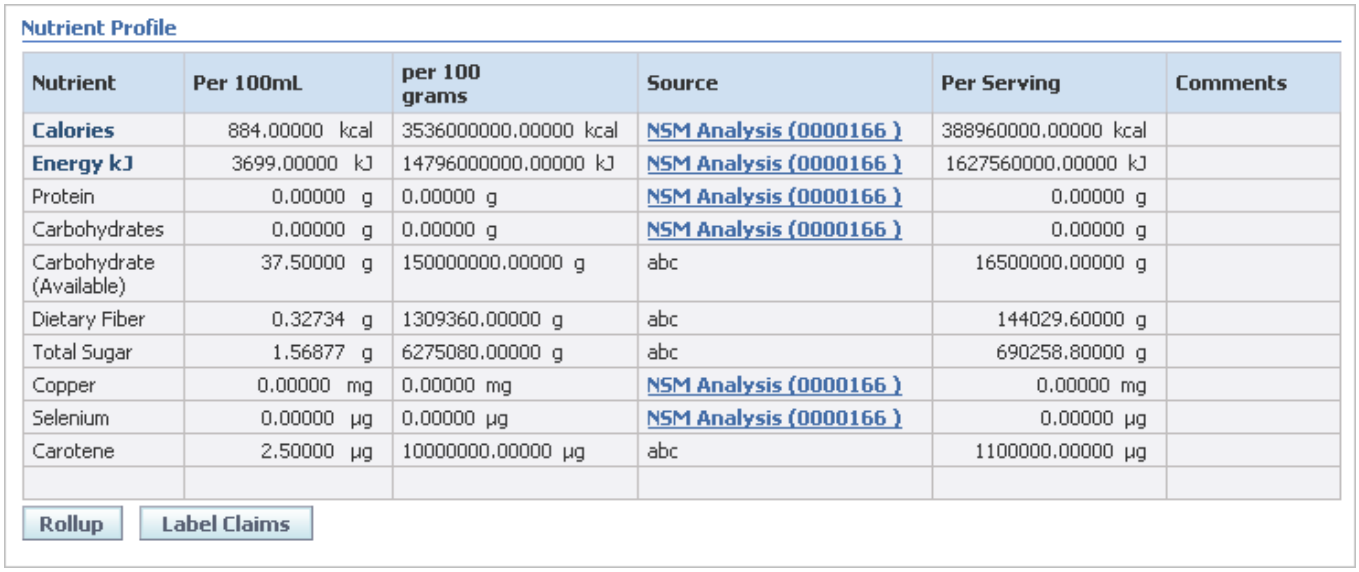
Nutrient Profile, the sole section in the Nutrition Panel tab, stores the nutritional information for the related specifications, as shown in figure 8-3, below. As shown in figure 8-4, you can declare nutrient data by volume (if density has been defined) or by mass, as shown in the dialog box in figure 8-2 below.

Figure 8-2: Per 100g/Per100mL dialog box



This data can appear within formulation specifications, and you can use this data when determining label claims.

Figure 8-3: Nutrient Profile section showing the Per 100g column

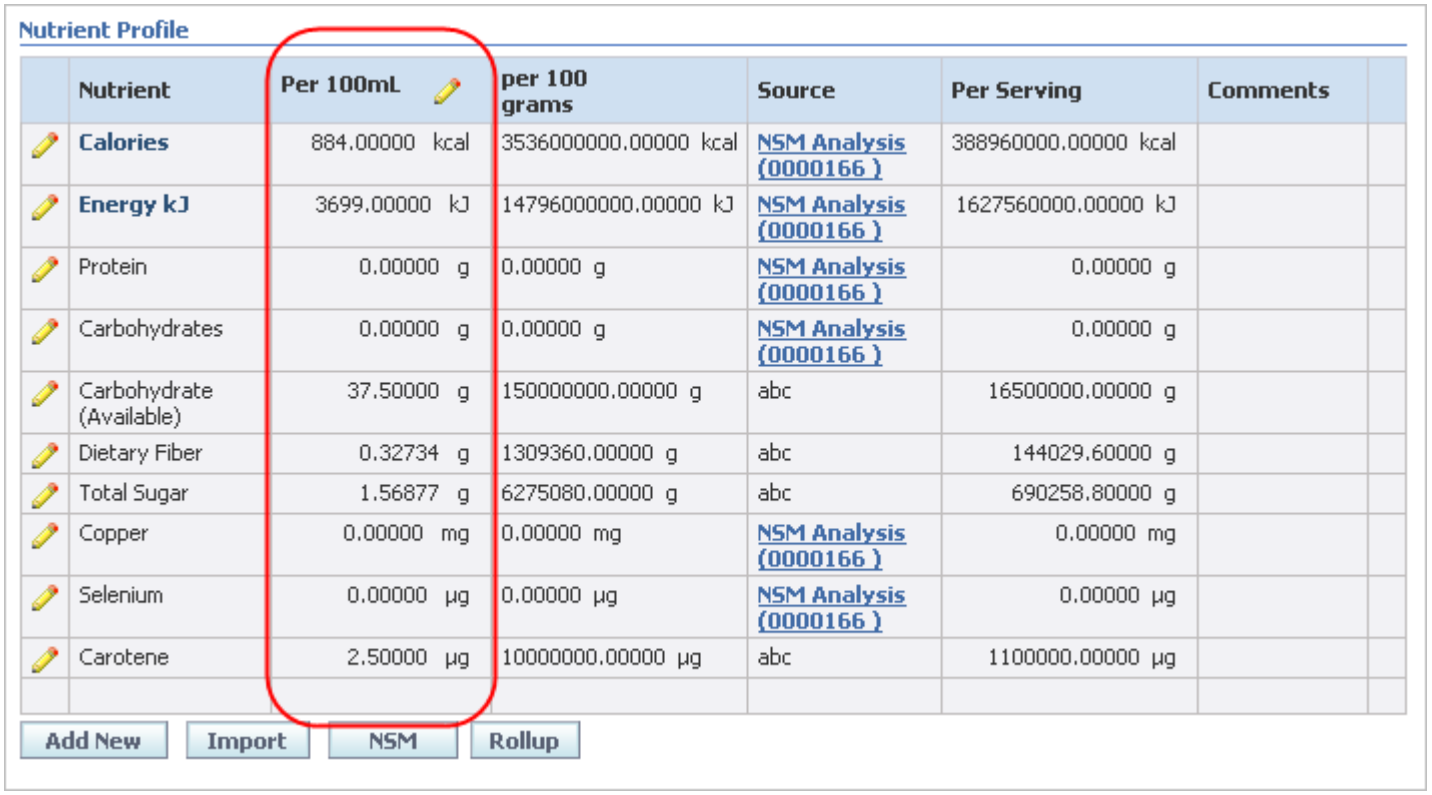


Nutrient Profile

Nutrient	Per 100mL	per 100 grams	Source	Per Serving	Comments
Calories	884.00000 kcal	3536000000.00000 kcal	NSM Analysis (0000166)	388960000.00000 kcal	
Energy kJ	3699.00000 kJ	14796000000.00000 kJ	NSM Analysis (0000166)	1627560000.00000 kJ	
Protein	0.00000 g	0.00000 g	NSM Analysis (0000166)	0.00000 g	
Carbohydrates	0.00000 g	0.00000 g	NSM Analysis (0000166)	0.00000 g	
Carbohydrate (Available)	37.50000 g	150000000.00000 g	abc	16500000.00000 g	
Dietary Fiber	0.32734 g	1309360.00000 g	abc	144029.60000 g	
Total Sugar	1.56877 g	6275080.00000 g	abc	690258.80000 g	
Copper	0.00000 mg	0.00000 mg	NSM Analysis (0000166)	0.00000 mg	
Selenium	0.00000 µg	0.00000 µg	NSM Analysis (0000166)	0.00000 µg	
Carotene	2.50000 µg	10000000.00000 µg	abc	1100000.00000 µg	

Rollup Label Claims

Figure 8-4: Nutrient Profile section showing the Per 100mL column in edit mode



Nutrient Profile

Nutrient	Per 100mL	per 100 grams	Source	Per Serving	Comments
Calories	884.00000 kcal	3536000000.00000 kcal	NSM Analysis (0000166)	388960000.00000 kcal	
Energy kJ	3699.00000 kJ	14796000000.00000 kJ	NSM Analysis (0000166)	1627560000.00000 kJ	
Protein	0.00000 g	0.00000 g	NSM Analysis (0000166)	0.00000 g	
Carbohydrates	0.00000 g	0.00000 g	NSM Analysis (0000166)	0.00000 g	
Carbohydrate (Available)	37.50000 g	150000000.00000 g	abc	16500000.00000 g	
Dietary Fiber	0.32734 g	1309360.00000 g	abc	144029.60000 g	
Total Sugar	1.56877 g	6275080.00000 g	abc	690258.80000 g	
Copper	0.00000 mg	0.00000 mg	NSM Analysis (0000166)	0.00000 mg	
Selenium	0.00000 µg	0.00000 µg	NSM Analysis (0000166)	0.00000 µg	
Carotene	2.50000 µg	10000000.00000 µg	abc	1100000.00000 µg	

Add New Import NSM Rollup

Key fields include:

Nutrient—The name of the nutrient.

Per 100g / Per 100mL—The mass or volume-based declaration for the nutrient. Volume (per 100mL) column can be displayed only if the density has been defined in the Summary tab.

Source—The source system that nutrient data was retrieved from. When nutrition is imported, the source will display the object it was imported from.

Per Serving—Per Serving nutritional information. GSM calculates this field from the Per 100g/100ml field and the Amount Per Serving data field.

Note The Final Values field and rounding rules are by default, configured off. For more information on this field, refer to the *Agile Product Lifecycle Management for Process Configuration Guide*.

To calculate the value of the Per Serving field:

1. Click **Edit** at the upper right of the page to put the specification in edit mode.
2. Click **Calculate**. If you have a serving size specified, GSM will calculate the per serving column.

To add a nutrient manually:

1. Click **Edit** at the upper right of the page to put the specification in edit mode.
2. Click **Add New** and select the nutrients from the dialog box that appears.

To import nutritional data from an ingredient specification:

1. Click **Edit** at the upper right of the page to put the specification in edit mode.
2. Click **Import** and select **Ingredient** in the drop-down list.
3. Search and select the item to import. A dialog box displays a list of nutrients and their values from the ingredient specification's nutrient composition.
4. Select the nutrients to import and click **Done**. The nutrient profile displays the selected nutrients, along with their values.

To import nutritional data from the Food Composition Library:

1. Click **Edit** at the upper right of the page to put the specification in edit mode.
2. Click **Import** and select **Food Composition Library** in the drop-down list.
3. Search and select the item to import. A dialog box displays a list of nutrients and their values.
4. Select the nutrients to import and click **Done**. The nutrient profile displays the selected nutrients, along with their values.

To import nutritional data from another nutrient profile:

1. Click **Edit** at the upper right of the page to put the specification in edit mode.
2. Click **Import** and select **Nutrient Profile** in the drop-down list.
3. Search and select the item to import. A dialog box displays a list of nutrients and their values.
4. Select the nutrients to import and click **Done**. The nutrient profile displays the selected nutrients, along with their values.

To import nutrient analysis or nutrient composites from the Nutrition Surveillance Management application (NSM):

1. At the upper right of the page, click **Edit**. The Nutrient Profile page reloads in edit mode, in which the Label Claims button is gone and three new buttons are present:
   - Add New
   - Import
   - NSM

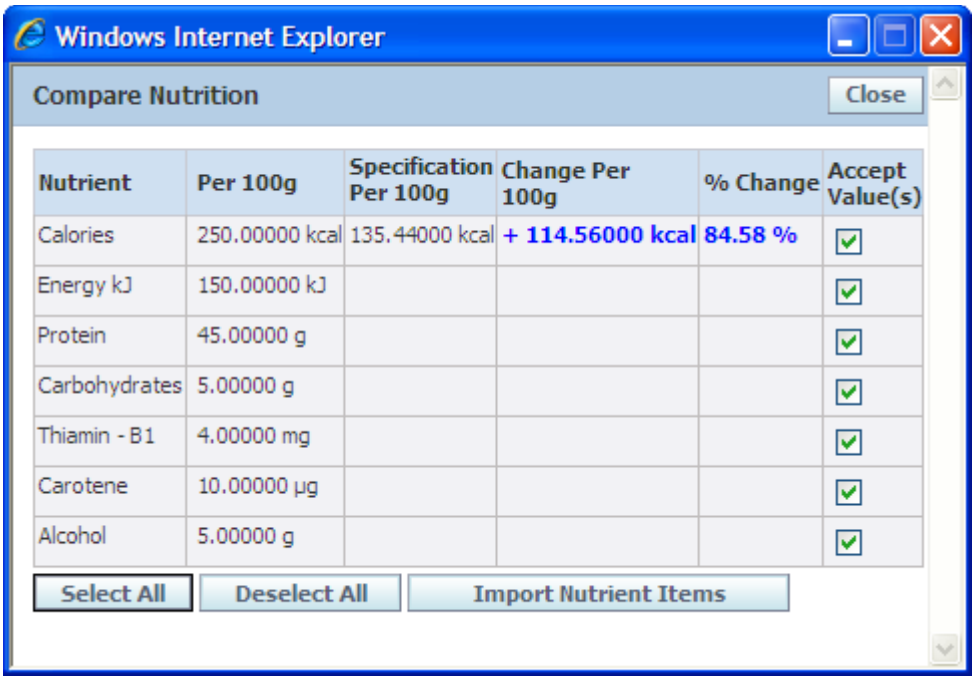
Each row in the Nutrient Profile table is now editable.

2 Click **NSM**. The Import Nutrient Items search page appears.

3 Select **Nutrient Analysis** or **Nutrient Composites** in the drop-down list near the top of the page, enter search criteria, and click **Search**. A Search Results section appears, with a table of search results.

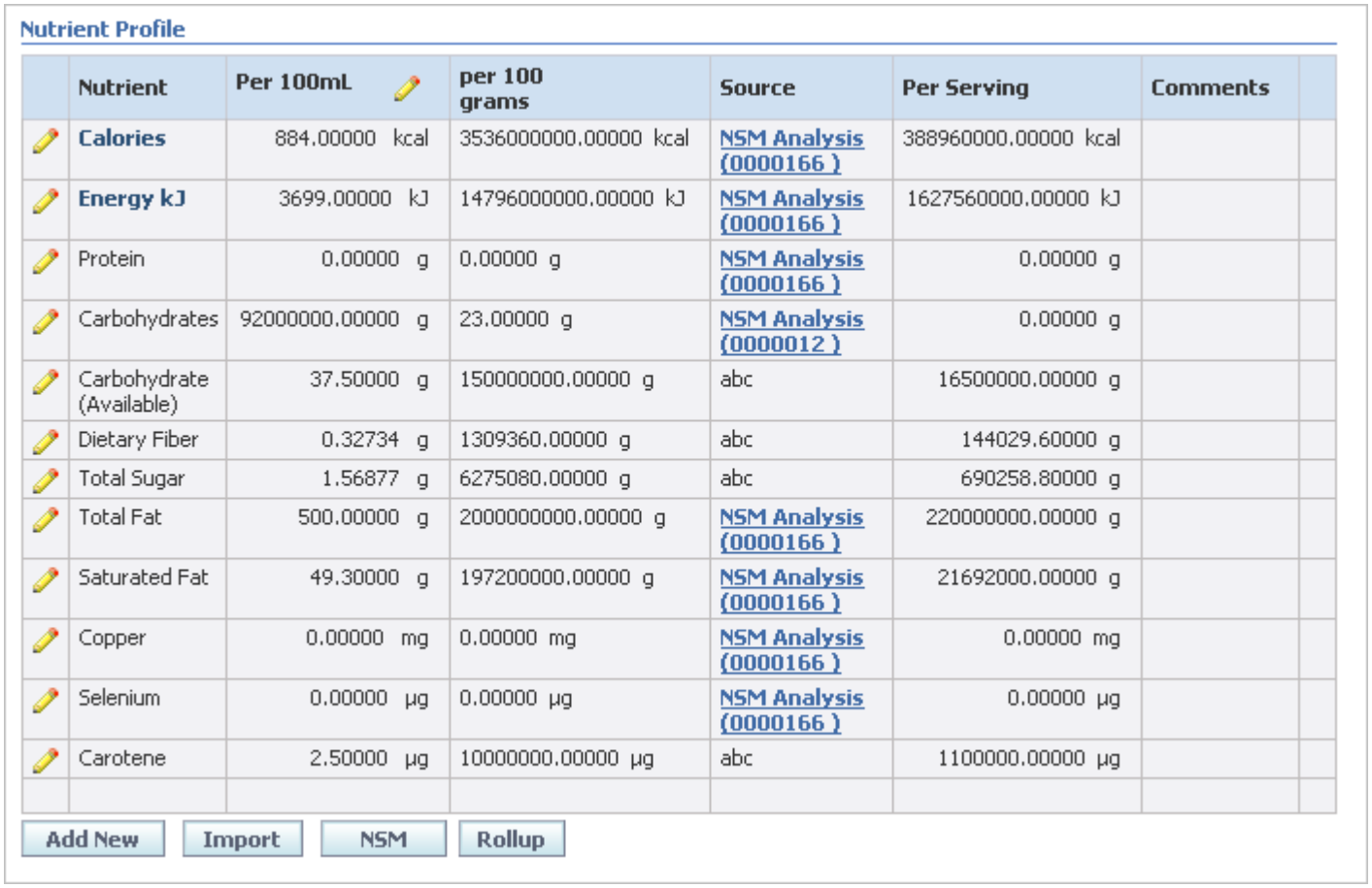
4 Click a hyperlinked analysis number or composite number in the first column of the search results table. The Compare Nutrition dialog box opens, displaying the nutrient information and the difference between what you selected and the current nutrient profile, as shown in figure 8-5 below.

Figure 8-5: Compare Nutrition dialog box



5 Select the items to import and click **Import Nutrient Items.** GSM imports the selected items and displays them in the Nutrient Profile section, as shown in figure 8-6 below:

Figure 8-6: Imported nutrient items



Nutrient Profile

	Nutrient	Per 100mL	per 100 grams	Source	Per Serving	Comments
	Calories	884.00000 kcal	3536000000.00000 kcal	NSM Analysis (0000166)	388960000.00000 kcal	
	Energy kJ	3699.00000 kJ	14796000000.00000 kJ	NSM Analysis (0000166)	1627560000.00000 kJ	
	Protein	0.00000 g	0.00000 g	NSM Analysis (0000166)	0.00000 g	
	Carbohydrates	92000000.00000 g	23.00000 g	NSM Analysis (0000012)	0.00000 g	
	Carbohydrate (Available)	37.50000 g	150000000.00000 g	abc	16500000.00000 g	
	Dietary Fiber	0.32734 g	1309360.00000 g	abc	144029.60000 g	
	Total Sugar	1.56877 g	6275080.00000 g	abc	690258.80000 g	
	Total Fat	500.00000 g	2000000000.00000 g	NSM Analysis (0000166)	220000000.00000 g	
	Saturated Fat	49.30000 g	197200000.00000 g	NSM Analysis (0000166)	21692000.00000 g	
	Copper	0.00000 mg	0.00000 mg	NSM Analysis (0000166)	0.00000 mg	
	Selenium	0.00000 µg	0.00000 µg	NSM Analysis (0000166)	0.00000 µg	
	Carotene	2.50000 µg	10000000.00000 µg	abc	1100000.00000 µg	

Add New | Import | NSM | Rollup

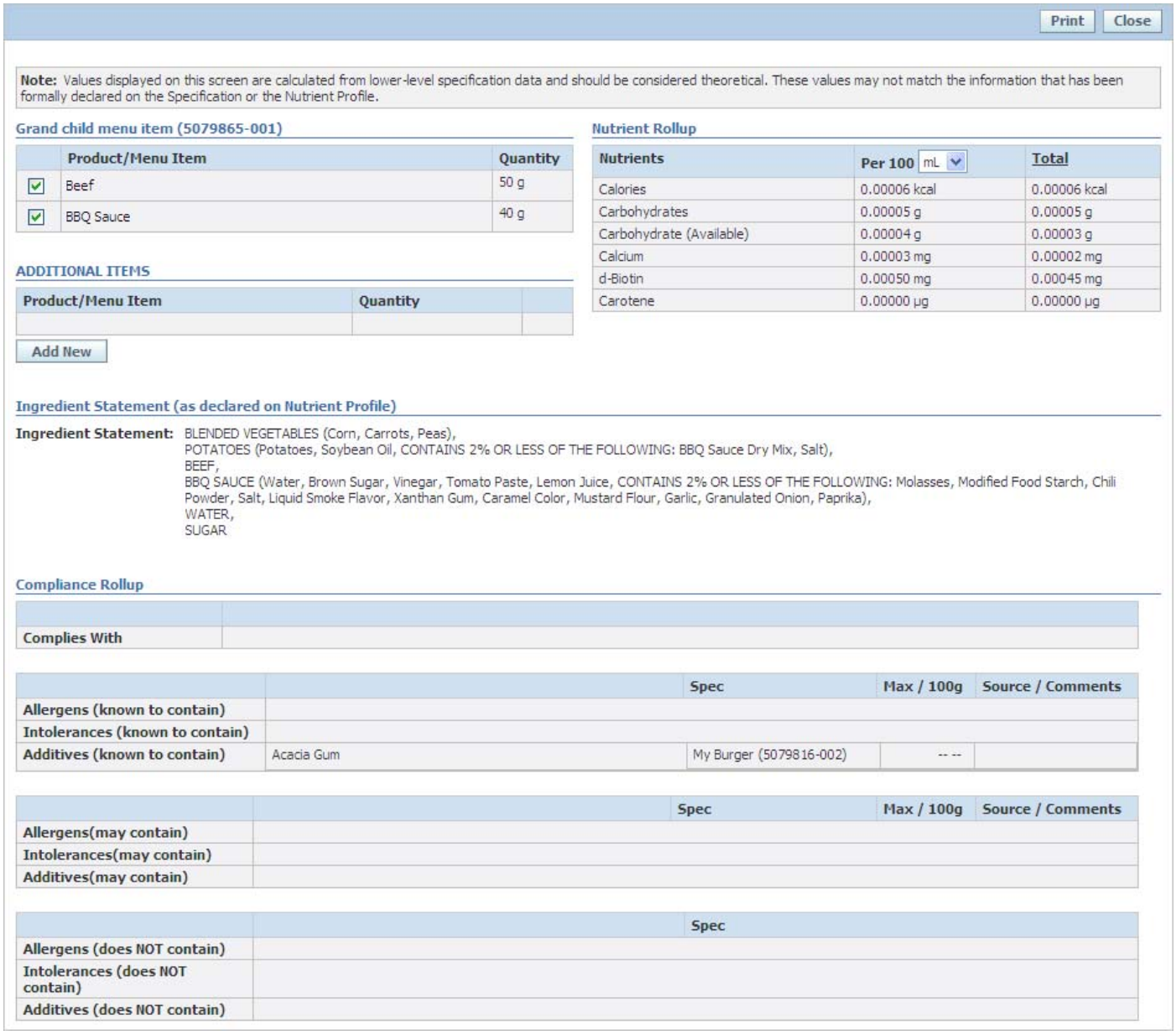
6 To roll up nutrient data for menu items only, click **Rollup**.

> **Note** This button is present only in nutrient profiles that have been associated with a menu item specification.

A dialog box displays the following, as figure 8-7 shows below:

- Theoretical nutrient data rolled up from the inputs of the menu item's build
- The ingredient statement from the nutrient profile
- Compliance data broken out by specification.

Figure 8-7: Nutrient profile Rollup screen



To change the source specifications of the nutrient rollup data:

1. Select only the desired menu items and products in the tables on the left. You can also add menu items or products by selecting **Add New**.
2. Click the **Total** link at the top right of the page to recalculate the rollup data.

Label Claims

Using the label claims determination feature, you can interrogate a product for claims applicability based on a centralized rule base segregated by label claims authority. Potential and Actual label claims are stored on the trade specification.

Label claim determination from the nutrient profile is for evaluation purposes only. You can only view label claims when the specification is in read mode.

To view label claims:

1. Click the **Nutrition Panel** tab.
2. Click **Label Claims**.
3. Some claims require another product to compare to, such as Low Fat. The system can evaluate comparative claims if you provide additional nutrient information that describes the comparative product. Select the comparative reference product tab and fill in the appropriate information needed. You can also import data from another trade specification by selecting the **Reference Product** label. Data will be imported from the trade specification's active nutrient profile. See figure 8-8, *Label Claim Determination dialog box,* on page 8-11.
4. On the Claims Determination tab, from the **Label Claims Authority** drop-down list, select a specific rule group to use for considering claims applicability.
5. Click **Display Label Claims** to display the Applicable Claims table. The system evaluates label claims against rules that you previously defined. All selected claims based on the label claims authority appear in the Applicable Claims table with color coding to show whether the claim may be made for the product.

   When the system evaluates a claim as compliant, the Comments column displays supporting information for the claim along with one or more user-defined values supporting the assessment in the Calculation(s) column, as shown in figure 8-9, *Label Claim Determination, Claims Determination tab,* on page 8-12. If the system finds that the claim is invalid, no such information appears in the Comments column. When you click the **Comments** column head within the Applicable Claims table, the Comments column of those claims that are not applicable displays additional information about claims that may not be made for the product. The Comments column also includes error information.

Figure 8-8: Label Claim Determination dialog box

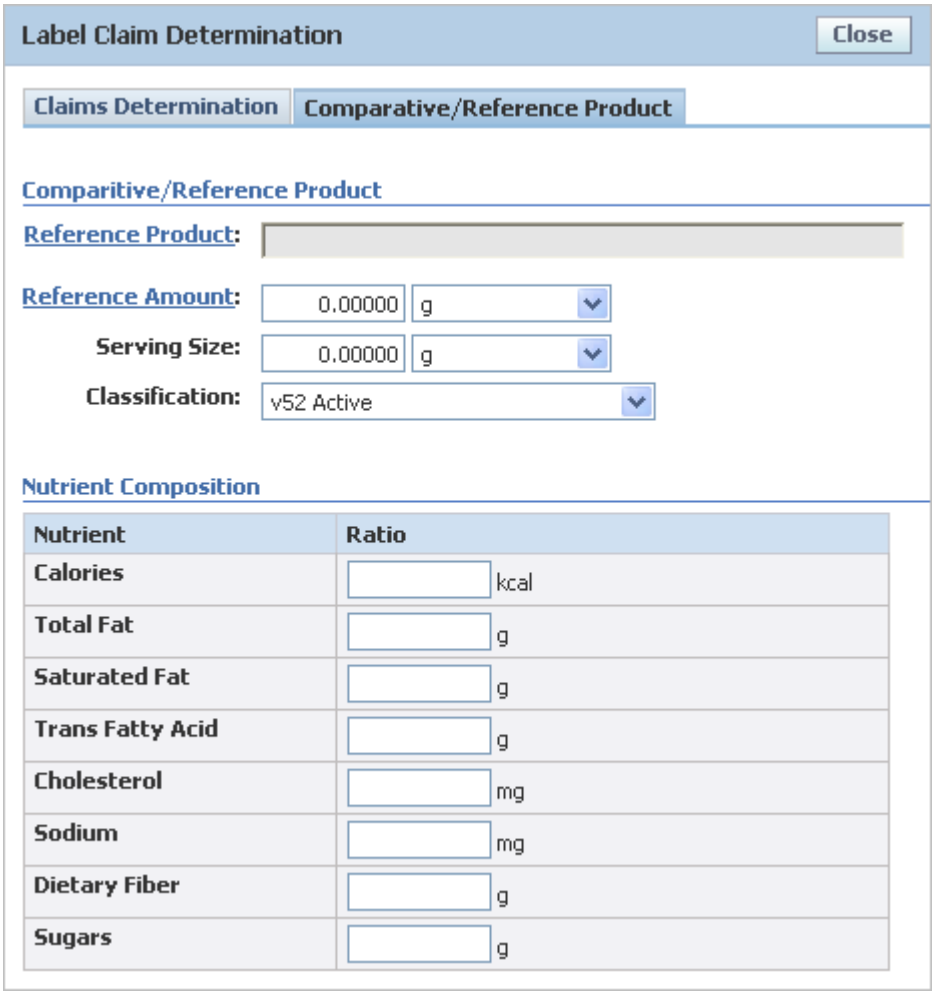
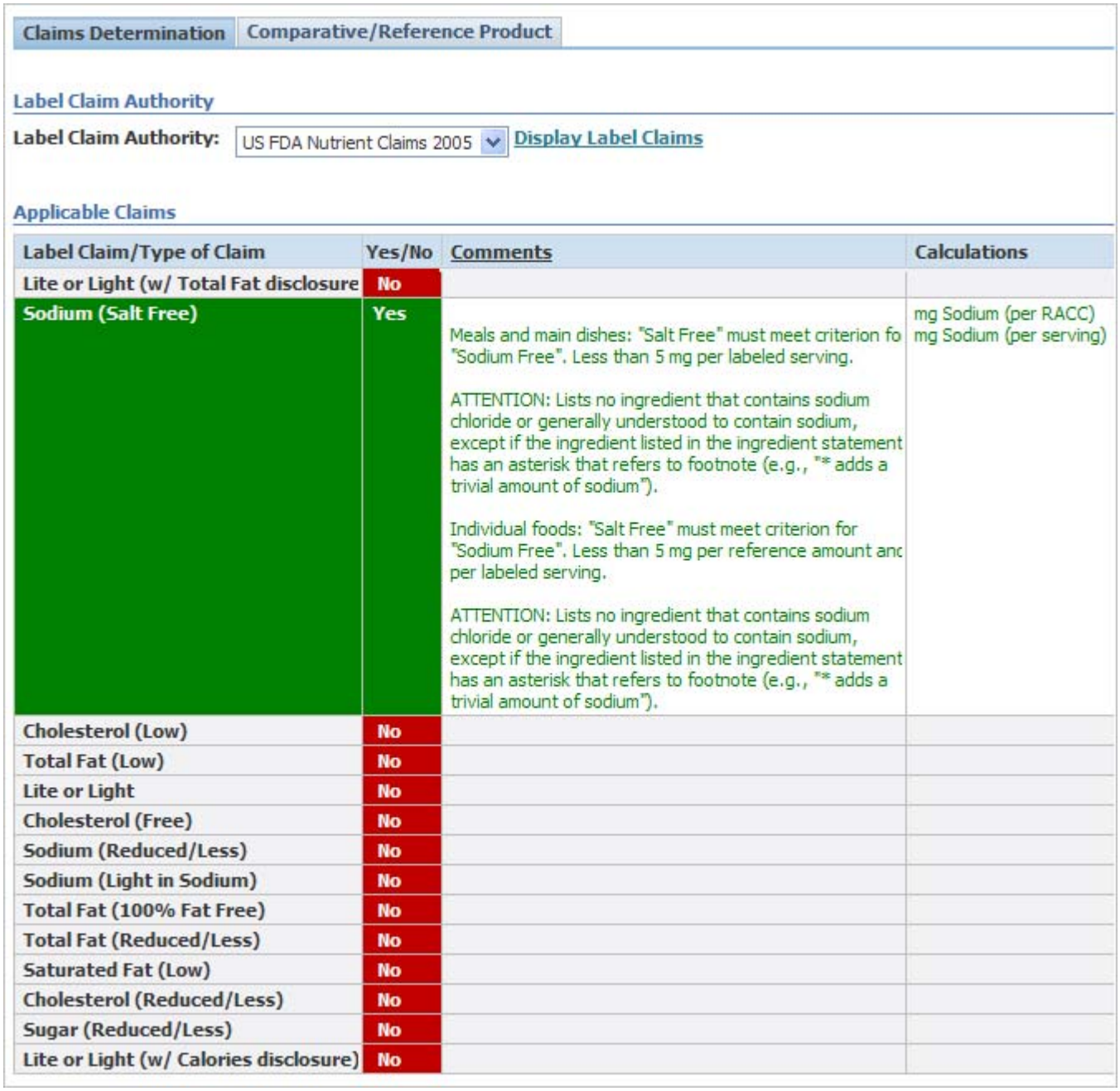


Figure 8-9: Label Claim Determination, Claims Determination tab



Claims Determination | Comparative/Reference Product

Label Claim Authority

Label Claim Authority: US FDA Nutrient Claims 2005 Display Label Claims

Applicable Claims

Label Claim/Type of Claim	Yes/No	Comments	Calculations
Lite or Light (w/ Total Fat disclosure	No		
Sodium (Salt Free)	Yes	Meals and main dishes: "Salt Free" must meet criterion fo "Sodium Free". Less than 5 mg per labeled serving. ATTENTION: Lists no ingredient that contains sodium chloride or generally understood to contain sodium, except if the ingredient listed in the ingredient statement has an asterisk that refers to footnote (e.g., "* adds a trivial amount of sodium"). Individual foods: "Salt Free" must meet criterion for "Sodium Free". Less than 5 mg per reference amount anc per labeled serving. ATTENTION: Lists no ingredient that contains sodium chloride or generally understood to contain sodium, except if the ingredient listed in the ingredient statement has an asterisk that refers to footnote (e.g., "* adds a trivial amount of sodium").	mg Sodium (per RACC) mg Sodium (per serving)
Cholesterol (Low)	No		
Total Fat (Low)	No		
Lite or Light	No		
Cholesterol (Free)	No		
Sodium (Reduced/Less)	No		
Sodium (Light in Sodium)	No		
Total Fat (100% Fat Free)	No		
Total Fat (Reduced/Less)	No		
Saturated Fat (Low)	No		
Cholesterol (Reduced/Less)	No		
Sugar (Reduced/Less)	No		
Lite or Light (w/ Calories disclosure)	No		

Label Composition Tab

If you have created a label composition in the Listed Ingredient Order (LIO) tool and have transferred it to the nutrient profile, then this tab displays the label composition.

Note Depending on your configuration, you may not see this tab.

Label Composition, the sole section in the Label Composition tab, displays the composition of the specification for labeling purposes. This information can be pushed to the nutrient profile from the LIO process. The data pushed to the Nutrient Profile is read only.

Figure 8-10: Label Composition section

Label Composition

Item	Formulation
BLENDED VEGETABLES	27.7273%
POTATOES	26.3636%
BEEF	22.7273%
BBQ SAUCE	18.1818%
WATER	4.9000%
SUGAR	0.1000%

Ext Data Tab

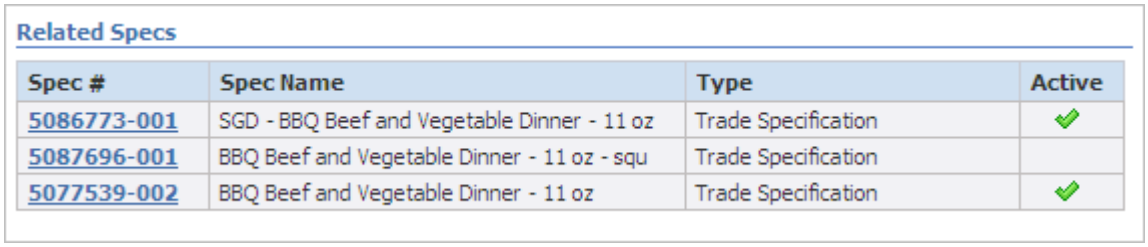
This page includes the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29

Related Specs Tab

Related Specs, the sole section in the Related Specs tab, displays the menu item and trade specifications that use the current nutrient profile. The system automatically generates the list of specifications to which this nutrient profile is tied and displays them in this section. Click the linked number in the **Spec #** column to open the specification. A checkmark ( ) may be displayed next to the specifications in the Active column. The checkmark signifies that the nutrient profile is marked as the active on the trade specification.

Figure 8-11: Related Specs section



Related Specs

Spec #	Spec Name	Type	Active
5086773-001	SGD - BBQ Beef and Vegetable Dinner - 11 oz	Trade Specification	✔
5087696-001	BBQ Beef and Vegetable Dinner - 11 oz - squ	Trade Specification	
5077539-002	BBQ Beef and Vegetable Dinner - 11 oz	Trade Specification	✔

Supporting Documents Tab

In Supporting Documents, the only section in this tab, you can attach any background documents that may help to explain the nutrient profile. The document types available are Attachments/Procedures, URL, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.

References Tab

The References tab consists of the following sections:

- Activities section—For discussion of this commonly used section, please see *Activities Section* on page 3-25
- Related Documents—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 9

Product Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding product specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Formulation Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Product Specification page consists of the following tabs:

- *Summary Tab* on page 9-3
- *Formulation Tab* on page 9-4
- *Compliance Tab* on page 9-4
- *Related Specs Tab* on page 9-5
- *Supporting Documents Tab* on page 9-6
- *References Tab* on page 9-6
- *Approval/Audit Trail Tab* on page 9-6

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current product specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a product specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

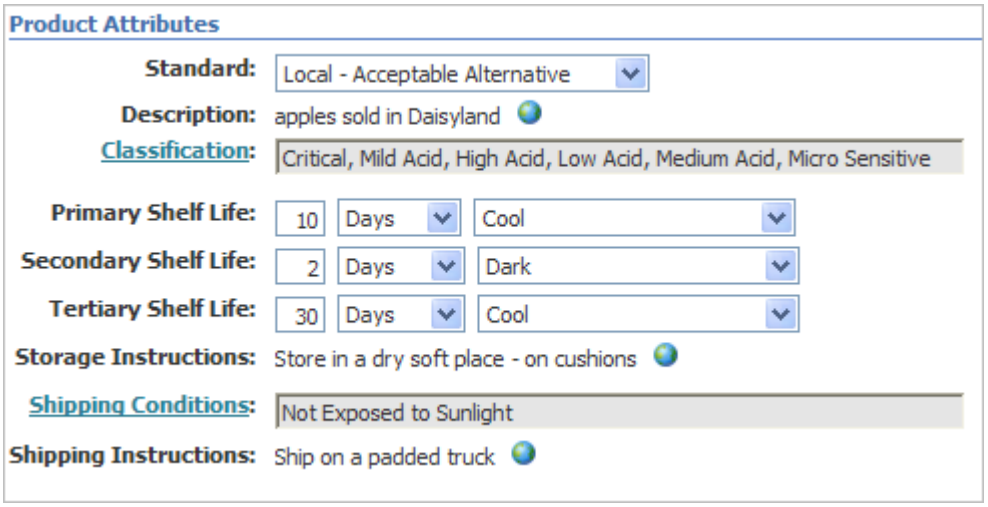
The Product Specification Summary tab contains the following sections:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Product Attributes—Discussed below, at *Product Attributes Section* on page 9-3.
- Design Attributes—Discussed below, at *Design Attributes Section* on page 9-3.
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Product Attributes Section

The Product Attributes section contains the specific core attributes of a product specification.

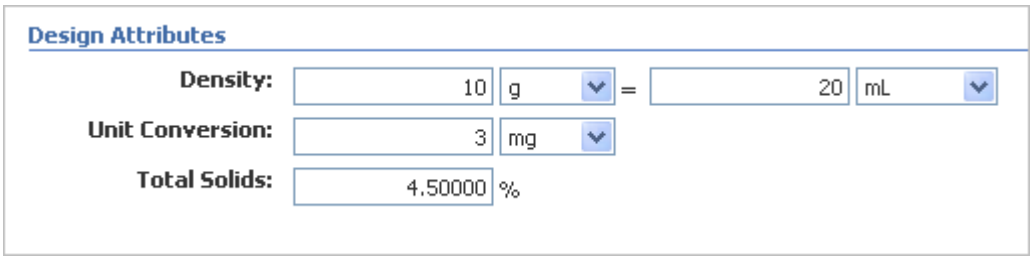
Figure 9-1: Product Attributes section



Design Attributes Section

The Design Attributes section contains product information that is used for mass conversions elsewhere in Agile Product Lifecycle Management for Process.

Figure 9-2: Design Attributes section



Key fields include:

Density —Allows for the entry of mass-to-volumetric conversion factor.

Unit Conversion — Allows the declaration of an actual weight or measurement for a particular unit. For example: 1 slice cheese = 3.2 oz.

Total Solids — Allows for the declaration of the material's "% total solid" composition.

Formulation Tab

The Formulation tab contains the data related to the ingredient statements and formulations of a product specification and consists of two sections:

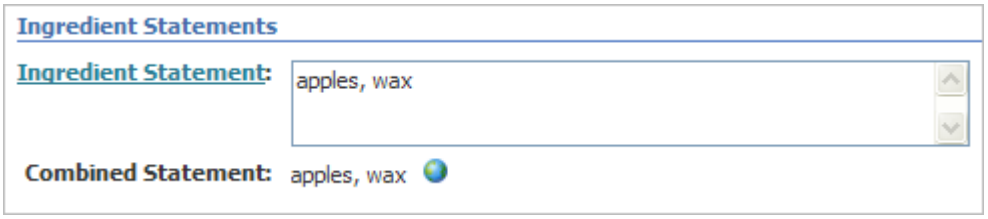
- Ingredient Statements—Discussed below, at *Ingredient Statements Section* on page 9-4.
- Formula—For discussion of this commonly used section, please see *% Breakdown (Formula) Section* on page 3-22.

Ingredient Statements Section

The Ingredient Statements section contains the ingredient statement for the product specification. You can input the ingredient statement in two ways:

- GSM can derive it from a formulation that you select. To select a formulation, click the hyperlinked **Ingredient Statement** field label and select one of the formulas on your product specification. The page refreshes and the ingredient statement will be populated based on the components and their composition listed in the formula you selected.
- You can manually enter this information in the Ingredient Statement field.

Figure 9-3: Ingredient Statements section



Compliance Tab

The Compliance tab includes the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.
- Compliance Information section—For discussion of this commonly used section, please see *Compliance Information Section* on page 3-6.
- Allergens, Intolerances, and Additives—For discussion of this commonly used section, please see *Additives, Allergens, and Intolerances Sections* on page 3-7.

Related Specs Tab

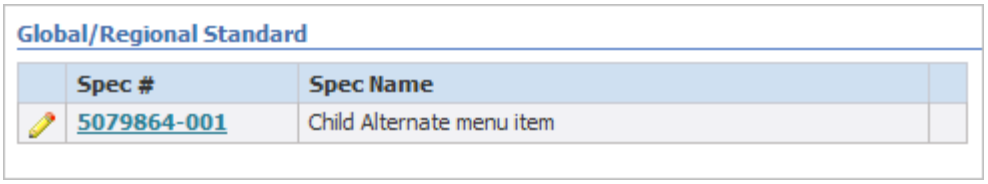
The Related Specs tab contains the following sections:

- Global/Regional Standard—Discussed below, at *Global/Regional Standard Section* on page 9-5.
- Alternate Standards—Discussed below, at *Alternate Standards Section* on page 9-5.
- Packing Configurations Specifications—Discussed below, at *Packing Configurations Specifications Section* on page 9-5.
- Master Specifications—For discussion of this field, please see *Master Specifications Section* on page 3-9.

Global/Regional Standard Section

The Global/Regional Standard section contains any specifications that are global/regional standards related to the product specification. You can associate only one global/regional standard to each specification.

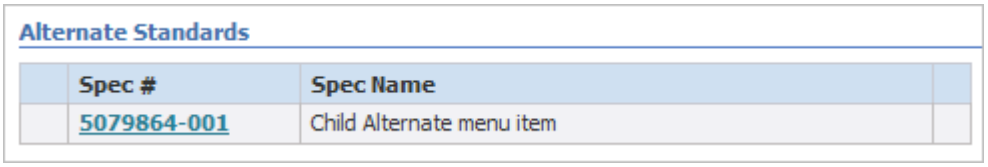
Figure 9-4: Global/Regional Standard section



Alternate Standards Section

The Alternate Standards section lists any alternate standard specifications for the product specification. GSM locates and displays any alternates that are linked to any other specification that references the current specification as a global/regional standard.

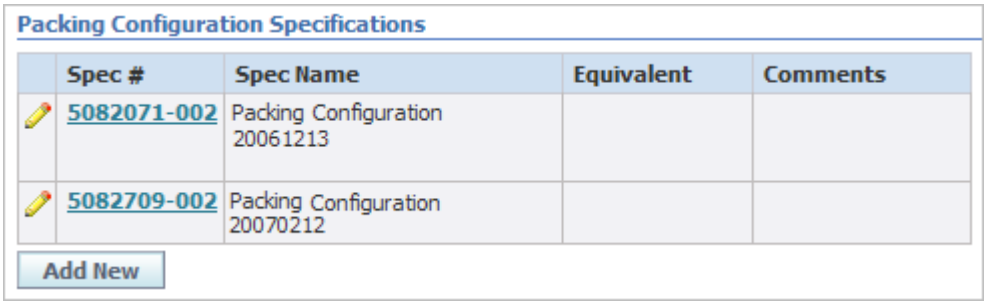
Figure 9-5: Alternate Standards section



Packing Configurations Specifications Section

The Packing Configurations Specifications section contains the packing configurations specifications associated with the product specification. In this section you can describe the multiple ways in which your specified material can be delivered (for instance, case/packaging variants).

Figure 9-6: Packing Configuration Specifications section



Key fields include:

Equivalent—Use this field to associate a cross-reference equivalent per packing configuration.

Supporting Documents Tab

The Product Specifications Supporting Documents tab consists of three sections:

- Supporting Documents section—The document types available are Attachments/Procedures, URL, nutrient composition, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- DRL Documents section—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- Testing Protocols section—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.

References Tab

The Product Specifications References tab consists of the following sections:

- Suppliers section—For discussion of this commonly used section, please see *Suppliers Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.
- Activities section—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Related Documents—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 10

Ingredient Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding ingredient specifications. Topics in this chapter include:

- *Summary Tab*
- *Formulation Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Ingredient Specification page consists of the following tabs:

- *Summary Tab* on page 10-3
- *Formulation Tab* on page 10-5
- *Compliance Tab* on page 10-6
- *Related Specs Tab* on page 10-6
- *CSS Tab* on page 10-7
- *Supporting Documents Tab* on page 10-8
- *References Tab* on page 10-8
- *Approval/Audit Trail Tab* on page 10-9

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current ingredient specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**— Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **LIO**—Create a new LIO profile, automatically referencing the ingredient specification as the target specification. The nutrient profile must be selected manually. The LIO button only displays if the Formulation and Compliance (F&C) bundle has been installed.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing an ingredient specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

The Ingredient Specification Summary tab contains the following sections:

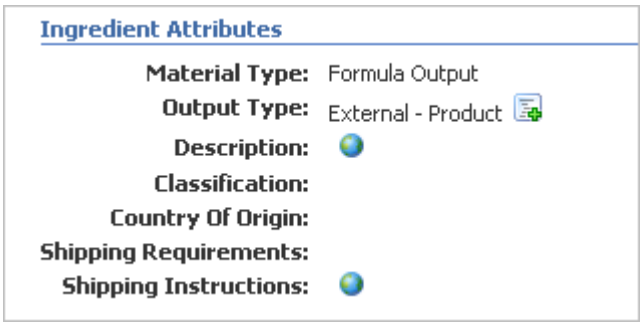
- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Ingredient Attributes—Discussed below, at *Ingredient Attributes Section* on page 10-3.
- Shelf Life—Discussed below, at *Shelf Life Section* on page 10-4.
- Design Attributes—Discussed below, at *Design Attributes Section* on page 10-5.
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Available UOM—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- UOM Conversions—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Ingredient Attributes Section

The Ingredient Attributes section contains specific, core attributes of an ingredient specification, as shown in figure 10-1, below. The Classification field may be required, depending on the configuration of your installation.

Note The graduate icon ( ) is available on ingredient specifications with a output type of "External" for a user with the [SPEC_GRADUATOR] role. Clicking on the icon changes the external output to a "Referenced" ingredient and resolves the workflow to an ingredient specification workflow. The Sourcing Approval section becomes available for an item that has been graduated.

Figure 10-1: Ingredient Attributes section



Key fields include:

Material Type—Defined by the system. There are two types of materials:

- **Raw Material**—General ingredient specification representing a sourced material
- **Formula Output**—Ingredient specification created by a formulation specification

If you purchase as well as produce a material, the ingredient will be considered both a raw material and a formula output.

Output Type—See *Output Types/Sub-Types* on page 6-3 for a list of output types.

Classification—Depending on your configuration this could be a required field. This field could potentially drive workflow resolution.

Shelf Life Section

Shelf lives can be declared in multiple contexts, usually based on storage conditions. You can store one set of shelf life conditions for frozen material and another for refrigerated material. For each separate context you can store values such as storage requirements and instructions, relative humidity, and supplier and internal shelf life.

Figure 10-2: Shelf Life section

Key fields include:

Type—Describes the context for the shelf life. Each specification can have only one shelf life record for each type.

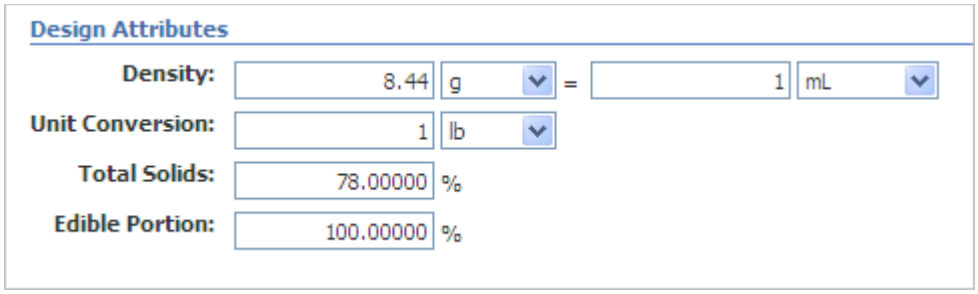
Tags—These tags describe how the shelf life will be used elsewhere in the system. The following tags are available:

- **Suppress Printing**—Prevents the shelf life record from being printed.
- **Do Not Publish to Supplier**—Prevents the shelf life record from being included in eQ and Supplier Portal.

Design Attributes Section

The design attributes in this section can be used by formulation specifications.

Figure 10-3: Design Attributes section



Key fields include:

Density—Necessary for calculating density in formulation specifications.

Unit Conversion—Necessary for calculating mass in some areas of the application in which units are used as a UOM. This is also used to convert between mass and volume in formulation specifications.

Total Solids—Necessary for calculating total solids in areas of the application such as for formulation specifications.

Edible Portion (ingredient specification only)—Percentage of the material that is edible.

Formulation Tab

The Formulation tab contains the data related to the ingredient statements and formulations of an ingredient specification. This tab has two sections:

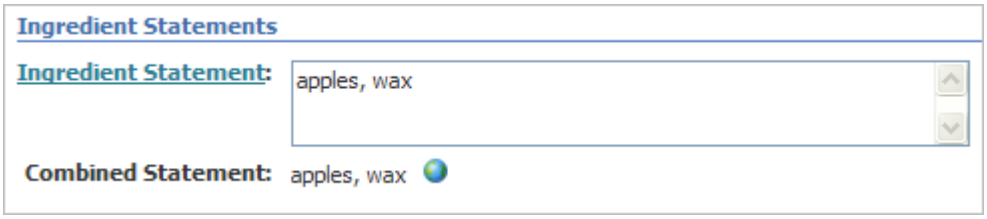
- Ingredient Statements section—Discussed below, at *Ingredient Statements Section* on page 10-5.
- % Breakdown section—For discussion of this section, please see *% Breakdown (Formula) Section* on page 3-22.

Ingredient Statements Section

The Ingredient Statements section contains the ingredient statement for the ingredient specification. The ingredient statement can be entered in a number of ways:

- If you have the F&C bundle, you can generate and push the ingredient statement using LIO. This would be pushed into the combined statement field.
- If you do not have the F&C bundle, you can build the ingredient statement from a selected % breakdown or manually enter the ingredient statement.

Figure 10-4: Ingredient Statements section



Compliance Tab

The Compliance tab includes the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.
- Compliance Information section—For discussion of this commonly used section, please see *Compliance Information Section* on page 3-6.
- Additives, Allergens, and Intolerances—For discussion of this commonly used section, please see *Additives, Allergens, and Intolerances Sections* on page 3-7.

Related Specs Tab

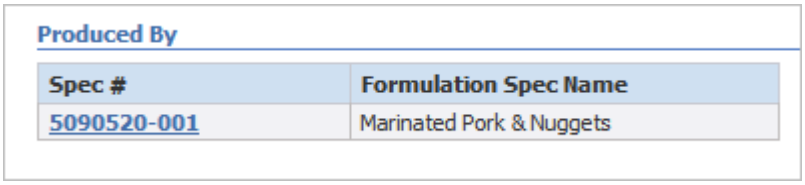
The Related Specs tab contains the following sections:

- Produced By—Discussed below, at *Produced By Section* on page 10-6.
- Trade Specifications—Discussed below, at *Trade Specifications Section* on page 10-7.
- Packing Configurations Specifications—Discussed below, at *Packing Configurations Specifications Section* on page 10-7.
- Associated Specifications —For discussion of this field, please see *Associated Specifications Section* on page 3-9.
- Master Specifications—For discussion of this field, please see *Master Specifications Section* on page 3-9.

Produced By Section

The Produced By section shows formulation specifications that produced this ingredient specification. This section is displayed only when producing specifications exist and is view-only. If a producing specification exists, then the material type on the ingredient specification will also include the type of Formula Output.

Figure 10-5: Produced By section



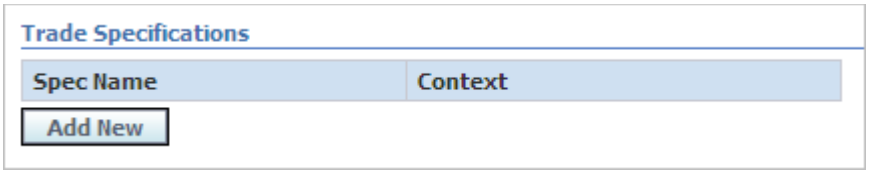
Trade Specifications Section

This section shows all trade specifications that this ingredient has been linked to. It displays the trade specification and the formulation that was used as context on the trade specification.

You can click on **Add New** to create a new trade specification with this ingredient already linked. The trade will automatically inherit the name and business unit from the ingredient specification.

Note Make sure to save your ingredient specification before clicking on **Add New**. When the trade specification is created, GSM takes you directly to the trade specification. Any unsaved changes to your ingredient specification will be lost.

Figure 10-6: Trade Specifications section



Packing Configurations Specifications Section

The Packing Configurations Specifications section contains the Packing Configurations Specifications associated with the ingredient specification. In this section you can describe the multiple ways in which this ingredient can be delivered (for instance, case/packaging variants).

Figure 10-7: Packing Configurations Specifications section

Key fields include:

Equivalent—In this field you can associate a cross-reference equivalent per packing configuration.

CSS Tab

For discussion of this commonly used tab, please see *CSS Tab* on page 3-10.

Supporting Documents Tab

The Ingredient Specification Supporting Documents tab contains the list of all supporting documents associated with an ingredient specification. The Supporting Documents tab consists of three sections:

- Supporting Documents—The document types available are attachments/ procedures, nutrient composition, and rich text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- Testing Protocols—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.

References Tab

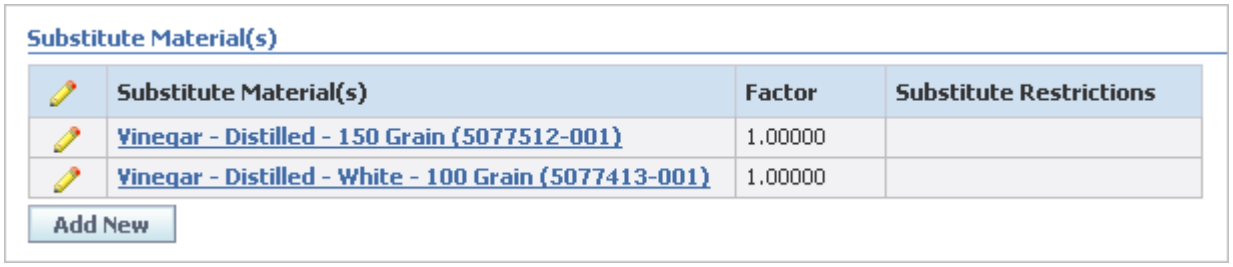
The Ingredient Specification References tab contains the list of all the reference data linked to an ingredient specification. The References tab includes the following sections:

- Suppliers—For discussion of this commonly used section, please see *Suppliers Section* on page 3-25. This section only appears for ingredients with material type as "Raw Material."
- Substitute Materials—Discussed below, at *Substitute Materials Section* on page 10-8.
- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.
- Related Documents—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27.

Substitute Materials Section

The Substitute Materials section allows users to capture substitute materials for the raw materials. Substitutes can be added in read or edit modes. Users must have the role [SUBSTITUTE_MATERIAL_DEFINER] to create new or modify existing raw materials.

Figure 10-8: Substitute Materials section



Key fields include:

Substitute Materials—Substitute materials associated with this raw material.

Factor—The factor to apply during the substitution process.

Substitute Restrictions—Lists substitute restrictions, which are maintained in the Data Administration application. These restrictions will work to filter the substitutions available to the formulator. For more information about substitute restrictions, refer to the "Formulation Attributes Section" in *Chapter 6, Formulation Specifications*.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 11

Packaging Material Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding packaging material specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Compliance Tab*
- *Printed Packaging Material Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Packaging Material Specification page consists of the following tabs:

- *Summary Tab* on page 11-3
- *Compliance Tab* on page 11-4
- *Printed Packaging Material Tab* on page 11-5
- *Related Specs Tab* on page 11-5
- *CSS Tab* on page 11-7
- *Supporting Documents Tab* on page 11-7
- *References Tab* on page 11-7
- *Approval/Audit Trail Tab* on page 11-8

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current packaging material specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**—Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a packaging material specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

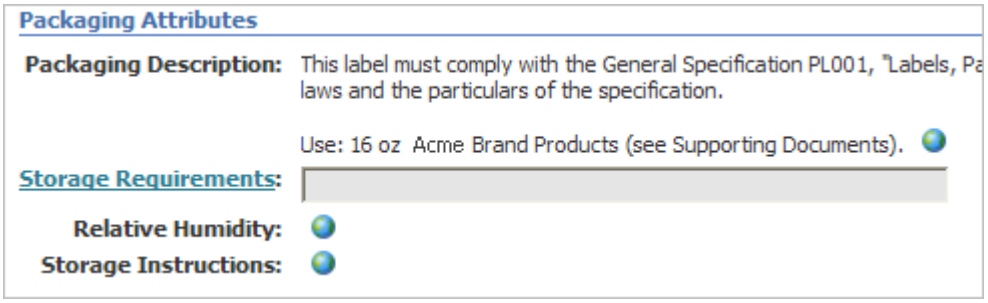
The Packaging Material Specification Summary tab contains the following sections:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Packaging Attributes—Discussed below, at *Packaging Attributes Section* on page 11-3.
- Tare Weight—Discussed below, at *Tare Weight Section* on page 11-3
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Available UOM—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- UOM Conversions—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Packaging Attributes Section

A packaging material specification has a number of core attributes, such as description, storage requirements, and relative humidity. List those attributes in this section.

Figure 11-1: Packaging Attributes section

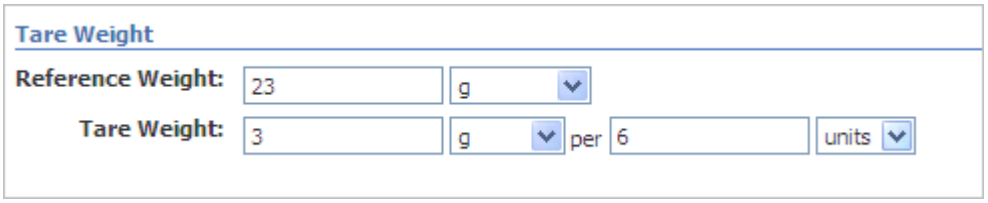


Tare Weight Section

The Tare Weight section for a packaging material or printed packaging specification is shown in the figure below. Use this section to define the mass to unit/count conversion.

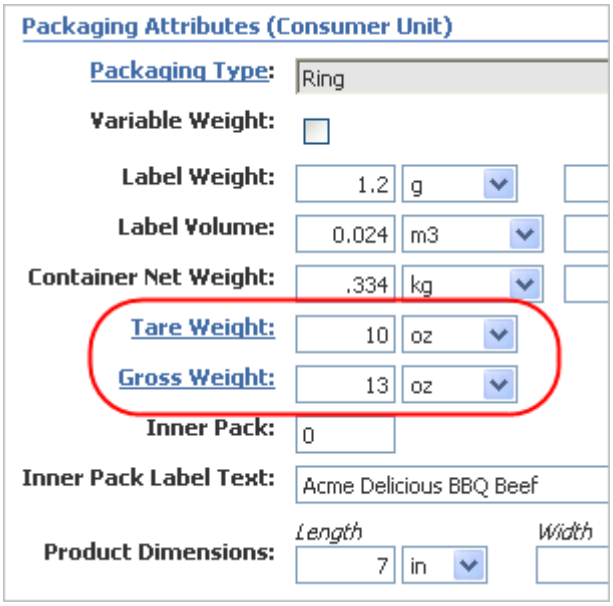
In addition, UOM Conversions can define tare weight. Please note that the Tare Weight fields must be populated in addition to the UOM Conversion fields for this to calculate properly.

Figure 11-2: Tare Weight section



From within a trade specification Packaging Attributes section, click the hyperlinked **Tare Weight** field label to have GSM calculate the appropriate tare weight, as shown in the figure below. If you have supplied the net weight, GSM can also calculate the gross weight of the product (net weight + tare weight).

Figure 11-3: Portion of a trade specification Packing Attributes section showing the hyperlinked Tare Weight field label



Compliance Tab

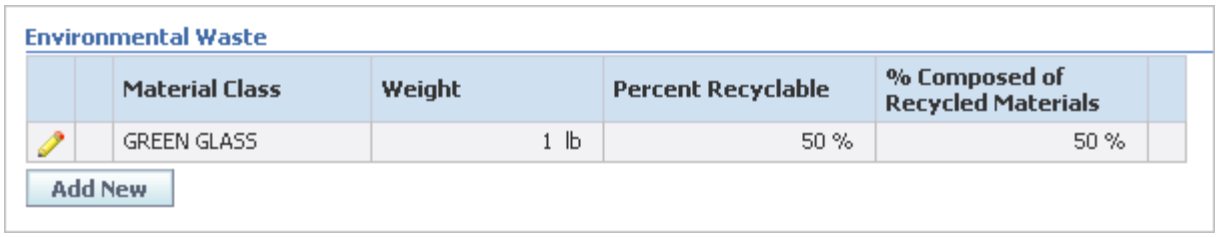
The Compliance tab contains the compliance data related to a packaging material specification. It has the following sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.
- Environmental Waste—Discussed below, at *Environmental Waste Section* on page 11-5.

Environmental Waste Section

This section provides a place to log known waste materials for this specification material, along with other relevant attributes required for environmental waste reporting.

Figure 11-4: Environmental Waste section

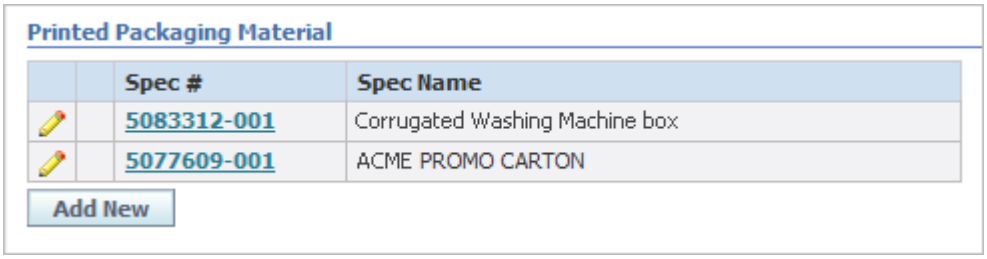


Printed Packaging Material Tab

Printed Packaging Material Section

The Printed Packaging Material section, the only section in the Printed Packaging Material tab, contains the list of printed packaging specifications linked to a packaging material specification.

Figure 11-5: Printed Packaging Material section



Related Specs Tab

The Related Specs tab contains the following sections:

- Sub Components—Discussed below, at *Sub Components Section* on page 11-5.
- Packing Configurations Specifications—Discussed below, at *Packing Configuration Specifications Section* on page 11-6.
- Equipment Specifications—Discussed below, at *Equipment Specifications Section* on page 11-6.
- Master Specifications—For discussion of this field, please see *Master Specifications Section* on page 3-9.

Sub Components Section

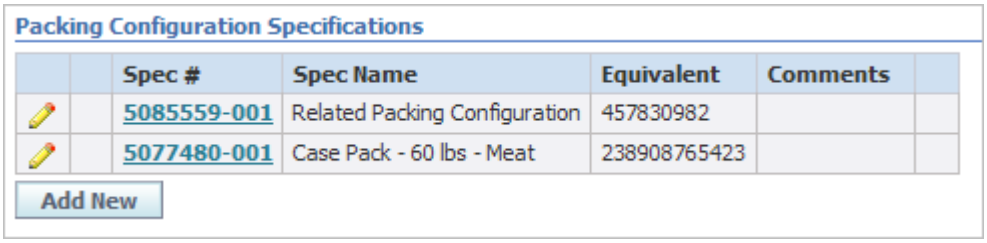
The Sub Components section contains any packaging material specifications that are subcomponents of this specification. You can categorize each subcomponent based on packaging type, for example, “inner,” “outer,” and “intermediate.” Additionally, you can declare the quantity of each subcomponent.

Figure 11-6: Sub Components section

Packing Configuration Specifications Section

The Packing Configuration Specifications section contains the packing configuration specifications associated with the packaging material specification. In this section you can describe the multiple ways in which your material can be delivered (for instance, case/packaging variants).

Figure 11-7: Packing Configuration Specifications section



Key fields include:

Equivalent—In this field you can associate a cross-reference equivalent per packing configuration.

Equipment Specifications Section

The Equipment Specifications section contains the list of equipment specifications linked to a packaging material specification.

Figure 11-8: Equipment Specifications section

CSS Tab

For discussion of this commonly used tab, please see *CSS Tab* on page 3-10.

Supporting Documents Tab

The Packaging Material Specification Supporting Documents tab contains the list of all supporting documents associated with a packaging material specification. The Supporting Documents tab consists of three sections:

- Supporting Documents—The document types available are Attachments/ Procedures, URL, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- Testing Protocols—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.

References Tab

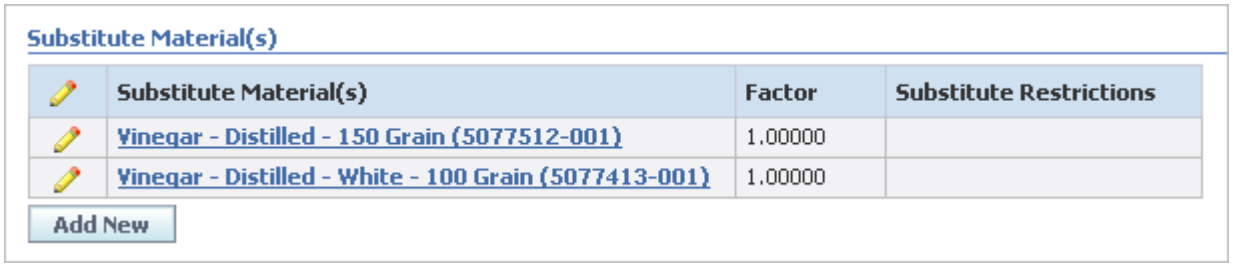
The Packaging Material Specification References tab contains the list of all the reference data linked to a packaging material specification. It includes the following sections:

- Suppliers—For discussion of this commonly used section, please see *Suppliers Section* on page 3-25.
- Substitute Materials—Discussed below, at *Substitute Materials Section* on page 11-7.
- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.
- Related Documents—The available related documents include only NPD activities. For discussion of this commonly used section, please see *Related Documents Section* on page 3-27.

Substitute Materials Section

The Substitute Materials section allows users to capture substitute materials for their raw materials. Users must have the role [SUBSTITUTE_MATERIAL_DEFINER] to create new or modify existing raw materials.

Figure 11-9: Substitute Materials section



Key fields include:

Substitute Materials—Substitute materials associated with this raw material

Factor—The factor to apply during the substitution process

Substitute Restrictions—Lists substitute restrictions, which are maintained in the Data Administration application.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 12

Equipment Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding equipment specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Equipment Specification page consists of the following tabs:

- *Summary Tab* on page 12-2
- *Compliance Tab* on page 12-3
- *Related Specs Tab* on page 12-3
- *Supporting Documents Tab* on page 12-4
- *References Tab* on page 12-4
- *Approval/Audit Trail Tab* on page 12-4

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current equipment specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Print**—Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing an equipment specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**—Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

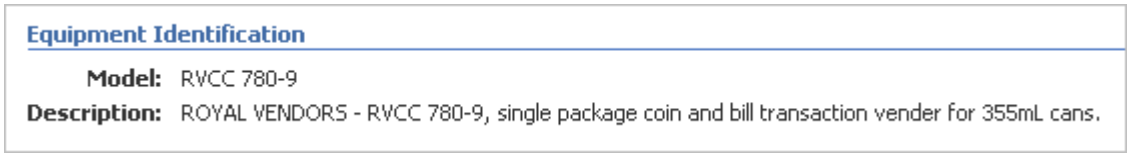
Key sections in the Summary tab include:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Equipment Identification—Described below, at *Equipment Identification Section* on page 12-3.
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Approved for Use In—For discussion on this commonly used section, please see *Approved for Use In Section* on page 3-5.

Equipment Identification Section

This section provides model information about the equipment.

Figure 12-1: Equipment Identification section



Compliance Tab

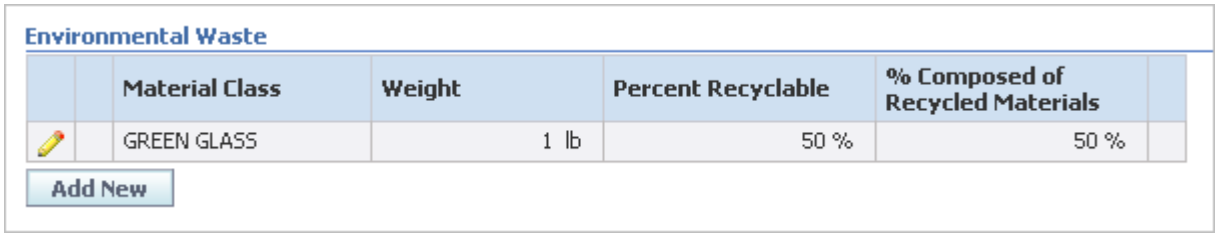
The Equipment Specification Compliance tab consists of the following sections:

- Equipment Attributes—This section contains a table called "Extended Attributes." For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.
- Environmental Waste (per item sold)—Discussed below, at *Environmental Waste (per item sold) Section* on page 12-3.

Environmental Waste (per item sold) Section

This section provides a place to log known waste materials for this specification material along with other relevant attributes required for environmental waste reporting.

Figure 12-2: Environmental Waste (per item sold) section



Related Specs Tab

The Related Specs tab contains the following sections:

- Packaging Specifications—Discussed below, at *Packaging Specifications Section* on page 12-4.
- Master Specifications—For discussion of this field, please see *Master Specifications Section* on page 3-9.

Packaging Specifications Section

In this section you can associate this specification with one or more packaging material specifications.

Figure 12-3: Packaging Specifications section

Supporting Documents Tab

The Equipment Specification Supporting Documents tab contains the list of all supporting documents associated with an equipment specification. This tab consists of three sections:

- Supporting Documents— The document types available are Attachments/ Procedures, URL, and Rich Text. For discussion of this commonly used section, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- Testing Protocols—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.

References Tab

The Equipment Specification References tab contains the list of all the reference data linked to an equipment specification and includes the following sections:

- Suppliers—For discussion of this commonly used section, please see *Suppliers Section* on page 3-25.
- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Related Documents—The available related documents include only NPD Activities. For discussions of this commonly used section, please see *Related Documents Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 13

Printed Packaging Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding printed packaging specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *CSS Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Printed Packaging Specification page consists of the following tabs:

- *Summary Tab* on page 13-3
- *Compliance Tab* on page 13-4
- *Related Specs Tab* on page 13-4
- *CSS Tab* on page 13-5
- *Supporting Documents Tab* on page 13-5
- *References Tab* on page 13-6
- *Approval/Audit Trail Tab* on page 13-6

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons (except **Calculate**) are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Calculate**—Performs all custom data calculations. This button is displayed when the specification is in edit mode. Calculation also happens when you save your specification.
- **Create Copy**—Create a new copy of the current printed packaging specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **CACS**—Screen the current specification using Computer Aided Compliance Screening (CACS), an application that you can use to inspect materials for fitness against any number of user-defined screens. (Appears only if your installation includes CACS.) For more information on CACS, please refer to the *Agile Product Lifecycle Management for Process Computer Aided Compliance Screening User Guide*.
- **Print**— Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a printed packaging specification, please see *Printing Other Specifications* on page 2-19
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**— Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

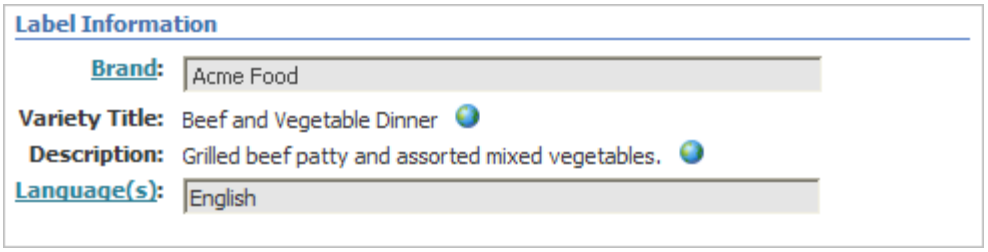
The Printed Packaging specification Summary tab contains the following sections:

- Summary Information — For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Label Information—Discussed below, at *Label Information Section* on page 13-3.
- Tare Weight—Discussed below, at *Tare Weight Section* on page 13-3
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Available UOM—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- UOM Conversions—For discussion of this commonly used section, please see *Available UOM* on page 3-4.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Label Information Section

This section contains identifying information for the packaging label, as shown in figure 13-1 below.

Figure 13-1: Label Information section



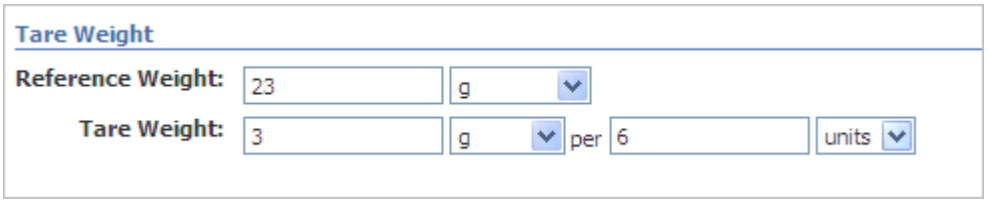
Note The languages in the Language(s) field are different from the application languages that you can specify in the user profile. These languages refer to the languages that are represented on the physical label.

Tare Weight Section

The Tare Weight section for a packaging material or printed packaging specification is shown in the figure below. Use this section to define the mass to unit/count conversion.

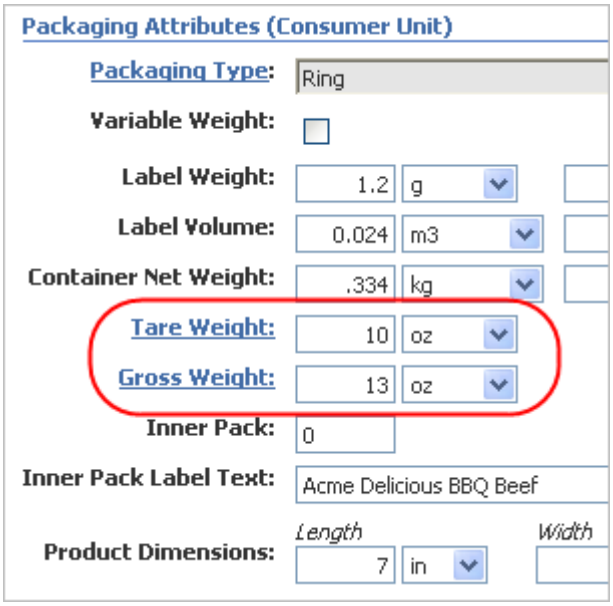
In addition, UOM Conversions can define tare weight. Please note that the Tare Weight fields must be populated in addition to the UOM Conversion fields for this to calculate properly.

Figure 13-2: Tare Weight section



From within a trade specification Packaging Attributes section, click the hyperlinked **Tare Weight** field label to have GSM calculate the appropriate tare weight, as shown in the figure below. If you have supplied the net weight, GSM can also calculate the gross weight of the product (net weight + tare weight).

Figure 13-3: Portion of a trade specification Packing Attributes section showing the hyperlinked Tare Weight field label



Compliance Tab

The Compliance tab consists of two sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.

Related Specs Tab

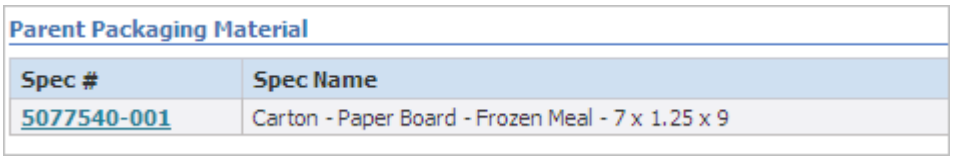
The Related Specs tab contains the following sections:

- Parent Packaging Material—Discussed below, at *Parent Packaging Material Section* on page 13-5.
- Master Specification—For discussion of this field, please see *Master Specifications Section* on page 3-9.

Parent Packaging Material Section

In this section you can connect the printed packaging specification to a parent packaging material specification.

Figure 13-4: Parent Packaging Material section



The printed packaging specification can have only one parent packaging material specification.

CSS Tab

For discussion of this commonly used tab, please see *CSS Tab* on page 3-10.

Supporting Documents Tab

The Supporting Documents tab consists of four sections:

- Attachments—For discussion of this commonly used section, please see *Attachments Section* on page 3-22.
- Supporting Documents—Document types available for use in the Printed Packaging Specifications Supporting Documents tab are URL and Rich Text. For more information, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.
- Testing Protocols—For discussion of this commonly used section, please see *Testing Protocols Section* on page 3-21.

References Tab

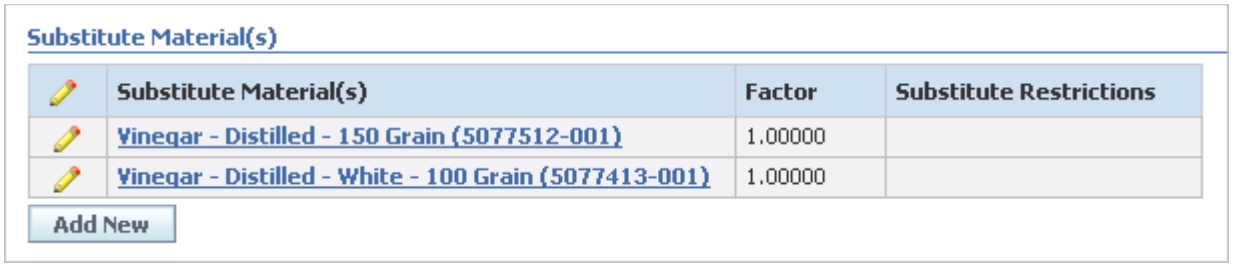
The Printed Packaging Specification References tab includes the following sections:

- Suppliers—For discussion of this commonly used section, please see *Suppliers Section* on page 3-25.
- Substitute Materials—Discussed below, at *Substitute Materials Section* on page 13-6.
- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.
- Related Documents—For discussion of this commonly used section, please see *Related Documents Section* on page 3-27.

Substitute Materials Section

The Substitute Materials section allows users to capture substitute materials for their raw materials. Users must have the role [SUBSTITUTE_MATERIAL_DEFINER] to create new or modify existing raw materials.

Figure 13-5: Substitute Materials section



Key fields include:

Substitute Materials—Substitute materials associated with this raw material

Factor—The factor to apply during the substitution process

Substitute Restrictions—Lists substitute restrictions, which are maintained in the Data Administration application.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 14

Delivered Material Packing Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding delivered material packing specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Delivered Material Packing Specification page consists of the following tabs:

- *Summary Tab* on page 14-2
- *Compliance Tab* on page 14-3
- *Related Specs Tab* on page 14-3
- *Supporting Documents Tab* on page 14-3
- *References Tab* on page 14-4
- *Approval/Audit Trail Tab* on page 14-4

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Create Copy**—Create a new copy of the current delivered material packing specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Print**—Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a delivered material packing specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**—Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

This tab contains the following sections:

- Summary Information section—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Packing Description section—Described below, at *Packing Description Section* on page 14-2.
- Approved for Use In section—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Packing Description Section

Use this section to describe the packing material.

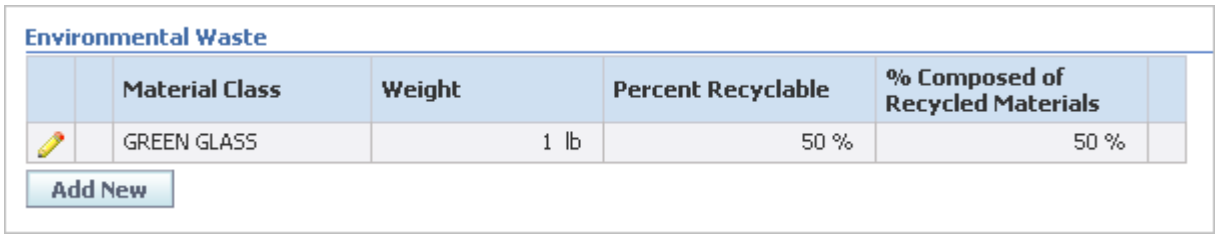
Figure 14-1: Packing Description section

Compliance Tab

Environmental Waste Section

This section, the only section in the Compliance tab, provides a place to log known waste materials for this specification material, along with other relevant attributes required for environmental waste reporting.

Figure 14-2: Environmental Waste section



Related Specs Tab

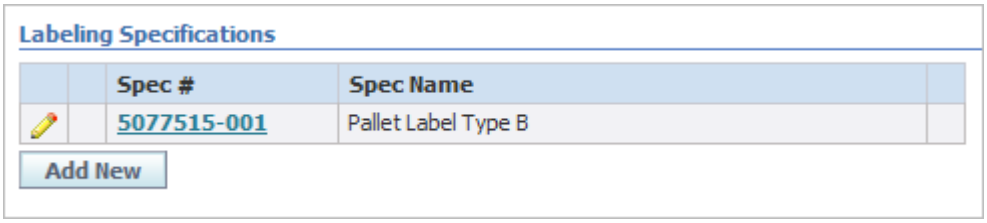
This tab contains the following sections:

- Labeling Specifications —Described below, in *Labeling Specifications Section* on page 14-3.
- Associated Specifications —For discussion on this commonly used section, please see *Associated Specifications Section* on page 3-9.

Labeling Specifications Section

In Labeling Specifications, the only section in the Related Specs tab, you can associate this specification with one or more labeling specifications that describe the labeling requirements for delivered items.

Figure 14-3: Labeling Specifications section



Supporting Documents Tab

The Supporting Documents tab contains two sections:

- Supporting Documents —The document types available for use are Attachments/Procedures, URL, and Rich Text. For more information, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.

References Tab

The References tab includes the following sections:

- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 15

Packing Configuration Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding packing configuration specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Packing Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Packing Configuration Specification page consists of the following tabs:

- *Summary Tab* on page 15-2
- *Packing Tab* on page 15-3
- *Related Specs Tab* on page 15-4
- *Supporting Documents Tab* on page 15-5
- *References Tab* on page 15-6
- *Approval/Audit Trail Tab* on page 15-6

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Create Copy**—Create a new copy of the current packing configuration specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Print**—Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a packing configuration specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature, please see *Item History* on page 2-3.
- **Workflow**—Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

This tab contains the following sections:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Packing Description—Discussed below, at *Packing Description Section* on page 15-2.
- Cross References—For discussion of this commonly used section, please see *Cross References Section* on page 3-3.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Packing Description Section

Use this section to describe the packing material.

Figure 15-1: Packing Description section

Packing Tab

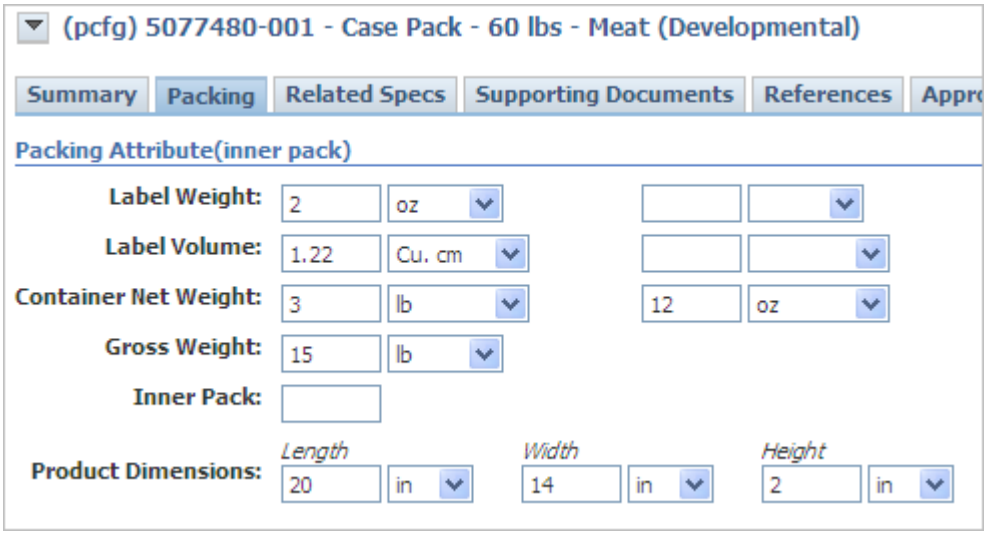
This tab contains the following sections:

- Packing Attribute (inner pack)—Discussed below, at *Packing Attribute (Inner Pack) Section* on page 15-3.
- Packing Attribute (master case)—Discussed below, at *Packing Attribute (Master Case) Section* on page 15-3.
- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.

Packing Attribute (Inner Pack) Section

In this section you can capture attributes that describe the inner packing of the delivered material. For example, if you have a case that contains six smaller bags of material, this section would describe the bags.

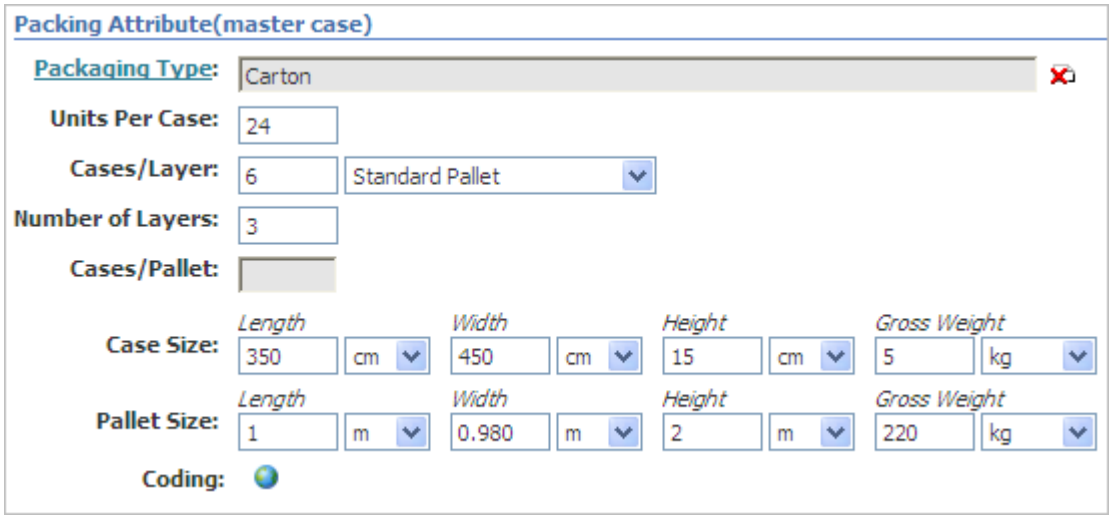
Figure 15-2: Packing Attribute (inner pack) section



Packing Attribute (Master Case) Section

In this section you can capture attributes that describe the master case attributes of the delivered material. For example, if you have a case that contains six smaller bags of material, this section would describe the case.

Figure 15-3: Packing Attribute (master case) section



Key fields include:

Packaging Type— Describe the packaging type by selecting from a list of options.

Related Specs Tab

The Related Specs tab contains the following sections:

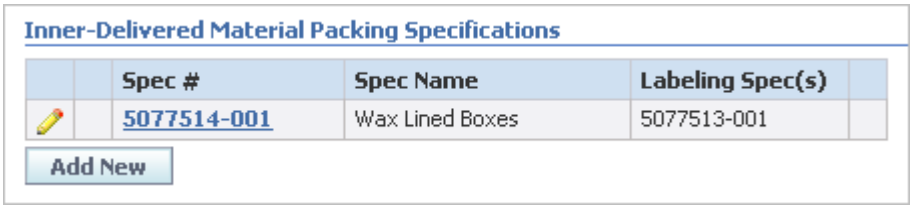
- Inner-Delivered Material Packing Specifications—Discussed below, at *Inner-Delivered Packing Specifications Section* on page 15-4.
- Intermediate-Delivered Material Packing Specifications—Discussed below, at *Intermediate-Delivered Material Packing Specifications Section* on page 15-5.
- Outer-Delivered Material Packing Specification—Discussed below, at *Outer-Delivered Material Packing Specification Section* on page 15-5.

In the sections in this tab you can further describe the packing configuration by distinguishing among inner, intermediate, and outer packing materials where relevant.

Inner-Delivered Packing Specifications Section

In this section you can associate this packing configuration specification with one or more delivered material packing specifications to describe the inner packing.

Figure 15-4: Inner-Delivered Packing Specifications section

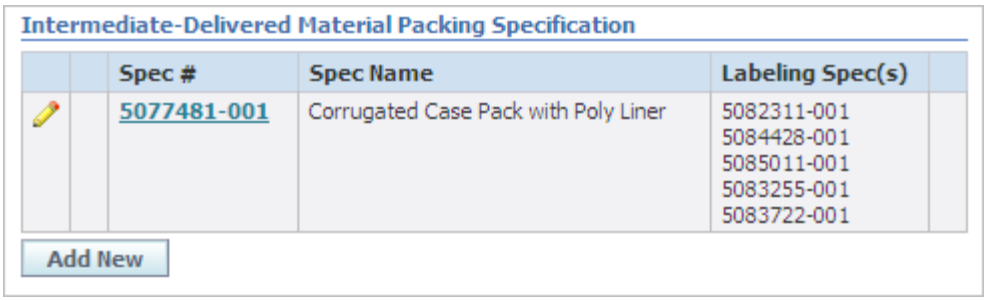


The associated labeling specification numbers display automatically based on their relationship with the delivered material packing specifications.

Intermediate-Delivered Material Packing Specifications Section

In this section you can associate this packing configuration specification with one or more delivered material packing specifications to describe the intermediate packing.

Figure 15-5: Intermediate-Delivered Material Packing Specifications section

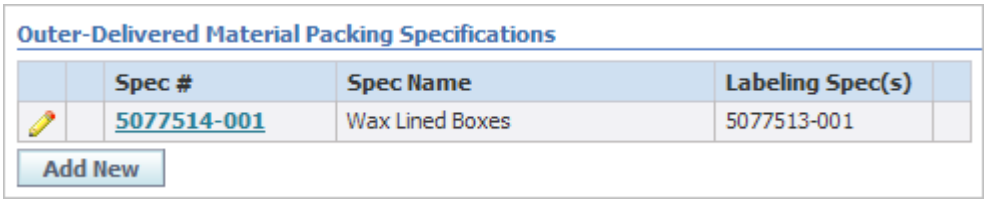


The associated labeling specification numbers display automatically based on their relationship with the delivered material packing specifications.

Outer-Delivered Material Packing Specification Section

In this section you can associate this packing configuration specification with one or more delivered material packing specifications to describe the outer packing.

Figure 15-6: Outer-Delivered Material Packing Specifications section



The associated labeling specification numbers display automatically based on their relationship with the delivered material packing specifications.

Supporting Documents Tab

The Supporting Documents tab contains two sections:

- Supporting Documents—The document types available are Attachments/ Procedures, URL, and Rich Text. For more information, please see *Supporting Documents Tab* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.

References Tab

The References tab includes the following sections:

- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 16

Labeling Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding labeling specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Compliance Tab*
- *Related Specs Tab*
- *Supporting Documents Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Labeling Specifications page consists of the following tabs:

- *Summary Tab* on page 16-3
- *Compliance Tab* on page 16-4
- *Related Specs Tab* on page 16-4
- *Supporting Documents Tab* on page 16-4
- *References Tab* on page 16-4
- *Approval/Audit Trail Tab* on page 16-4

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Create Copy**—Create a new copy of the current labeling specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Print**—Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a trade specification, please see *Printing Other Specifications* on page 2-19
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature, please see *Item History* on page 2-3.
- **Workflow**—Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`.)

Summary Tab

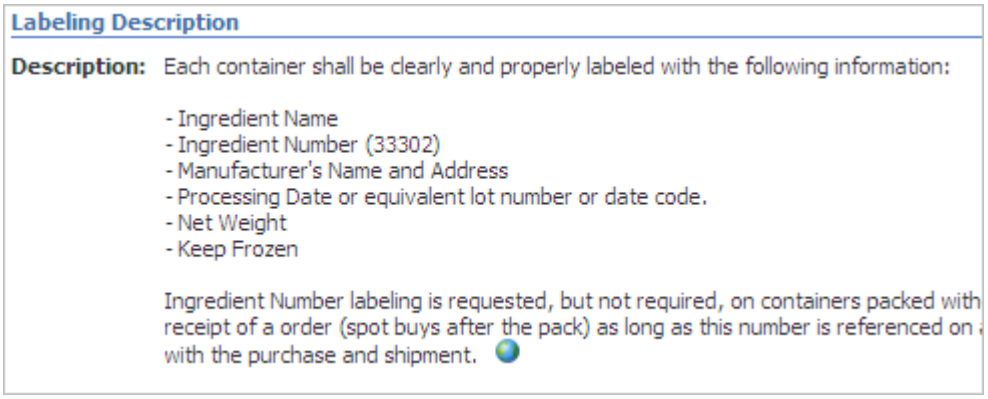
The Label Specifications Summary tab contains the following three sections:

- Summary Information — For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Labeling Description—Discussed below, at *Labeling Description Section* on page 16-3.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Labeling Description Section

This section provides a place to describe the labeling requirements for this specification.

Figure 16-1: Labeling Description section



Compliance Tab

This tab is not currently used but is present for legacy purposes only.

Related Specs Tab

Delivered Material Packing Specifications That Rely on This Specification Section

This section is the only one in the Related Specs tab. Information in this section is read only so you cannot associate specifications here. The section displays the associations that have been made to this labeling specification from a delivered material packing specification.

Figure 16-2: Delivered Material Packing Specifications that rely on this Specification section

Supporting Documents Tab

The Label Specifications Supporting Documents tab consists of three sections:

- Attachments—For discussion of this commonly used section, please see *Attachments Section* on page 3-22.
- Supporting Documents—The only document type available for use in this section is rich text. For more information, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.

References Tab

The Label Specifications References tab consists of two sections:

- Activities—For discussion of this commonly used section, please see *Activities Section* on page 3-25.
- Specification Dependencies—For discussion of this commonly used section, please see *Specification Dependencies Section* on page 3-27.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 17

Master Specifications

This chapter presents an overview of the capabilities of Global Specification Management regarding master specifications. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *Applies To Tab*
- *Supporting Documents Tab*
- *Ext Data Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

The Master Specifications page consists of the following tabs:

- *Summary Tab* on page 17-2
- *Applies To Tab* on page 17-3
- *Supporting Documents Tab* on page 17-5
- *Ext Data Tab* on page 17-5
- *References Tab* on page 17-5
- *Approval/Audit Trail Tab* on page 17-5

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear (on certain specifications). Click **Report** to launch the Reporting application.
- **Create Copy**—Create a new copy of the current master specification. For discussion of this commonly used function, please see *Creating a Copy of an Existing Specification* on page 2-1.
- **Print**—Opens a dialog box through which you can print the current specification in a variety of formats. For more information on printing a master specification, please see *Printing Other Specifications* on page 2-19.
- **Act**—Create a primary activity, or mini-workflow, for this specification. For more information about this function, please see *Chapter 20, Activities*. (Appears only if you have editorial control over the specification.)
- **Item History**—Display all issues of the specification that exist in a Spec History table, along with the reason for creating each issue and other identifying information. For more information on this feature please see *Item History* on page 2-3.
- **Workflow**—Move the current specification, or document, from one workflow step to another. For more information on workflows, please see *Transitioning a Workflow* on page 2-7.
- **Resolve Workflow**—Re-resolve the specification to a workflow (present only when you are logged in with a user account that has the user role of `[CAN_RERESOLVE_WORKFLOWS]`).

Summary Tab

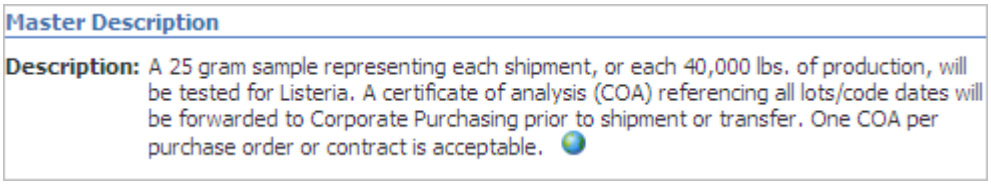
The Master Specifications Summary tab consists of the following sections:

- Summary Information—For discussion of this commonly used section, please see *Summary Information Section* on page 3-2.
- Master Description—Discussed below, at *Master Description Section* on page 17-2.
- Approved for Use In—For discussion of this commonly used section, please see *Approved for Use In Section* on page 3-5.

Master Description Section

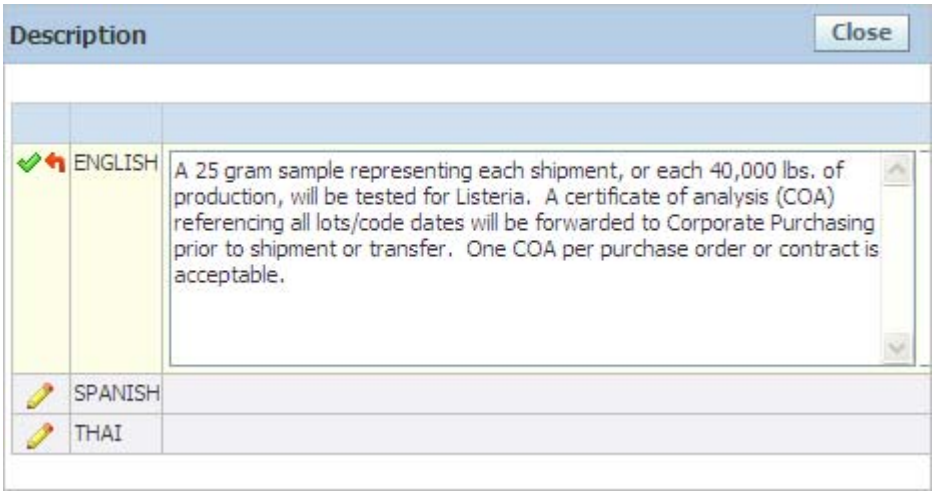
In this section you can describe the purpose of the master specification, as shown in figure 17-1 below.

Figure 17-1: Master Description section



Click the alternate wording icon ( ) to provide the description in multiple languages, as shown in figure 17-2 below.

Figure 17-2: Master Description, alternative text input screen



Applies To Tab

Specification Categories Section

In Specification Categories, the only section in the Applies To tab, you can associate this master specification to other specifications in the system by choosing one or more categories that this master specification will automatically apply to, as shown in figure 17-3, below.

Figure 17-3: Specification Categories section

You can apply specification categories from the highest to the lowest levels of the specification categories. For example, you can create and apply a master specification that will automatically apply to the following:

- All ingredient specifications
- Ingredient specifications exclusively for produce
- Ingredient specifications for apples

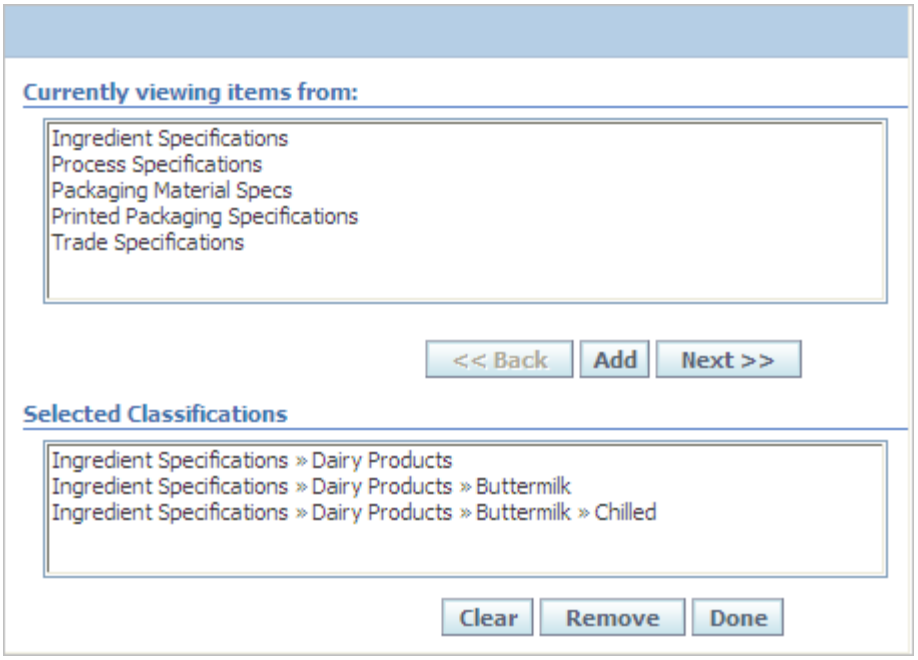
Note The business unit on the master specification must be the same on the associated specification for this master specification to be associated. The Business Unit field is set in the Approved for Use In section, as discussed in *Available UOM* on page 3-4.

Applied master specifications appear on the associated specification in the master specifications section of that specification. See *Master Specifications Section* on page 3-9 for more information.

To apply a specification category:

1. On the Applies To tab, in the upper right of the page, click **Edit**. GSM reloads the page in editable mode, showing the Edit Applies To button as shown in figure 17-3 above.
2. Click **Edit Applies To**. GSM displays a dialog box with two large fields: "Currently viewing items from" and "Selected Classifications," as shown in figure 17-4 below.

Figure 17-4: The "Edit Applies To" dialog box



3. In the "Currently viewing items from" field, select one specification type.

Note This dialog box does not support multiple-select.

4. To choose from a preset list of subcategories associated with the selected specification type, click **Next>>**. GSM displays the list of subcategories for your selected specification type. (Continue this process until you arrive at the subcategory that you need.)
5. Click **Add**. Your selected subcategory appears in the "Selected Classifications" box.

6 Click **Done**. GSM closes the dialog box and adds your selections to the list in the Specification Categories section of the Applies To tab.

7 Click **Save** or **Save & Close Document**.

Note Master specifications can also be associated explicitly at the specification level. See *Master Specifications Section* on page 3-9 for more information.

Supporting Documents Tab

This Supporting Documents tab consists of the following sections:

- Attachments—For discussion of this commonly used section, please see *Attachments Section* on page 3-22.
- Supporting Documents—The only document type available for use in the Master Specifications Supporting Documents tab is rich text. For more information, please see *Supporting Documents Section* on page 3-12.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.

Ext Data Tab

This tab consists of two sections:

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.

References Tab

For discussion of the Activities section, the only section in the References tab, please see *Activities Section* on page 3-25.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 18

LIO Profiles

This chapter presents an overview of the capabilities of Global Specification Management regarding LIO profiles. Topics in this chapter include:

- *Page-Level Functions*
- *Summary Tab*
- *LIO Construction Tab*
- *Final Statement Tab*
- *Label Composition Tab*

Overview

Listed Ingredient Order (LIO) is the tool for labeling administrators to:

- View a food or beverage item based on its aggregated labeling composition;
- Manage the labeling composition to meet regulatory requirements using stored rules or manual overrides;
- Generate and push the final ingredient statement to a nutrient profile and/or an ingredient specification so that the broader organization can further augment and complete the labeling business process.

LIO uses ingredient specification's percent breakdown and/or combined ingredient statement to describe labeling composition. This information can be presented using the top level output or the complete formulation and ingredient specifications hierarchy to better understand and label a given item.

The LIO Profile page consists of the following tabs:

- *Summary Tab* on page 18-2
- *LIO Construction Tab* on page 18-3
- *Final Statement Tab* on page 18-19
- *Label Composition Tab* on page 18-20

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions include:

- **Edit**—Place the entire page in edit mode so that you can modify it.

Summary Tab

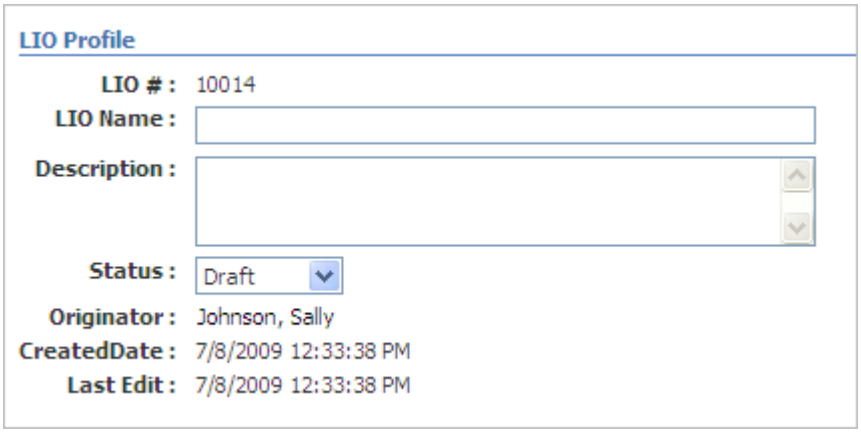
The LIO Profiles Summary tab consists of the following sections:

- LIO Profile —Discussed below, at *LIO Profile Section* on page 18-2.
- Output Material Selection—Discussed below, at *Output Material Selection Section* on page 18-2.
- Nutrient Profile—Discussed below, at *Nutrient Profile Section* on page 18-3.

LIO Profile Section

Use the LIO Profile section to define the LIO profile.

Figure 18-1: LIO Profile section



Key fields include:

LIO #—Number assigned to the LIO profile by GSM.

LIO Name—Name of the LIO profile. The LIO name will often be very similar to the trade specification or nutrient profile name as you are usually labeling a finished good. This field is required.

Output Material Selection Section

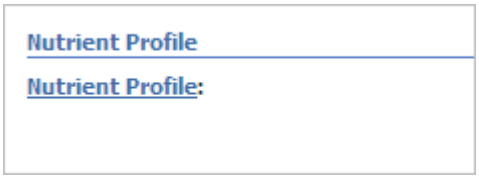
Use this section to define which ingredient specification will be used as the basis for the LIO. Click the Target Specification link to search for the targeted specification. The "Select Context" drop-down list allows the user to select which formulation specification to pull the child items from when generating the LIO tree.

Figure 18-2: Output Material Selection section

Nutrient Profile Section

This section allows the user to select which nutrient profile will be used if the user decides to push the LIO data to the ingredient and nutrient profile using the Push to Spec functionality from the Final Statement tab.

Figure 18-3: Nutrient Profile section



LIO Construction Tab

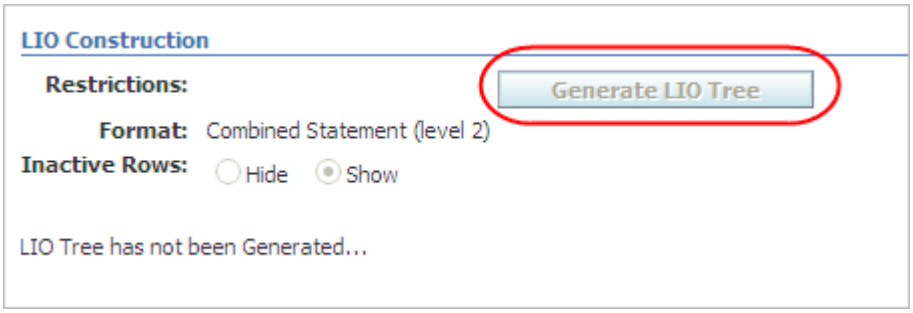
The LIO Construction tab consists of one section, LIO Construction, described below. This tab and section is where a labeling administrator will perform a majority of their work grouping, overriding, formatting and in the end creating the ingredient statement.

LIO Construction Section

Use this section to build the ingredient statement. In the LIO Construction tab you can manipulate formula items based on certain constraints imposed by each item's underlying specification, LIO profile, and currently selected labeling restriction.

The first time you open the LIO tab of a profile, the LIO tree does not appear, because the system will not have generated it yet, as shown in figure 18-4, below.

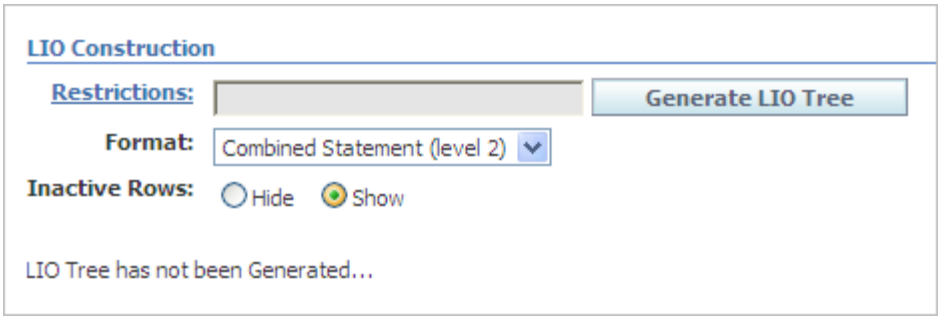
Figure 18-4: LIO Construction section



To prepare to generate the LIO tree:

1 At the upper right corner of the page, click **Edit**. GSM reloads the page in editable mode, as shown in figure 18-5 below.

Figure 18-5: LIO Construction section in edit mode



2 Define the following summary-level information:

- Restrictions
- Format
- Inactive Rows

Restrictions

Restrictions are a configurable list that you can use to differentiate disclosures and groupings. Restrictions impact two major areas of functionality:

- Component Catalog—For example, in Canada you might be able to rename "salty beef" to "beef," but in the United States, because of tighter regulations around sodium, you could not. By setting the restrictions on the LIO tree to Canada, you could see disclosures and groupings set up in the Component Catalog with a restriction of Canada. LIO would be able to leverage this information to modify the ingredient statement in Canada to refer to "salty beef" as "beef." If you were creating an ingredient statement for the United States, the "salty beef" would have to be labeled as such. For more information on restrictions, disclosures and groupings, see *Component Catalog* on page 22-1.
- Ingredient Breakdown—Similar to the Component Catalog, breakdowns can contain regional or regulatory differences. Therefore restrictions can be assigned to breakdowns and then filtered upon when using LIO.

Format

From the Format drop-down list you can choose the level of detail to which the LIO tree will be created. After you change one of these options, GSM immediately reformats the Generate LIO and Final Statement fields. There are two options:

- Combined Statement (Level 2)
- Multipart Statement (Level 1)

Combined Statement (Level 2)—Omit top-level items in the LIO tree. For example, if you have seasoning that has a percent breakdown of "salt," "pepper," and "cinnamon" and you select this format, the resulting tree will contain salt, pepper, and cinnamon.

Multi-part Statement (Level 1)—Shows you all the levels in the LIO tree, as shown in figure figure 18-6, on page 18-6. In the example above, if you selected the "Multi-part Statement (Level 1)" format, you would see "seasoning" with "salt," "pepper," and "cinnamon" as child items.

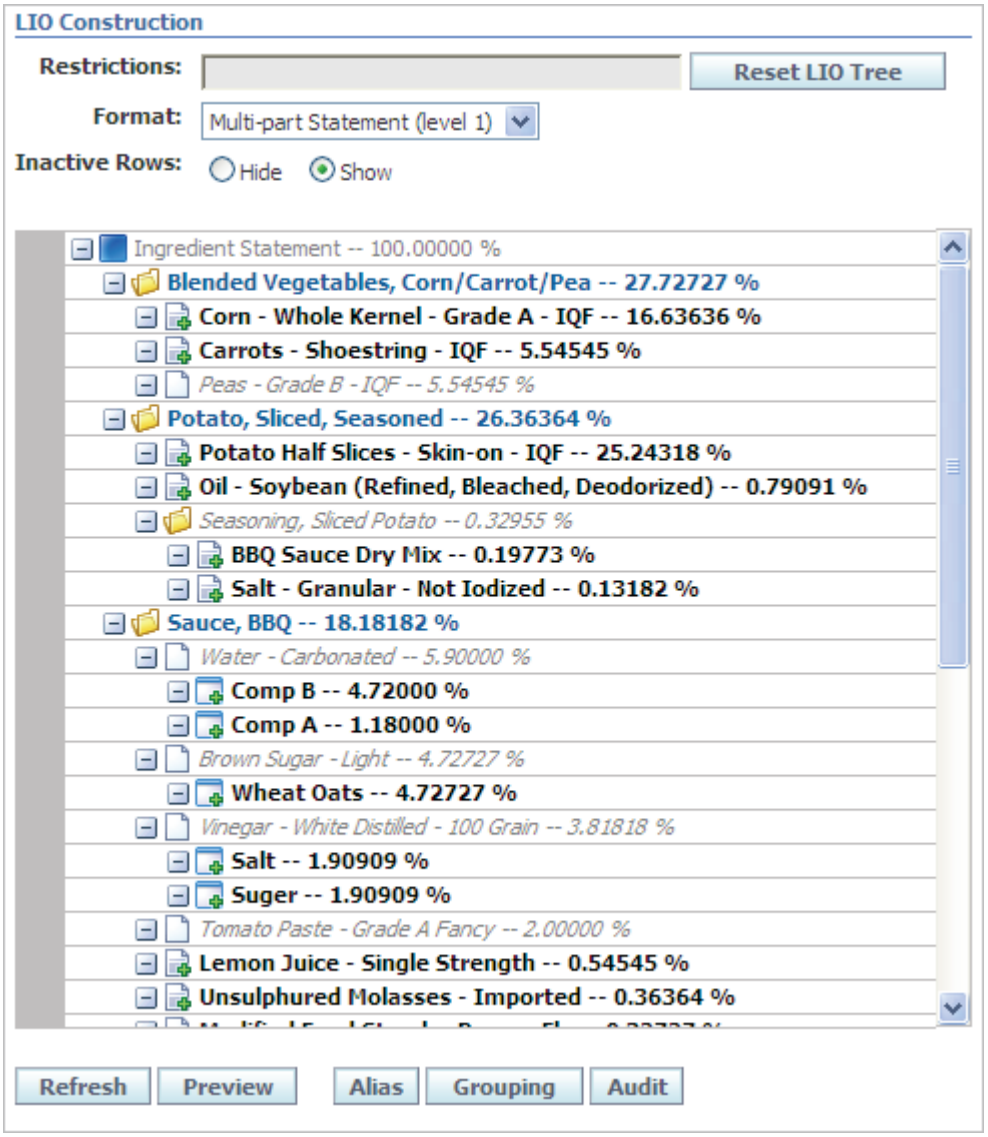
Inactive Rows

Use the Inactive Rows field to choose whether the tree will display or hide rows that are inactive. Hiding inactive rows is especially helpful if you are trying to pinpoint exactly what data will be shown in the ingredient statement.

Using the LIO Tree

Once you have defined the restrictions, format, and inactive row handling, click **Generate LIO Tree** to have the system create the requested tree, as shown in figure 18-6 below.

Figure 18-6: LIO Tree

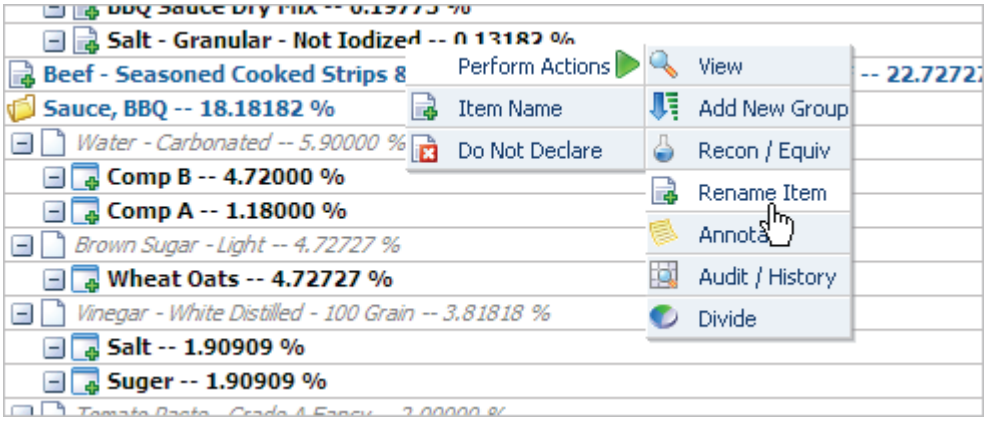


GSM displays the tree directly under the inactive row handling information and will display the entire formula tree.

Each item within the tree represents a material that may be considered for inclusion in the final ingredient statement. Each LIO item is represented by an icon indicating its type and current method of disclosure and includes its relative percent composition (yield based) within the final formula.

In the LIO tree, you can right-click an individual LIO item to reveal a number of declaration options/actions that you can use during LIO construction, as shown in figure 18-7 below.

Figure 18-7: LIO right-mouse menu



These options are contextual based on the type of item selected and the data inherited from its underlying specification, LIO profile, and the currently selected labeling restrictions. Using the described options/actions, you can build your ingredient statement.

Declaration Options and Actions

The table below describes the various presentations/methods for disclosing each LIO item and the corresponding declaration options and actions available:

Table 18-1: Declaration options/actions

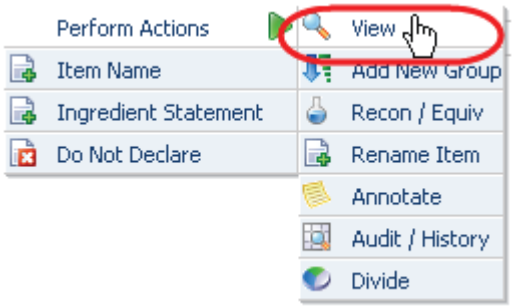
Icon	Current Method for Disclosure	Declaration Options/Actions
	Base level for LIO authoring (does not appear in LIO)	Perform Action > Add new Group
	Ingredient that is listed as a single item in the LIO	Perform Action > View Perform Action > Add new Group Perform Action > Recon/Equiv Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Ingredient Statement Do NOT Declare
	Ingredient that is broken out into separate subitems in the LIO	Perform Action > View Perform Action > Add new Group Perform Action > Recon/Equiv Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Ingredient Statement Breakdown List ... x, y Breakdown List …i(x,y) Breakdown List …i(x%,y%) Context List …x,y Context List …i(x,y) Context List …i(x%,y%)
	Ingredient that is flagged as “Do NOT Declare” and will not appear in the LIO	Perform Action > View Perform Action > Add new Group Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Ingredient Statement Do NOT Declare

Table 18-1: Declaration options/actions (continued)

Icon	Current Method for Disclosure	Declaration Options/Actions
	Component that is listed as a single item in the LIO	Perform Action > View Perform Action > Refer to Component Catalog Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Do NOT Declare
	Component that is listed as a single item in the LIO and whose title has been manually edited	Perform Action > View Perform Action > Refer to Component Catalog Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Do NOT Declare
	Component that is flagged as "Do NOT Declare" and will not appear in the LIO	Perform Action > View Perform Action > Refer to Component Catalog Perform Action > Rename Item Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name Do NOT Declare
	Group that has been added during the LIO process	Perform Action > Add new Group Perform Action > Rename Item Perform Action > Delete Group Perform Action > Annotate Perform Action > Audit/History Perform Action > Divide Item Name List ... x, y List ... i (x, y) List ... i (x%, y%) Do NOT Declare

Right Menu Actions

View

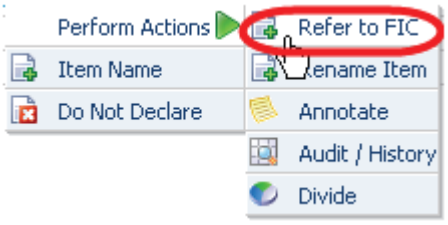


In the case of ingredients, click **View** to refer to the corresponding specification in GSM. In the case of Component Catalog components, click **View** to refer to the corresponding Component Profile of the item.

Add New Group

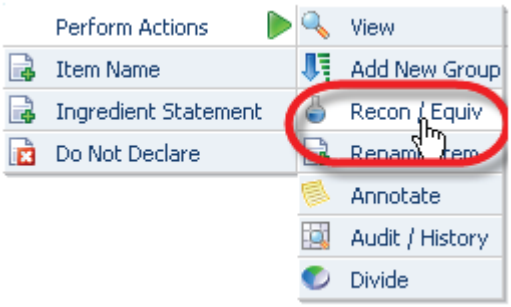
Click this menu option to create a new group directly under the current item. Once the group is created, you can delete it (if empty) or relocate it via drag-and-drop.

Refer to FIC



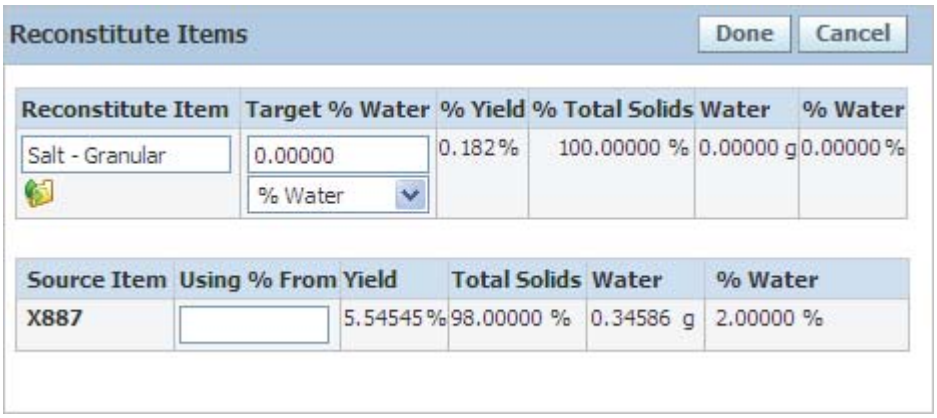
Click this menu option to consider other options for disclosure based on the Component Catalog profile of the current item.

Recon/Equiv



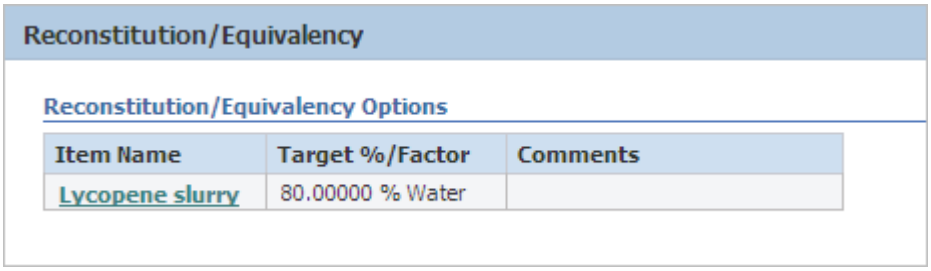
Click this menu option to work with reconstitution and equivalency factors that will adjust the moisture content of the current item. Initially, GSM will display the dialog box shown in figure 18-8 below:

Figure 18-8: Reconstitute Items, moisture



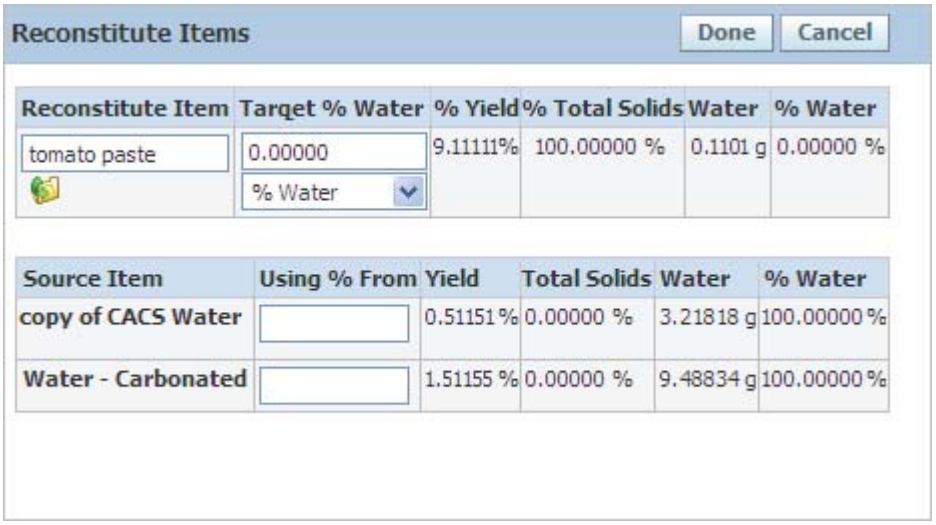
From this dialog box you can manually adjust the moisture content for the selected item. To do so, first define a target "%Water" or "Factor," and then declare one or more items from which to source the moisture. If one or more conversion factors have been previously defined for the current item, you can access/select a predefined factor by clicking the import data icon ( ), which GSM will display to the right of the field in the Reconstitute Item column. Click the icon to open the dialog box shown in figure 18-9 below.

Figure 18-9: Reconstitution/Equivalency



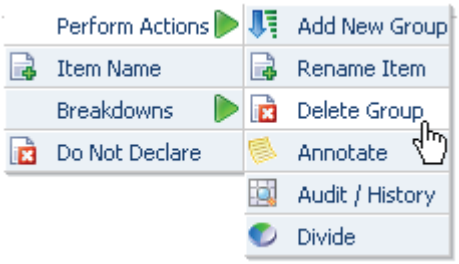
The Reconstitution/Equivalency Options for a given item are managed within the item's corresponding LIO profile. GSM will use the selected factor/target % to populate the matrix as shown in figure 18-10 below.

Figure 18-10: Reconstitute Items with Source Item table



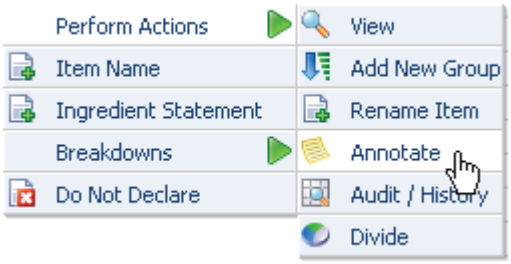
Enter the source from which to get the water necessary for performing the reconstitution and click **Done**. The results of your reconstitution appear in the LIO tree.

Delete Group



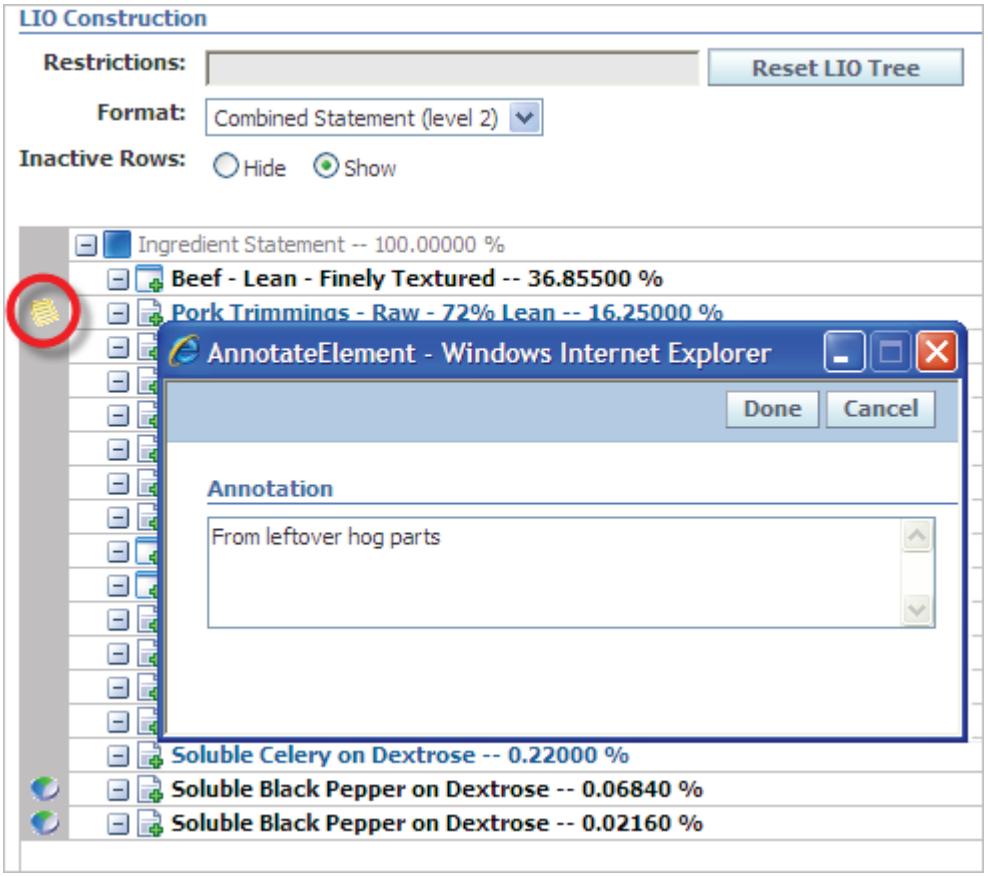
Click this menu option to delete the selected group. You can delete a group only if it has no subitems.

Annotate

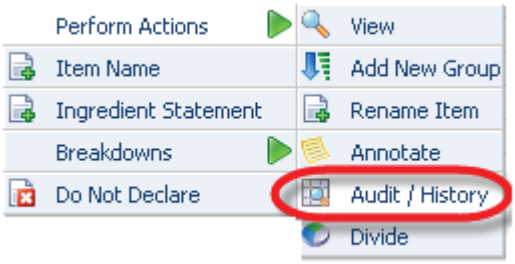


Click this menu option to add a narrative comment to the item. Annotations are typically used to provide additional explanation/rationale to help others understand the decisions made during the LIO process. Any item containing an annotation will be denoted with a special icon in the left margin of the LIO tree, as shown in figure 18-11 below.

Figure 18-11: Annotation



Audit History



Click this menu option to get an accounting of the current disclosure method and any relevant actions that have been performed against the selected item. GSM displays a dialog box as shown in figure 18-12 below.

Figure 18-12: Audit/History dialog box

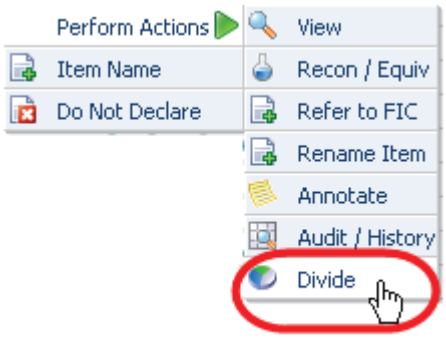
Close

Audit History

Date	Item Name	Element Reference	% Yield	Declaration	High Level Action	Source	Destination	Message
8/20/2009 11:47 AM	New Group		0.00000 %	Item Name	Add Group			Group Added under [RootLevel]
8/20/2009 11:47 AM	1,3-bis (hydroxymethyl)-5,5-dimethylimidazolidin		6.24688 %	Item Name	Divide	1,3-bis (hydroxymethyl)-5,5-dimethylimidazolidin		Item Divided into [1,3-bis (hydroxymethyl)-5,5-dimethylimidazolidin] - 50.00000 % and [1,3-bis (hydroxymethyl)-5,5-dimethylimidazolidin] - 50.00000 %

Note The Action Performed column of the Audit/History dialog box will be recorded in the user's currently selected language and will not be language aware.

Divide



Click this menu option to create a new instance of the current item based on a percent or quantity of the original item (that is, to split an item into two separate instances). GSM prompts you to indicate a percentage or a quantity. Once you have created the new item, it will appear at the same level as the original item in the LIO hierarchy and you can move it via drag-and-drop to another area. Any item affected by a "divide" action will be flagged with a special divide icon ( ) in the LIO tree view margin.

Declaration Descriptions

Item Name

Click this option to list the item as a single entry in the LIO using the default name of the current item.

Ingredient Statement

Click this option to list the item as a single entry in the LIO using the ingredient statement of the current item (if available).

List... x, y

Click this option to suppress the current item in the LIO disclosure and create individual entries for each lower level item, that is, “item one, item two, item three.” For ingredients with multiple %Breakdown values and/or formulation specification contexts, there may be multiple options (the term “List” is replaced with the first 25 characters of each corresponding %Breakdown value or formulation specification name, for example, “From Supplier... x, y,” “Canada Only ... x, y,” and so on).

List... i (x, y)

Click this option to disclose as a combined statement using the current item and its lower-level items, that is, “Item Name (item one, item two, item three)”. For ingredients with multiple %Breakdown values and/or formulation specification contexts, there may be multiple options (the term “List” is replaced with the first 25 characters of each corresponding %Breakdown value or formulation specification name, for example, “From Supplier... i (x, y),” “Canada Only... i (x y),” and so on).

List... i (x%, y%)

Click this option to disclose as a combined statement with percentage using the current item and its lower-level items, for example, “Item Name (item one 50%, item two 25%, item three 25%).” For ingredients with multiple %Breakdown values and/or formulation specification contexts, there may be multiple options (the term “List” is replaced with the first 25 characters of each corresponding %Breakdown value or formulation specification name, for example, “From Supplier ... i (x%, y%),” “Canada Only ... i (x%, y%),” and so on).

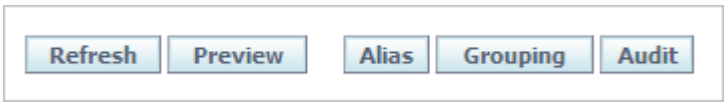
Do NOT Declare

Click this option to not disclose this item in the LIO. Items marked as “Do NOT Declare” will not appear in the final ingredient statement.

LIO Operations

During the LIO process, you can perform a number of operations using the row of buttons beneath the LIO tree view, shown in figure 18-13 below.

Figure 18-13: LIO Operations buttons



Refresh Operation

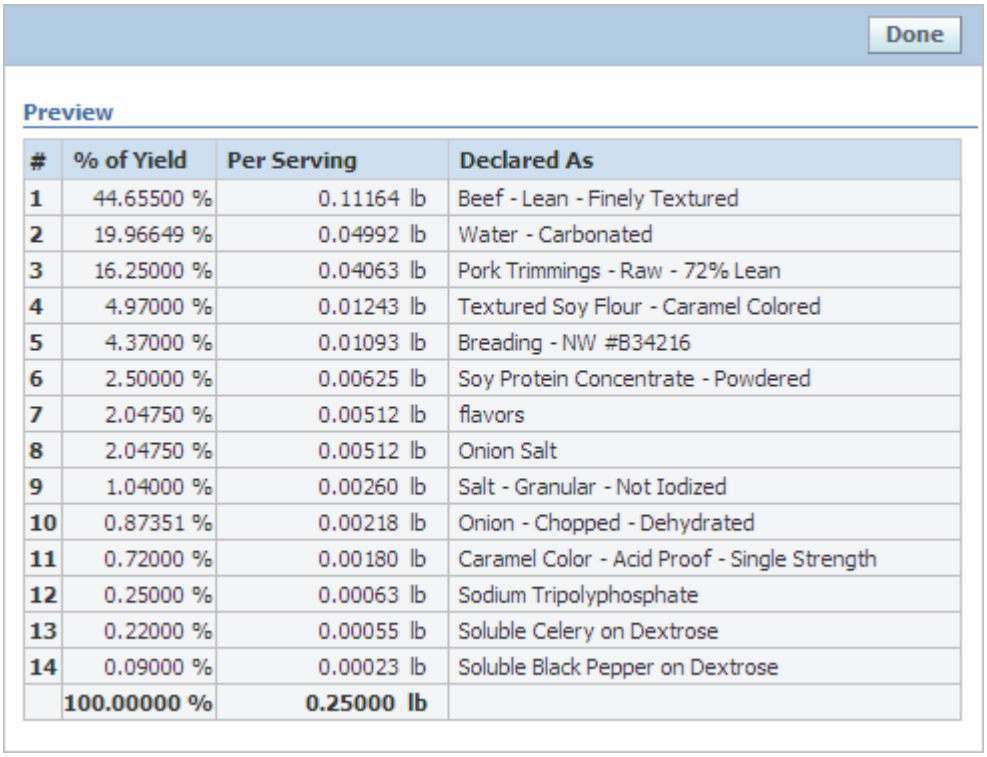
For performance reasons, many of the declaration options and actions are not executed immediately within the LIO tree view. Click **Refresh** to perform multiple actions before posting the tree view back to the server for rendering.

Once a Declaration Option/Action has been selected, the affected LIO item will be flagged to inform you that a change will occur upon the next refresh. When you click **Refresh**, GSM posts the tree view back to the server for processing and re-renders it to reflect the desired changes.

Preview Operation

When you click Preview, GSM opens a dialog box with a table in it, shown in figure 18-14 below. This table indicates the order in which each LIO item will appear in the final ingredient statement.

Figure 18-14: Preview



#	% of Yield	Per Serving	Declared As
1	44.65500 %	0.11164 lb	Beef - Lean - Finely Textured
2	19.96649 %	0.04992 lb	Water - Carbonated
3	16.25000 %	0.04063 lb	Pork Trimmings - Raw - 72% Lean
4	4.97000 %	0.01243 lb	Textured Soy Flour - Caramel Colored
5	4.37000 %	0.01093 lb	Breading - NW #B34216
6	2.50000 %	0.00625 lb	Soy Protein Concentrate - Powdered
7	2.04750 %	0.00512 lb	flavors
8	2.04750 %	0.00512 lb	Onion Salt
9	1.04000 %	0.00260 lb	Salt - Granular - Not Iodized
10	0.87351 %	0.00218 lb	Onion - Chopped - Dehydrated
11	0.72000 %	0.00180 lb	Caramel Color - Acid Proof - Single Strength
12	0.25000 %	0.00063 lb	Sodium Tripolyphosphate
13	0.22000 %	0.00055 lb	Soluble Celery on Dextrose
14	0.09000 %	0.00023 lb	Soluble Black Pepper on Dextrose
	100.00000 %	**0.25000 lb**	

In addition, the Preview section shows the adjusted percent yield of each item (based on suppressed items) and its relative weight/volume per serving.

Note The preview will automatically combine like items (including group designations) based on LIO item name in the currently selected language.

Alias/FIC Operation

Click Alias/FIC to open the aliasing dialog box shown in figure 18-15 below.

Figure 18-15: Aliasing dialog box

The aliasing dialog box provides you with options for aliasing based on the labeling rules of each item derived from its corresponding Component Catalog Profile and its disclosures. GSM filters disclosure options based on matching restrictions and displays them in order of priority (also defined within the FIC Profile). See Chapter 22, *Component Catalog*, for more information.

Grouping Operation

Click **Grouping** to display the grouping dialog box shown in figure 18-16 below.

Figure 18-16: Grouping dialog box

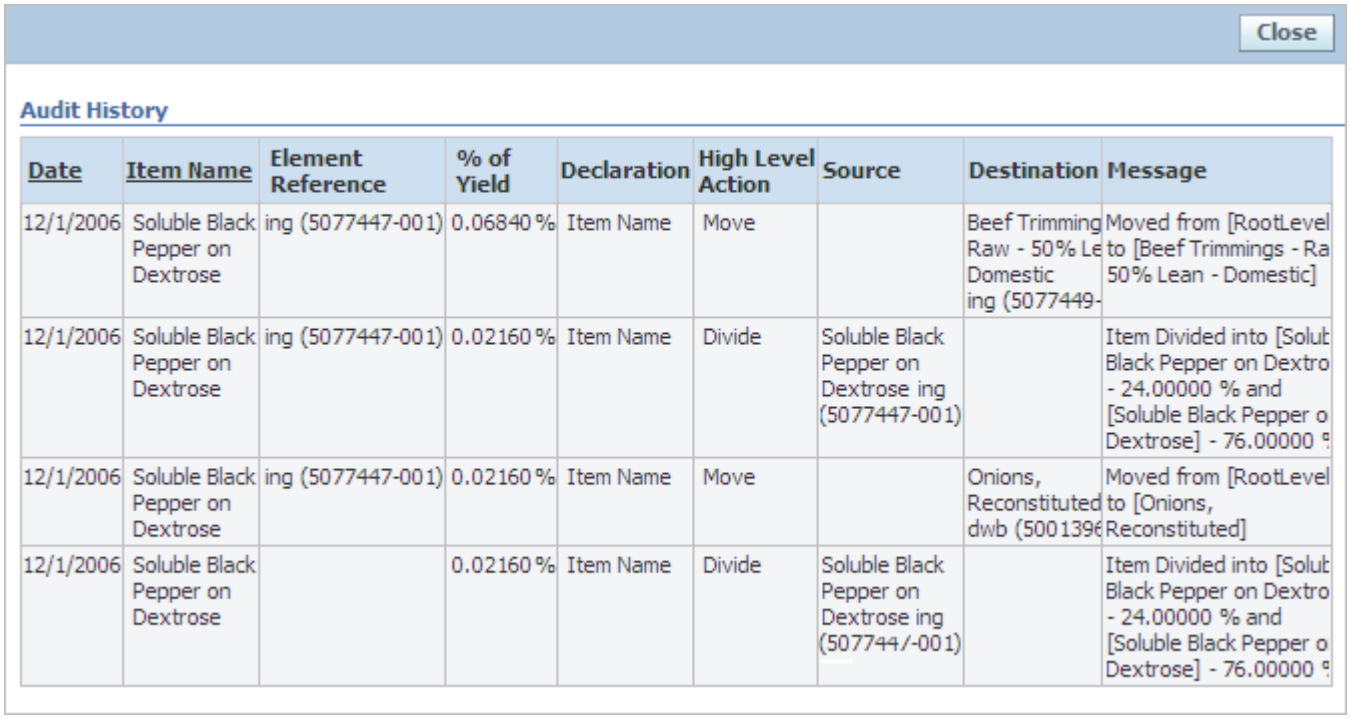
The grouping dialog box provides you with options for grouping based on each the labeling rules of each item derived from its corresponding FIC Profile and its groupings. GSM filters grouping options based on matching restrictions and displays them in order of priority (also defined within the FIC Profile). See Chapter 22, *Component Catalog*, for more information.

Note You can manually group LIO items using the drag-and-drop feature.

Audit Operation

Similarly to the preview operation, the audit operation opens a dialog box with a table that denotes the percent composition of each item with an accounting of the current disclosure method and any relevant actions that have been performed against that item (see figure 18-17 below).

Figure 18-17: Audit Operation



Note The "High Level Action" column of the Audit/History table will be recorded in English and will not be language aware.

Once you have performed all required actions on your tree, click the Final Statement tab to finalize your ingredient statement.

Final Statement Tab

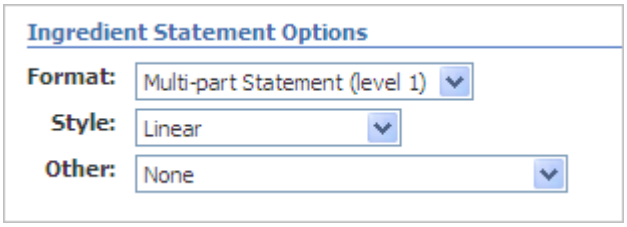
This Final Statement tab consists of the following sections:

- Ingredient Statement Options—Discussed below, at *Ingredient Statement Options Section* on page 18-19.
- Final Ingredient Statement—Discussed below, at *Final Ingredient Statement Section* on page 18-20.

In the Final Statement tab you can further edit the generated statement for final label production. Once you have completed the LIO construction process, you can produce and edit the final ingredient statement using features found within the tab, then push the changes to the specification.

Ingredient Statement Options Section

Figure 18-18: Ingredient Statement Options section



When editing the final statement, you can modify the statement using the Format, Style, and Other fields.

Format Field

GSM supports the following formats:

Multi-part Statement (level 1)—Creates a multi-part statement using level one items as primary headers

Combined Statement (level 2)—Creates a single, combined statement using all items beginning at level 2 within the LIO hierarchy

Style Field

GSM supports the following styles:

Columnar—Arranges the final statement in a columnar list, separating each item with a new line

Columnar - Uppercase—Arranges the final statement in a columnar list, separating each item with a new line, and converts all text to upper case

Linear—Arranges the final statement as a linear paragraph

Linear - Uppercase—Arranges the final statement as a linear paragraph and converts all text to upper case

Contains Less than 2% of…—Inserts "Contains Less than 2% of:" at the appropriate point in the statement based on the percent composition of each item

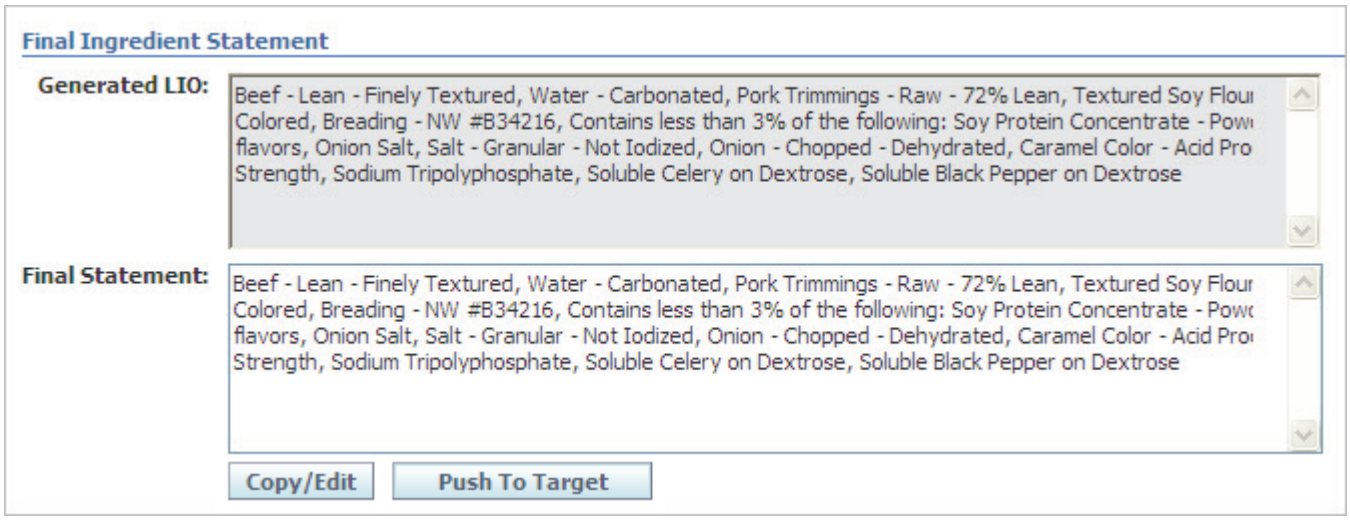
Contains Less than 3% of…—Inserts "Contains Less than 3% of:" at the appropriate point in the statement based on the percent composition of each item

Once you have set the fields in the Ingredient Statement Options section and the generated LIO is displayed, you can click **Copy/Edit** to move the generated statement into the Final Statement page. At that time you can make any manual adjustments that are necessary.

Final Ingredient Statement Section

Use this section to review the ingredient statement, perform final editing, and push the changes to the specification.

Figure 18-19: Final Ingredient Statement section



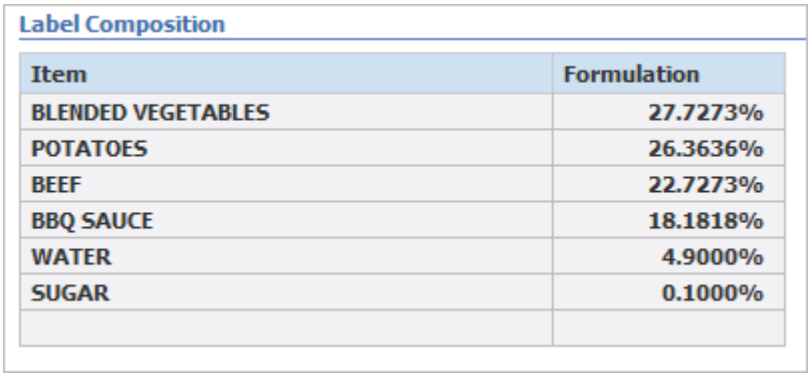
Label Composition Tab

If you have created a label composition in the Listed Ingredient Order (LIO) tool and have transferred it to the nutrient profile, then this tab displays the label composition.

Note This tab is enabled using the following configuration: GSM.LabelComposition.Enabled

Label Composition, the sole section in the Label Composition tab, displays the composition of the specification for labeling purposes. This information can be pushed to the nutrient profile from the LIO process. The data pushed to the Nutrient Profile is read only.

Figure 18-20: Label Composition section



Label Composition

Item	Formulation
BLENDED VEGETABLES	27.7273%
POTATOES	26.3636%
BEEF	22.7273%
BBQ SAUCE	18.1818%
WATER	4.9000%
SUGAR	0.1000%

CHAPTER 19

Testing Protocol Library

This chapter describes the purpose and use of the Testing Protocol Library of Global Specification Management. Topics in this chapter include:

- *Page-Level Functions*
- *Testing Protocol (Header) Section*
- *Facility Information Section*
- *Sections Section*
- *Extended Attributes Section*
- *Testing Protocol (Detail) Section*

Overview

The Testing Protocol Library is a centralized location where you can document and manage quality and sampling procedures. Procedures are documented in GSM for specifications. Therefore you can capture protocols for raw materials (ingredients, products, packaging, printed packaging), work in process (ingredients and formulation), and finished goods (menu and trade).

Testing Protocols are then utilized in Product Quality Scorecard's Scorecards to assist in determining the quality of a specification.

A Testing Protocol can be created using one of two approaches:

- Global (via Library)—These testing protocols are global in scope and can be applied to many specifications. The protocols are created and maintained via the Testing Protocol Library and applied from a given specification by "Pulling from Library".
- Spec (via Specification)—Testing protocols created from an individual specification are limited in scope to that specification. You can view them in the library but cannot edit them from the library, as they are owned by the specification and can only be edited from that specification.

Page-Level Functions

In the upper right corner of the page is a row of buttons that trigger actions that can affect the entire page. All of these buttons are displayed when the specification is in read mode. These buttons and their functions are:

- **Edit**—Place the entire page in edit mode so that you can modify it.
- **(Report)**—Depending on the configuration of your Agile PLM for Process installation, this button may or may not appear. Click **Report** to launch the Reporting application.
- **Create New Copy**—Create a new copy of the current testing protocol.
- **Validate**—Validates the testing protocol to ensure key data has been entered corrected. Validation uses customer rules that must be built as part of an implementation.

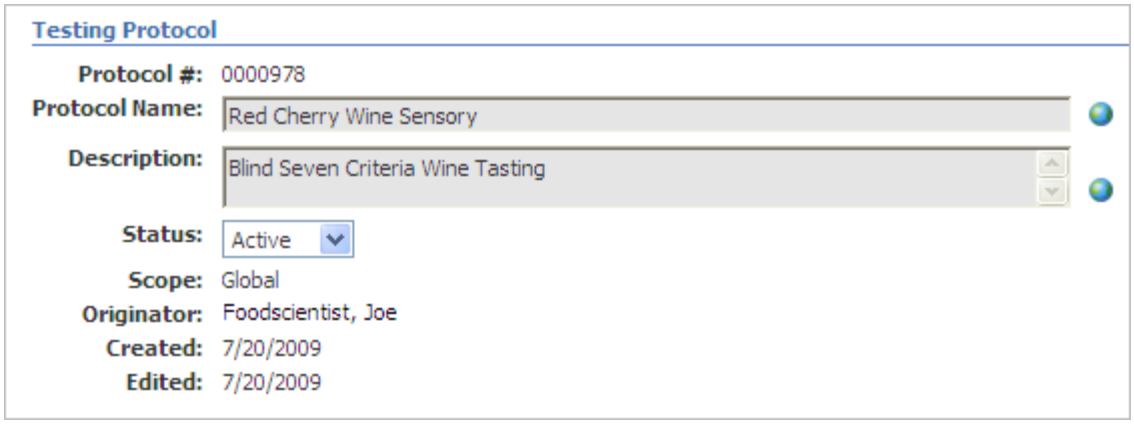
Testing Protocol Detail

In the testing protocol you can define and categorize quality attributes to measure and the scoring method to use in evaluating the results. You can access the testing protocol library from the GSM left navigation panel.

Testing Protocol (Header) Section

This section captures information pertaining to the testing protocol such as name, description, and status. The Status field controls whether or not you can use the protocol on specifications. The only testing protocols that you can add to a specification are those with a status of "active."

Figure 19-1: Testing Protocol (Header) section



Facility Information Section

Some protocols are closely associated to facilities due to equipment or geography. In this section you can specify a set of facilities that you intend for this protocol to test.

Figure 19-2: Facility Information section

Sections Section

In this section you can define a section for your protocol in which to group testing attributes for scoring. You can apply a scoring method and weight to each section to describe how GSM scores these attributes in the testing system.

Figure 19-3: Sections section

Sections

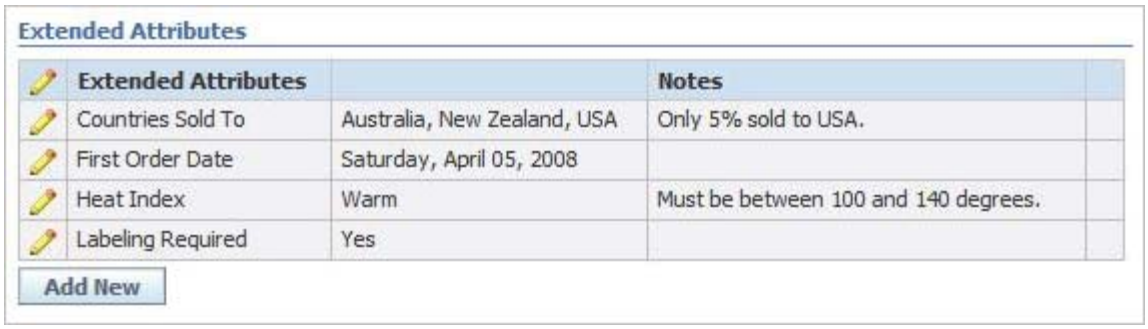
Section Name	Section Description	Section Weight	Scoring Method
Appearance	Red wine presented as bright red. Rim colour: Tilt the glass slightly and look at the edge of the wine to observe a purple tint representing youth. Swirling: Visually perceive "Good legs" indicating a thicker body and a higher sweetness level.	1	Lowest Score
Aroma	Swirl your wine. This releases molecules in the wine allowing you to smell the aroma or bouquet. Take a quick whiff and formulate an initial impression, then take a second deeper whiff	1	Lowest Score
Balance	Verify sweetness, acidity, and bitterness	1	Lowest Score
Body/Texture	Presented as nearly correct or better	1	Lowest Score
Taste/Flavor	1. Initial taste (or first impression): Cherry and Woody. 2. Taste: Rich and Smooth.	1	Lowest Score
Finish	Reminds the taster of a rich cherry desert.	1	Lowest Score
Overall Quality	Summary, general opinion of quality	1	Lowest Score

Add New

Extended Attributes Section

Extended attributes define important features and characteristics of the testing protocol. You can build these attributes to meet specific needs, as shown in the figure below.

Figure 19-4: Extended Attributes section

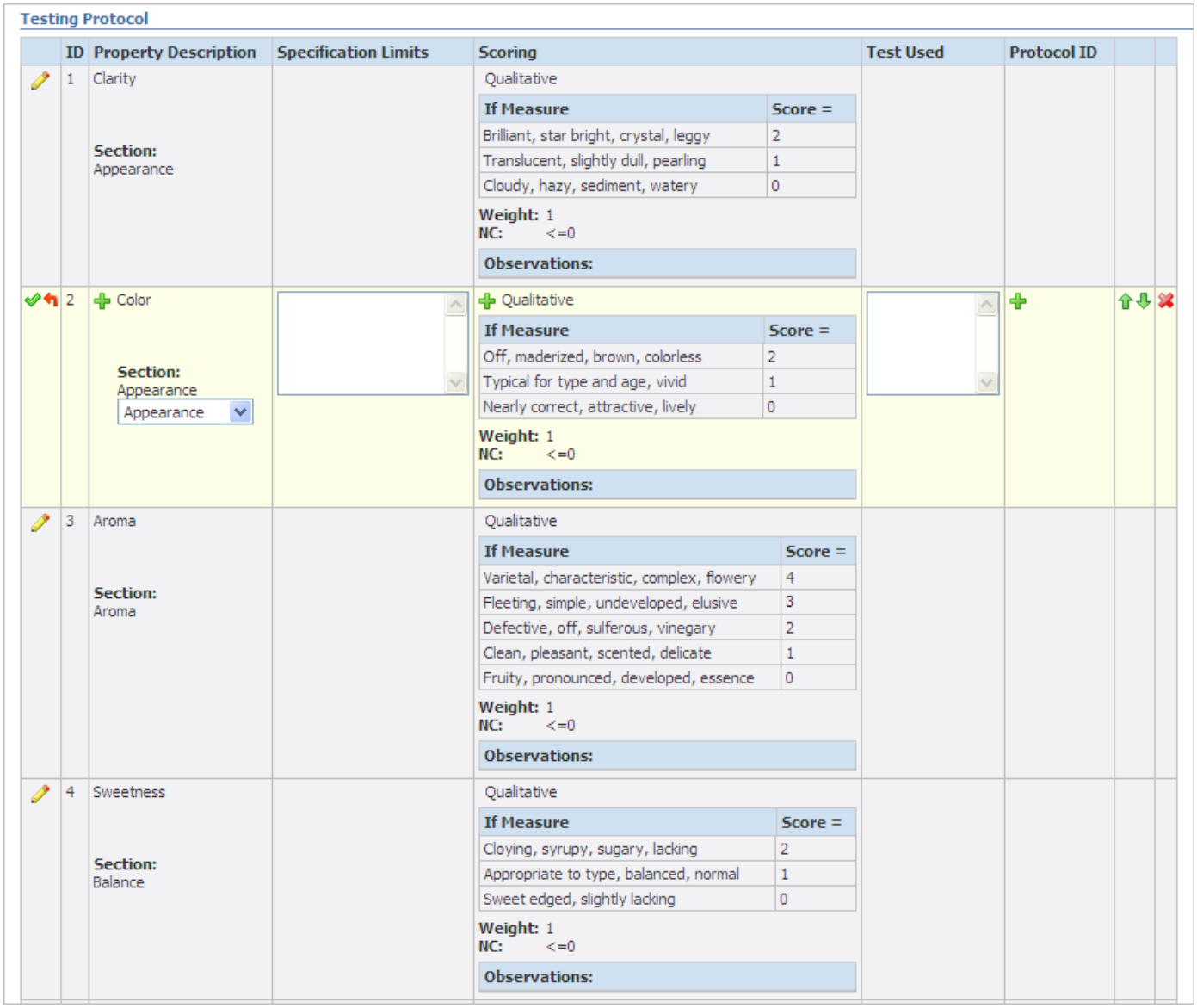


Testing Protocol (Detail) Section

In this section you can define which properties of the specification to test in this protocol and the details around the definition and scoring of the tests. You can add a number of extended attributes and define the testing parameters for each.

To edit any data in this table, click **Edit** at the upper right of the page. GSM reloads the page in editable form and displays an edit icon ( ) to the left of each editable row in the table. In the row to edit, click the edit icon. GSM reloads the page, displaying the row in editable mode (with a yellow background), including the apply changes icon ( ), the undo icon ( ), the delete icon ( ), and an add data icon ( ) in the Property Description, Scoring, and Protocol ID columns, as shown in figure 19-5, below.

Figure 19-5: Testing Protocol (Detail) section



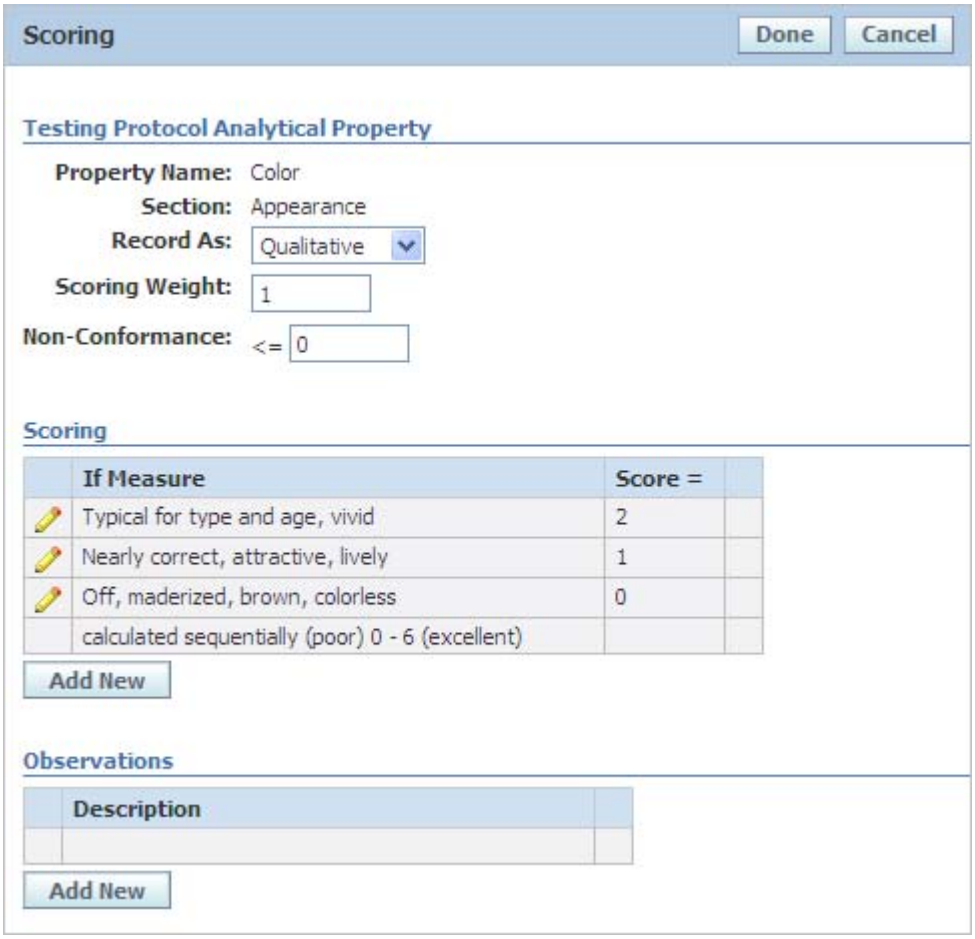
Key fields include:

Property Description/Section—Click the add data icon (+). If the item is an analytical property, GSM opens a search form with which you can select a different property description. From the Section drop-down list, choose a section defined above to categorize which section this testing item belongs to. If the item is an extended attribute, then it opens up a multi-select dialog box with active extended attributes for testing protocols.

Specification Limits—Define target, upper, and lower bounds for this test as well as a unit of measure.

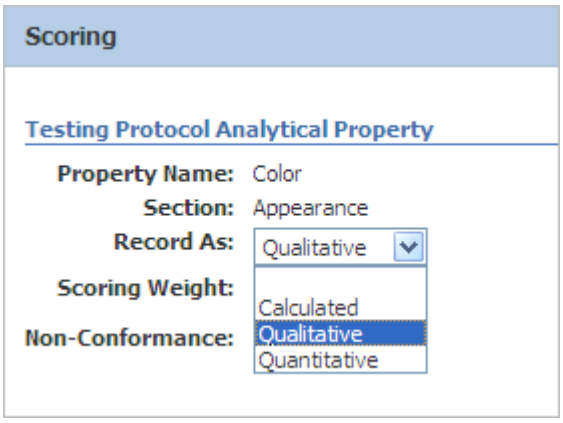
Scoring—Set up the scoring for the item in this subsection. This field defines how to score this item in the testing system. Click the add data icon (+) in this column to open the Scoring dialog box, from which you can make your selections, as shown in figure 19-6 below.

Figure 19-6: Scoring dialog box



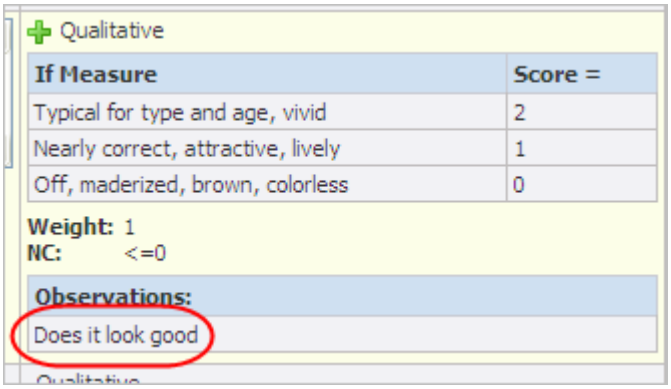
If you intend to use the testing protocol in PQS, then select "Qualitative" from the Record As drop-down list, as shown in figure 19-7, below.

Figure 19-7: Record As drop-down list



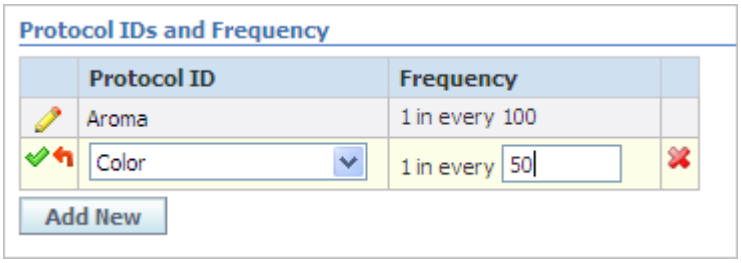
(For more information of PQS, please see the *Agile Product Lifecycle Management for Process Product Quality Scorecard User Guide.*) If you have the applicable administrative permissions, you can create observations that enable scorers to comment based on an administered list of options, as shown in figure 19-8, below.

Figure 19-8: Scoring column with data



Protocol ID—Describes how frequently to perform this test. Click the add data icon ( ) in this column to display a dialog box in which to input test frequencies, as shown in figure 19-9, below. Use the apply changes icon ( ) to confirm new additions, and click **Done** in the upper right of the dialog box to close it and display your additions in the table.

Figure 19-9: Setting Protocol IDs and frequency



CHAPTER 20

Activities

This chapter describes the purpose and use of the activities feature of Global Specification Management. Topics in this chapter include:

- *Creating an Activity*
- *Searching for an Activity*
- *Summary Tab*
- *Supporting Documents Tab*
- *Ext Data Tab*
- *References Tab*
- *Approval/Audit Trail Tab*

Overview

An activity is a workflow enabled object that can be used with other specifications or objects. Activities can be useful in the following scenarios:

- Managing Parallel Work—As an ingredient specification is moving through its workflow a user may choose to launch a nutritional review. This review can be modeled as a GSM activity working in parallel with the ingredient specification's workflow. In addition you can choose to create a linkage between the activity and the specification to support business rules such as, "A specification cannot move to an "Approved" status if a nutritional review has been initiated and has not yet been completed."
- Managing A Group Of Activities—A given activity can be linked to one or many specifications or objects. This is useful if there is a single approval for all objects. Examples include: Linking multiple smart issue requests to an activity for approval or linking a number of specifications where a similar change must be performed.
- Providing A Notification To Specification Readers—Activities can be configured to provide an informational notification when users open a specification for reading. These notifications may be of value if a temporary condition exists impacting a group of specifications or an impending change is being considered.
- Activities are based on workflow templates managed in the Workflow Administration application (WFA). For more on WFA, please see the *Agile Product Lifecycle for Process Administrator User Guide*.

The Activity page consists of the following tabs:

- *Summary Tab* on page 20-4
- *Supporting Documents Tab* on page 20-7
- *Ext Data Tab* on page 20-7
- *References Tab* on page 20-7
- *Approval/Audit Trail Tab* on page 20-7

An activity is an additional workflow that may be tied to a specification. Activities are based on workflow templates managed in the Workflow Administration application (WFA). For more on WFA, please see the *Agile Product Lifecycle for Process Administrator User Guide*.

Creating an Activity

You can create an activity from within Global Specification Management (GSM) in two ways:

- Primary Relationship—A user can create an activity directly from another specification. We refer to this relationship as a Primary Relationship where the activity has a unique relationship to the originating specification.
- Related Relationship—A user can create a standalone activity and link it to one or more specifications or objects. We refer to this relationship as a Related Relationship and consider it to be generic in nature.

Creating a Primary Relationship from a Specification

You can create a primary relationship from an existing specification in GSM.

To create a primary relationship from an existing specification:

1. Access the specification to tie the activity to and click **Act** at the top right of the page. GSM displays an activity, opened to the Summary tab. By creating the activity in this manner, the activity has a primary relationship to the specification from which it originated.
2. Type a title for the activity in the **Activity Title** field.
3. Click the hyperlinked **Activity Type** field label. A dialog box opens . Via this dialog box users select an activity workflow that will be used to manage the activity. The activity workflows are organized and presented by GSM business unit (BU). Please note, activities do not resolve to workflows similar to other specification types.
4. Select an application type from the list of types in that dialog box and click **Done** at the top right. The box closes and your selection appears in the Application Type field.
5. Continue filling out all required fields and any others that you wish to use as listed in the *Summary Tab*, *Supporting Documents Tab*, *Ext Data Tab*, and *References Tab* sections, later in this chapter.
6. Click **Save** or **Save & Close Document** at the top right of the activity page.

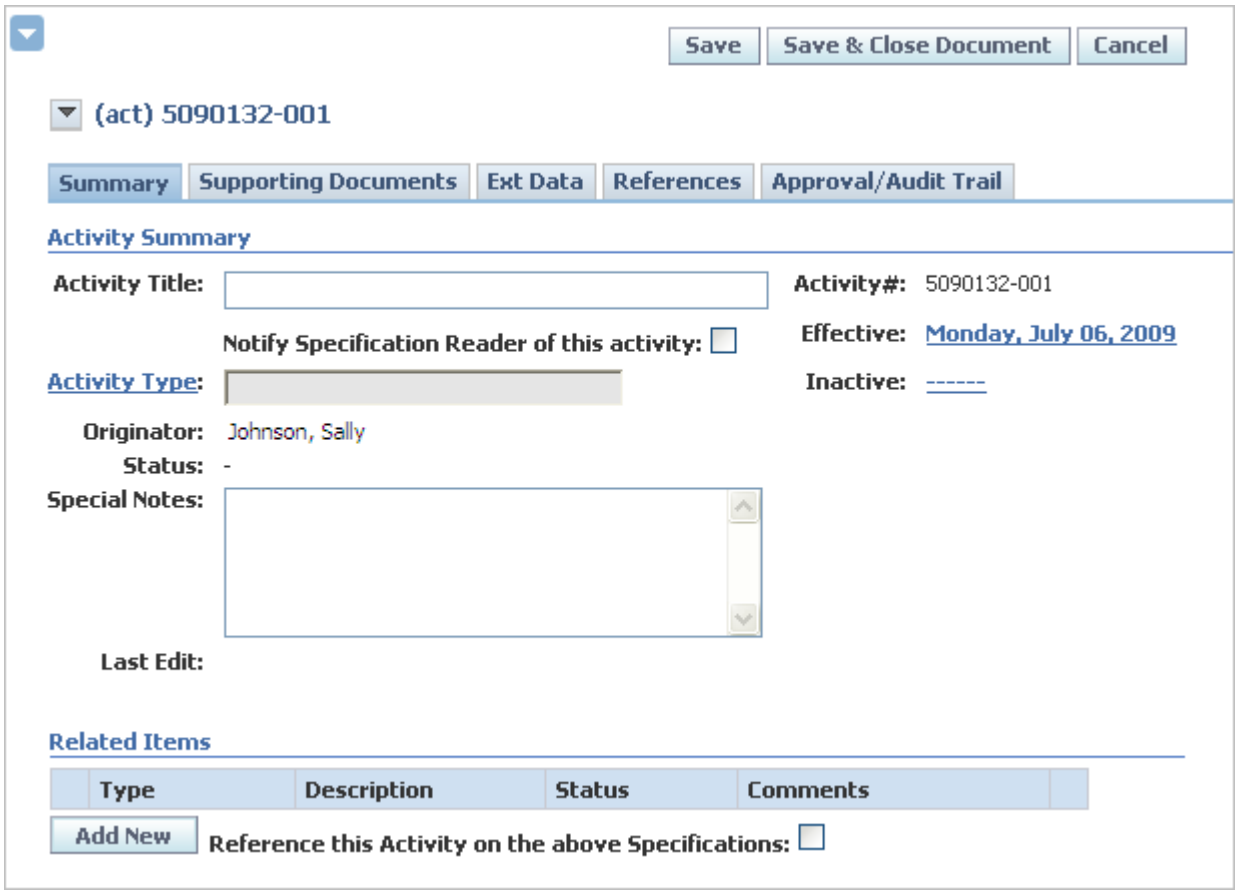
Creating an Activity That Is Independent of Specifications

If you have the necessary user role, you can create an activity that is independent of an individual specification. You must use the Create New button on the Activities search page in order to create an activity of this type.

To create a specification-independent activity:

1. From within GSM, click **Activities** on the left navigation panel. The Activities page displays.
2. Click **Create New** at the top right of the page. GSM displays an empty activity page opened to its Summary tab, as shown in figure 20-1 below.

Figure 20-1: Empty activity creation page



3. Follow the same steps as in the procedure for specification-dependent activities as described above (step 2 through step 6), keeping in mind that a specification-independent activity contains no Primary Action Item section.

Searching for an Activity

From the Activities option on the left navigation panel, you can also search for an existing activity.

To search for an existing activity:

1. Click **Activities** on the left navigation menu. The Activities search page loads.
2. From the leftmost drop-down list, select a key field to search on.

3 From the middle drop-down list, select an operator, for example, "Contains," "Equals," or "Starts With."
4 In the rightmost drop-down list, select a search term, either by typing or by using the subsearch dialog box that is available if an add data icon (+) appears to the left of the field.
5 Under the search form, click **Search**. GSM runs the query and reloads the page, showing your search results in a Search Results section.
6 Click the hyperlinked activity number of the activity to view. GSM opens the activity page, defaulting to the Summary tab.

Note For more detailed guidance on using the search form, please see *Understanding the Search Form* on page 1-4.

Summary Tab

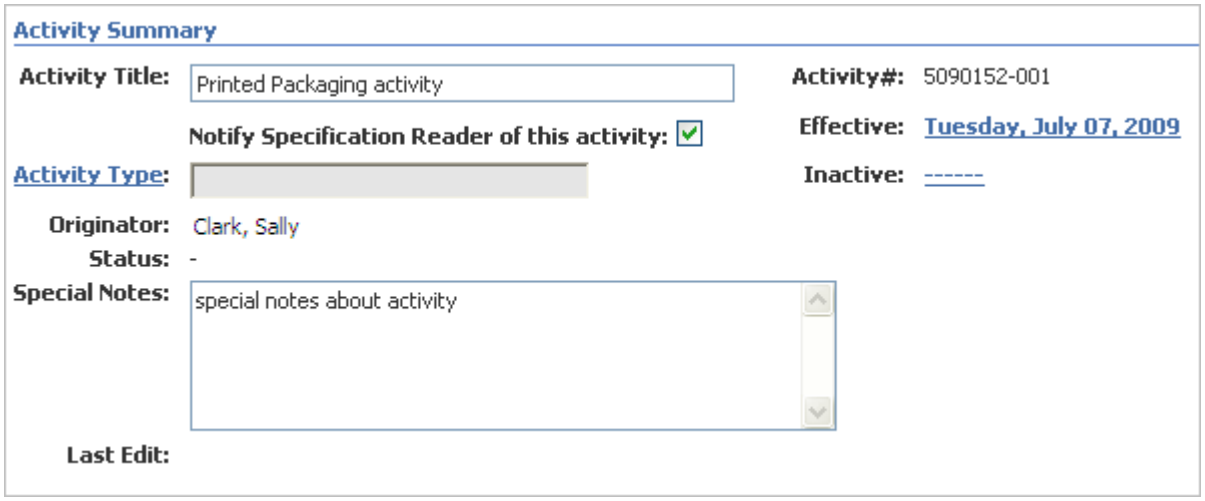
The Activity Summary tab contains the following sections:

- Activity Summary—Discussed below, at *Activity Summary Section* on page 20-4
- Primary Action Item—Discussed below, at *Primary Action Item Section* on page 20-5 (for specification-dependent activities only)
- Related Items—Discussed below, at *Related Items Section* on page 20-6

Activity Summary Section

The Activity Summary section contains the identifying information for the activity and specifies which workflow template the activity is following.

Figure 20-2: Activity Summary section



Key fields include:

Activity Title—Identifies the activity by name (required field).

Activity #—Identifies the activity by number (system-defined field).

Notify Specification Reader of this activity—When checked, a notification panel will appear on the primary and/or related specification(s) informing the user that the activity exists. This panel will appear when the user opens the specification; the panel will disappear once the user places the specification in edit mode or switches tabs.

Effective—The date the activity becomes active. This date controls when the activity appears in the activity reference section on a related specification. This date is not available on a primary activity (an activity created from and possibly dependent on a specification).

Inactive—The date the activity expires. This date controls when the activity is removed from the activity reference section on a related specification. If the inactive date is not set, then the activity will never expire and always appear on the specification(s). This date is not available on a primary activity (an activity created from and possibly dependent on a specification).

Note For either of the effective or inactive dates to control visibility of the activity on the related specification(s), you must have the "Reference this Activity on the above Specifications" checkbox selected. For more information, see *Related Items Section* on page 20-6.

Activity Type—Link the activity to an activity workflow template (required field). Your workflow administrator manages activity workflow templates using the Workflow Administration application (WFA).

Note For more information on managing workflow templates in WFA, please see the "Using WFA to Manage GSM Workflows" chapter in the *Agile Product Lifecycle for Process Administrator User Guide.*

Originator—Identify the person who created the activity (system-defined field).

Status—WFA template-defined field displaying the workflow step that the activity is currently in.

Primary Action Item Section

The Primary Action Item section describes the specification participating in the primary relationship with the activity and allows users to create a dependency between the activity and the primary specification or item name.

Note This section appears only in activities that are tied to a specific specification. It does not appear when you are creating a new specification-independent activity.

Figure 20-3: Primary Action Item section

Key fields include:

Item Name—Displays the name and number of the specification that the activity is tied to, hyperlinked to that specification.

Process Dependency—Users choose whether to create a relationship between an activity workflow status and a specification workflow status. If a dependency is in place, the specification cannot move forward into a designated specification workflow status unless the activity first moves forward into the designated activity workflow status.

Related Items Section

The related items section contains the specifications participating in a related relationship to this activity. You can add one or more specifications and/or objects to this section.

Note Activities participating in a related relationship will not appear in a specification's Activities section unless you select "Reference this Activity on the above Specifications".

Figure 20-4: Related Items section

Supporting Documents Tab

The Supporting Documents tab contains the following sections:

- Supporting Documents — The document types available are attachments/procedures, URL, and rich text. For more information, please see *Attachments/Procedures Document Type* on page 3-14 and *Rich Text Document Type* on page 3-16.
- DRL Documents—For discussion of this commonly used section, please see *DRL Documents Section* on page 3-18.

Ext Data Tab

The Ext Data tab can contain an Extended Attributes section, one or more custom sections, or it can be empty.

- Extended Attributes—For discussion of this commonly used section, please see *Extended Attributes Section* on page 3-29.
- Custom Sections—For discussion of this commonly used section, please see *Custom Sections* on page 3-29.

References Tab

The Reference tab presents a list of primary and related activity relationships. Similar to other specification types, activities can participate in these relationships with other activities. Therefore a user can nest activities and view the relationships via this tab.

Approval/Audit Trail Tab

For discussion of this tab, please see *Approval/Audit Trail Tab* on page 2-11.

CHAPTER 21

Using Change Management Features

This chapter discusses the Change Management activities used to manage specifications. Topics in this chapter include:

- *Global Succession Tool*
- *Smart Issue Tool*

Overview

The Change Management feature provides tools for efficiently managing GSM specifications and for approving the modifications to specifications. The Change Management submenu in GSM is shown in figure 21-1 below.

Figure 21-1: Change Management submenu

Two tools are available:

- *Global Succession Tool* on page 21-1—Globally replace specifications without versioning the specifications
- *Smart Issue Tool* on page 21-8—Replace and version specifications

Global Succession Tool

As an Agile PLM for Process administrator, from time to time you may need to globally replace specifications without versioning the host specifications. The Global Succession tool is designed to assist you in making non-material changes to relevant specifications in your Agile PLM for Process database. In this case, "non-material" refers to changes that do not affect the composition or labelling of the finished good.

Using this tool, you can request, tailor, approve, and execute (on a scheduled basis) mass changes affecting any number of product hierarchies. You can tailor the scope of target specifications (affected specifications) as required. Mass changes using this tool are not an all-or-nothing proposition; they are a kind of "find and replace" function.

Caution! Because this tool enables such sweeping changes, typically only an administrator with the highest security level will have access to it. Two roles are associated with the Global Succession tool:

[SUCCESSION_REQUEST_EDITOR]—Allows the user to edit and run global succession requests.
[SUCCESSION_REQUEST_READER]—Allows the ability to search and view global succession requests.

Table 21-1: Supported changes

Specification to Replace	Host Specification
Ingredient specification	Formulation Inputs and Alternate Inputs
Ingredient specification	Trade Specifications
Master specification	Equipment, Formulation, Ingredient, Menu Item, Packaging Material, Printed Packaging, Product, and Trade specifications
Menu Item specification	Menu Item specification
Packaging Material specification	Formulation Inputs and Alternate Inputs
Packaging Material specification	Trade Packaging Materials and Alternate Packaging Materials
Printed Packaging specification	Formulation Inputs and Alternate Inputs
Printed Packaging specification	Trade Packaging Materials and Alternate Packaging Materials
Product	Menu Item specification

Accessing the Global Succession Tool

Access the Global Succession tool as described in the procedure below.

To access the Global Succession tool:

1 Click **GSM** > **Change Management** > **Global Succession.** Agile PLM displays a Global Successions search page with a Create New button in the top right, as shown in figure 21-2 below.

Figure 21-2: Global Succession search page

Finding the Specifications to Supersede

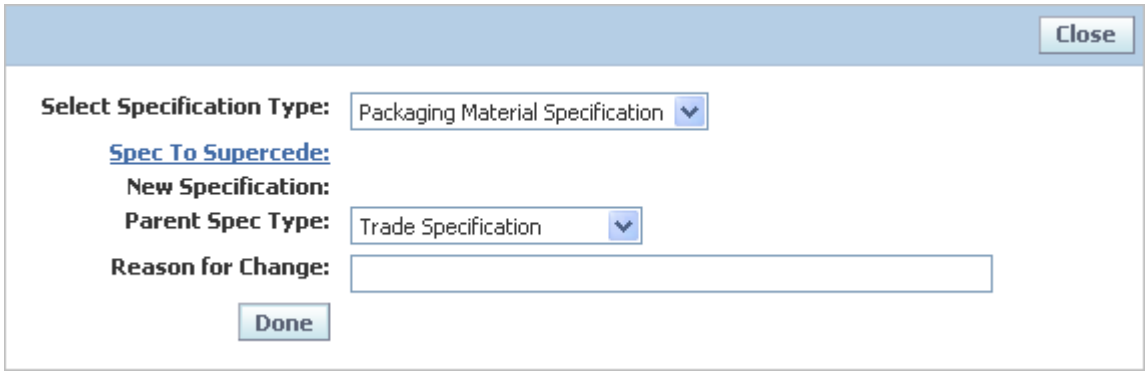
The process of identifying the specifications to supersede and the specification to replace them with includes these basic steps:

- Narrowing down the list of specifications
- Selecting the individual specifications to replace
- Executing the global succession
- Verifying the change

To narrow down the list of specifications:

1 Before entering search criteria, at the upper right of the Global Successions page, click **Create New.** A Select Specification Type dialog box appears, as shown in figure 21-3 below.

Figure 21-3: Global Successions Select Specification Type dialog box

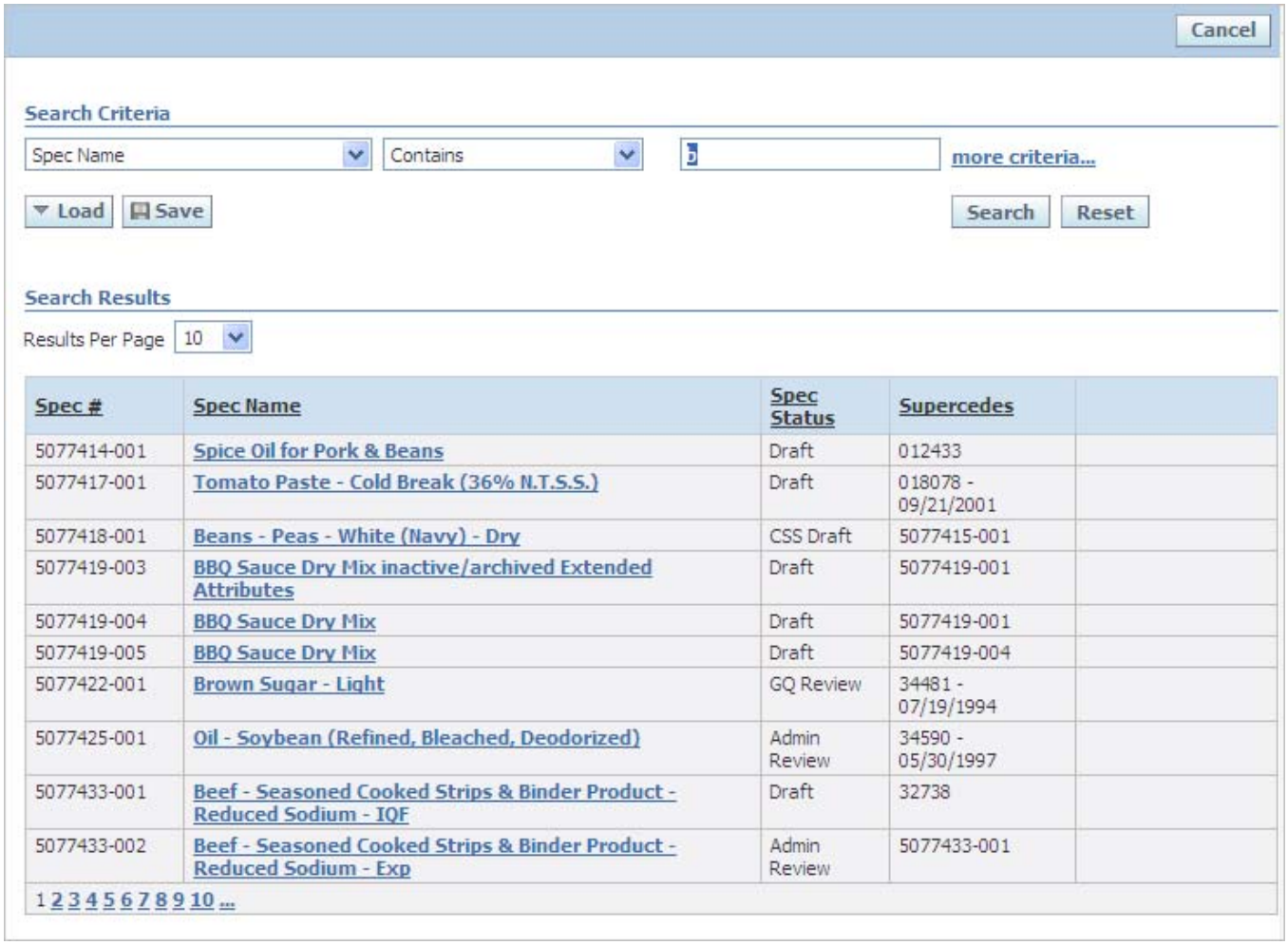


2 From the **Select Specification Type** drop-down list, select the type of specification you are going to supersede.

3 Click the **Spec To Supersede** hyperlink to display a search form in a dialog box.

4 Use that search form to locate the specification you are going to replace and click that specification in the search results list (see figure 21-4, below).

Figure 21-4: Spec to Supersede search results

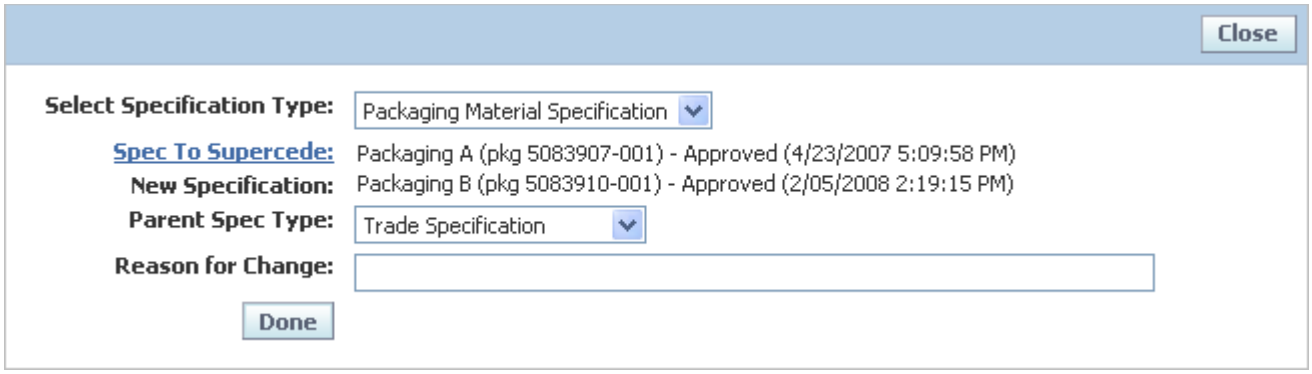


The search box closes, and your selection displays in the Select Specification Type dialog box. The New Specification field label is now hyperlinked, as shown in figure 21-5, on page 21-5.

5 Click the **New Specification** hyperlink to display a search form in a dialog box.

6 As above, use that search form to locate the new specification and select it. The search box closes and the new specification displays in the Select Specification Type dialog box, as shown in figure 21-5.

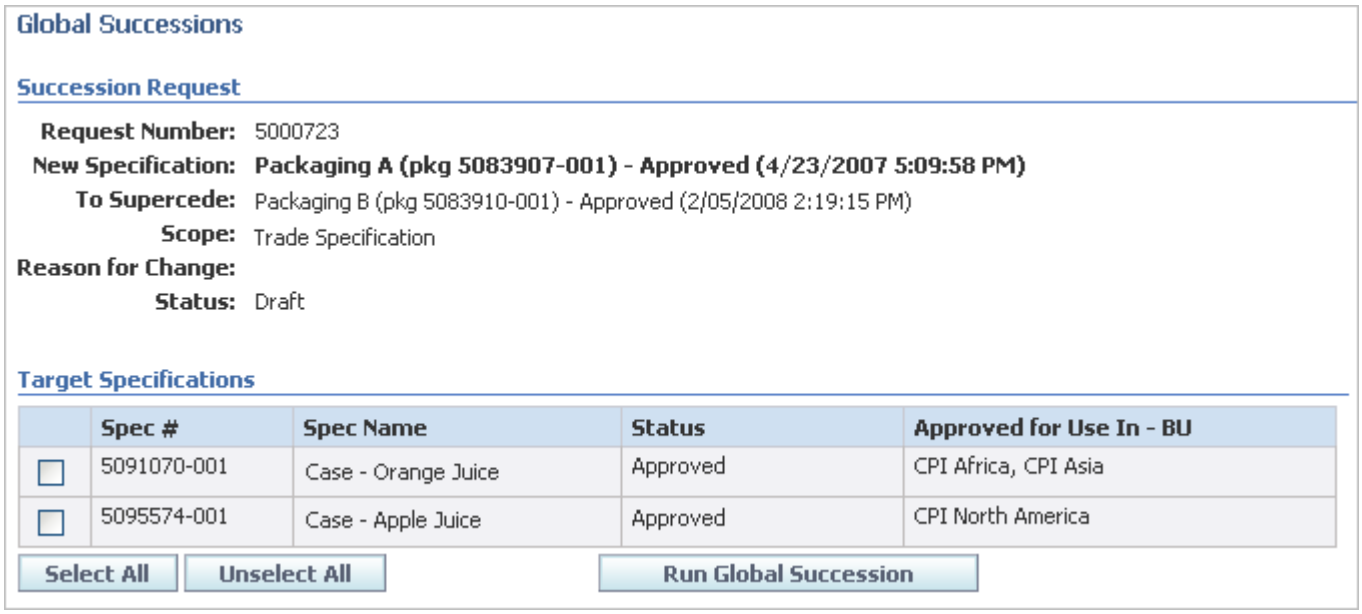
Figure 21-5: Global Succession Select Specification Type dialog box after selecting a specification to supersede and a new specification to succeed the old one with



7 Select the parent specification type from the drop-down box with that name. The parent specification type will help further filter out your search results. For example, shown in the screen above, the system will find all trade specifications that use Packaging A as an input and replace that input with the Packaging B specification.

8 Enter a description of the global succession in the **Reason for Change** field, and click **Done**. The Global Successions tool queries the database and returns a list of target specifications on which you can perform a succession, as shown in figure 21-6.

Figure 21-6: Global Successions page showing Target Specifications section



You have now narrowed down the list of specifications to choose from and are ready to choose individual specifications to replace.

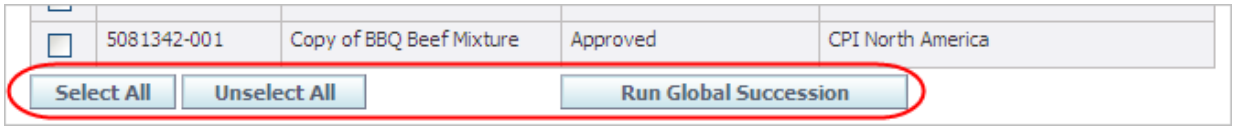
Performing the Global Succession

You can now select specifications to replace.

To select and replace individual specifications:

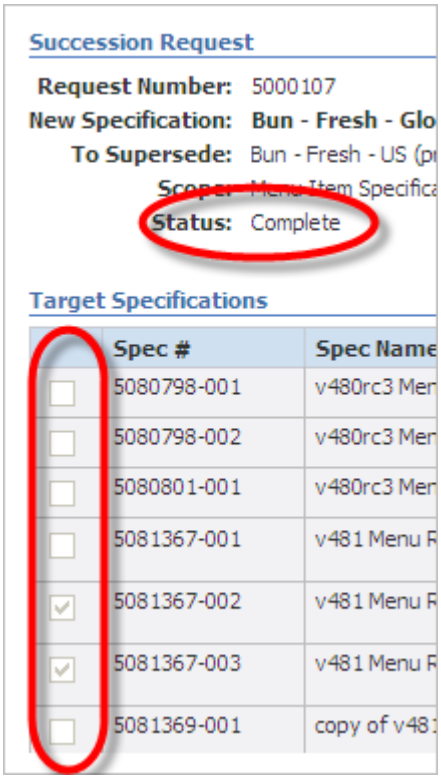
1. On the Global Successions page with the narrowed-down list of specifications in the Target Specifications section, click **Edit**. The page reloads in editable mode, showing the Select All, Unselect All, and Run Global Succession buttons, as shown in figure 21-7 below.

Figure 21-7: Available buttons at the bottom of the Global Successions Target Specifications section in editable mode



2. In the Target Specifications table, check the box next to each specification to replace and then click **Run Global Succession**. The tool replaces all selected specifications with the new specification and reloads the page showing the checked specifications and a status of "Complete," as shown in figure 21-8 below.

Figure 21-8: After a successful global succession request



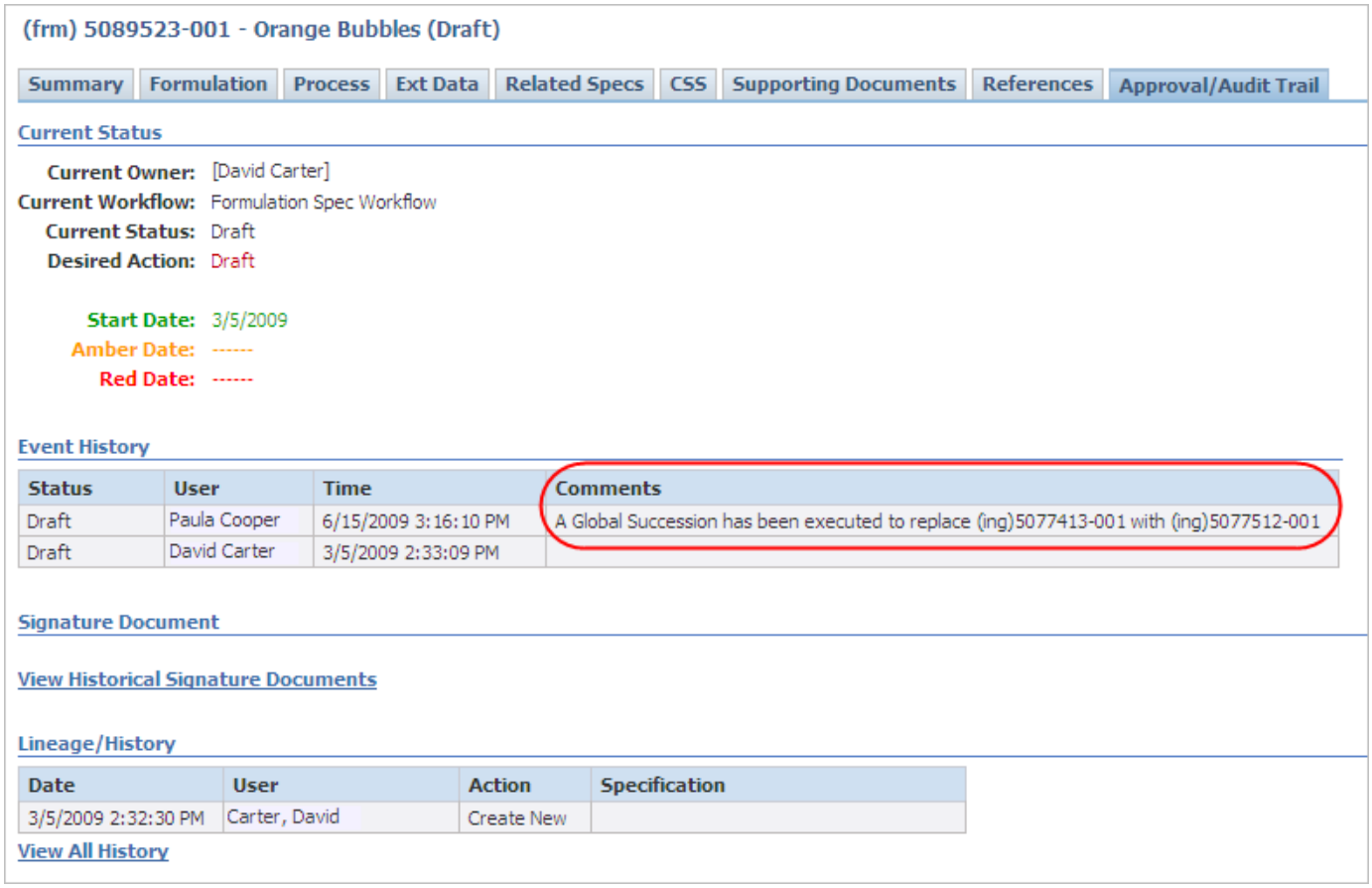
The checked boxes represent specifications that have been replaced. The boxes are now dimmed, indicating the succession request is complete. To replace more specifications, run another global succession.

Verifying the Succession

To verify that the change has been made:

1. Find one of the targeted specifications in GSM, as explained in the procedure beginning on page 21-3.
2. Click the **Approval/Audit Trail** tab.
3. Look in the Event History table for a notation stating that the global succession was executed, as shown in figure 21-9 below.

Figure 21-9: Approval/Audit Trail tab, Event History section showing a record of a successful global succession

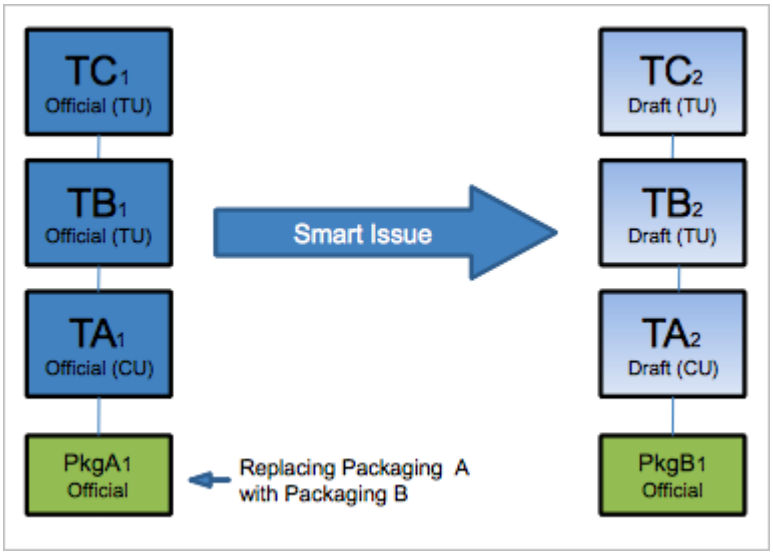


Smart Issue Tool

The Smart Issue tool allows you to create issues of entire hierarchies of specifications. You are able to just issue the hierarchy only, or replace specifications when issuing.

For example, you have a finished good hierarchy where you want to replace Packaging A with Packaging B. When smart issue is complete, you'll see that the entire trade specification hierarchy attached to Packaging A is issued and Packaging B is attached to the new version of the hierarchy.

Figure 21-10: Smart Issue packaging trade specification example



Use the Smart Issue tool to:

- Version a hierarchy only
- Replace one specification with another, without specifying a parent
- Replace one specification with another, while specifying a parent

The following specification types are supported:

Table 21-2: Affected specifications

Specification Type to Add or Remove	Parent Specification Type
Trade	Trade
Ingredient	Trade
Ingredient	Formulation Inputs and Alternate Inputs
Packaging/Printed Packaging	Formulation Inputs and Alternate Inputs
Packaging/Printed Packaging	Trade Packaging Materials and Alternate Packaging Materials
Packaging/Printed Packaging	Menu Packaging Materials and Alternate Packaging Materials
Menu Item	Menu Item
Product	Menu Item

Caution! Because this tool enables such sweeping changes, typically only an administrator with the highest security level will have access to it. Three roles are associated with the Smart Issue tool:

[SMART_ISSUE_CREATOR]— Allows the user to create smart issue requests.

[SMART_ISSUE_EDITOR] — Allows the user to edit and run smart issue requests.

[SMART_ISSUE_READER] — Allows the ability to search and view smart issue requests.

Note Additional security can be placed on the smart issue request itself by leveraging the Private and additional readers fields. This ability is explained further in this chapter.

Accessing the Smart Issue Tool

Access the Smart Issue tool as described in the procedure below.

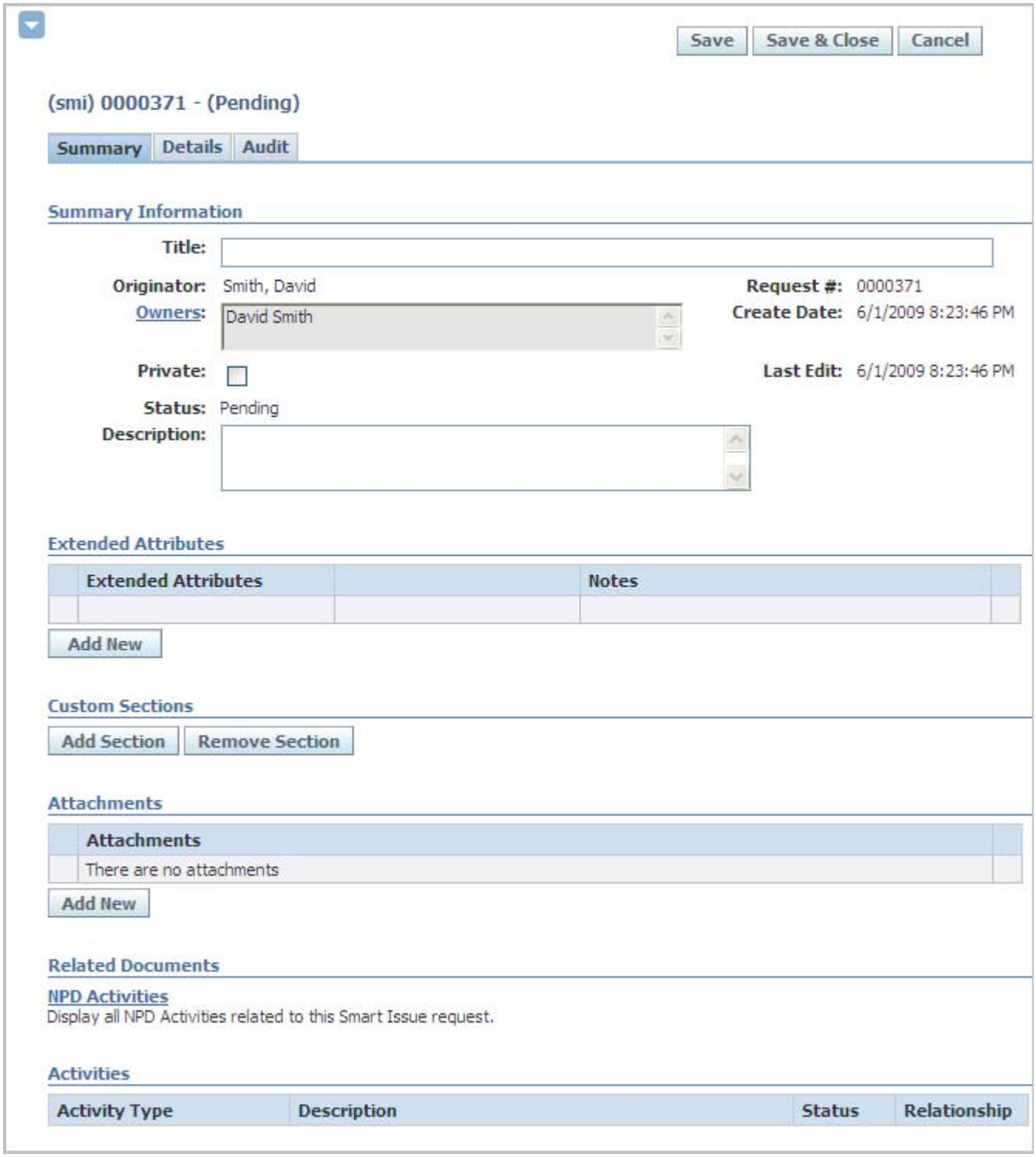
To access the Smart Issue tool:

1 Click **GSM** > **Change Management** > **Smart Issue**. Agile PLM displays the Smart Issue search page with a Create Request button in the top right, as shown in figure 21-11 below.

Figure 21-11: Smart Issue search page

2 At the upper right of the Smart Issue page, click **Create Request**. The Smart Issue page displays, as shown in figure 21-12 below.

Figure 21-12: Smart Issue page



The tabs on the Smart Issue page include:

- **Summary**—Defines the smart issue request and the users and groups able to view and edit it.
- **Detail**—Designates the specifications impacted by the smart issue request.
- **Results**—This tab appears when the smart issue request is completed or failed. This tab displays the new hierarchies created as a result of the smart issue.
- **Audit**—Details and a status for the smart issue request.

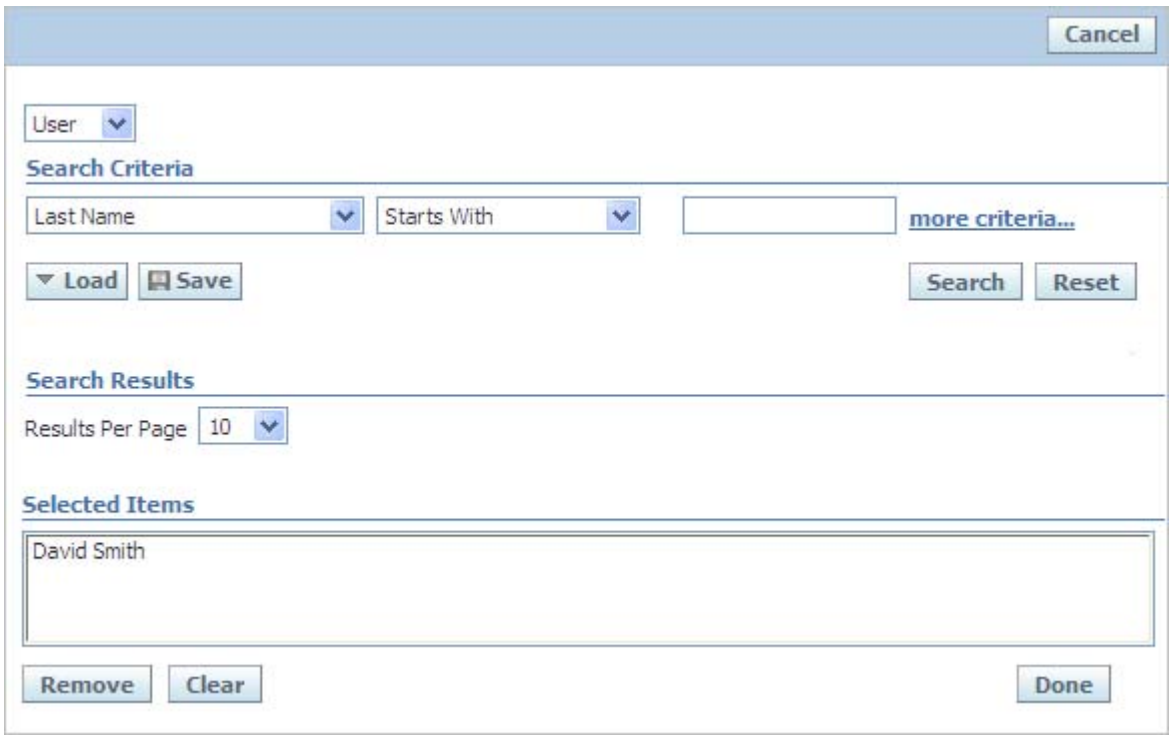
Defining the Smart Issue Request

Use the Summary tab to define the smart issue request.

To define the smart issue request:

1. Enter a **Title**. This field is required. The system automatically assigns the Originator, Status, Request #, Create Date, and Last Edit date.
2. Assign an owner of the smart issue request. The owner(s) of a request will be the only users allowed to edit and issue the request. Click the **Owners** hyperlink to display a search page, as figure 21-13 shows below. Owners is a required field.

Figure 21-13: Owners search page



3. Use the search form to select users or groups that own the smart issue request.

4. Click **Done**. The search form closes and your selections display in the Owners field.
   a. To designate the smart issue request as private, check the **Private** flag. By default all users with the [SMART_ISSUE_READER] role will be able to read the smart issue request. If a request is marked as Private, only the users added to the Owner and Readers fields will be allowed to view the request.
   b. If the Private flag is selected, the Readers field will appear. Click the **Readers** hyperlink to open the user and group multi-select search. Only users added to this field (and owners) will be able to view this smart issue request.
5. Enter a **Description** of the request.
6. Optionally, in the remaining sections on the page, add extended attributes, custom sections, and attachments.
7. Click **Save** to save the smart issue request.

You will be able to attach smart issue requests to NPD activities and/or GSM activities. You can view all NPD activities associated to this request by clicking on the **NPD Activities** hyperlink in the Related Documents section.

You will see all GSM activities associated to the smart issue request in the Activities section.

Finding the Specifications to Version

Use the Details tab to specify which type of smart issue to perform. The options are:

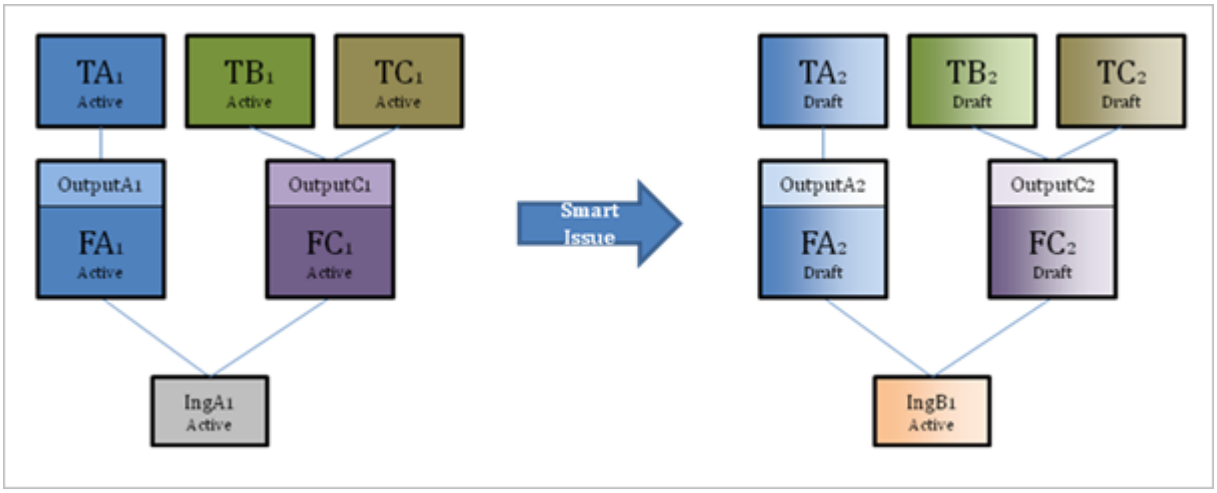
- **Replace Specification**
- **Replace Specification Given Parent**
- **Version Hierarchy Only**

Replace Specification

Use this option to replace a specification with another specification. This option is used to find all hierarchies that are attached to a given specification.

In the example below you would be replacing the ingredient specification IngA v1 with ingredient specification IngB v1. Notice after smart issue runs, all of the hierarchies attached to IngA1 are issued and the new issues of the hierarchy are now attached to IngB1.

Figure 21-14: Example of replacing a specification

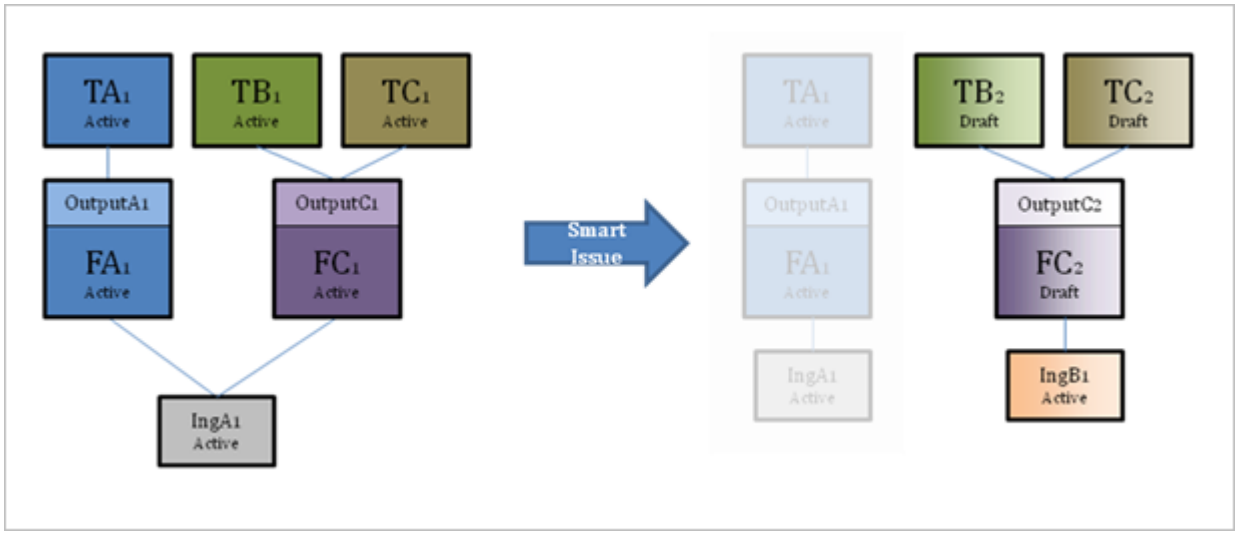


Replace Specification Given Parent

Use this option to replace a specification with another specification filtered by a parent specification. This option is used to find all hierarchies that are attached to a given parent and child pair of specifications.

In the example below you would be replacing the ingredient specification IngA v1 with ingredient specification IngB v1. However, you only want to replace IngA when it is used inside formulation specification FC. All other formulations that reference IngA you would like to keep untouched. This result could also be accomplished with the replace specification type if you know the top level specifications of the finished good hierarchies that reference formulation FC.

Figure 21-15: Example of replacing a specification with another specification filtered by a parent specification



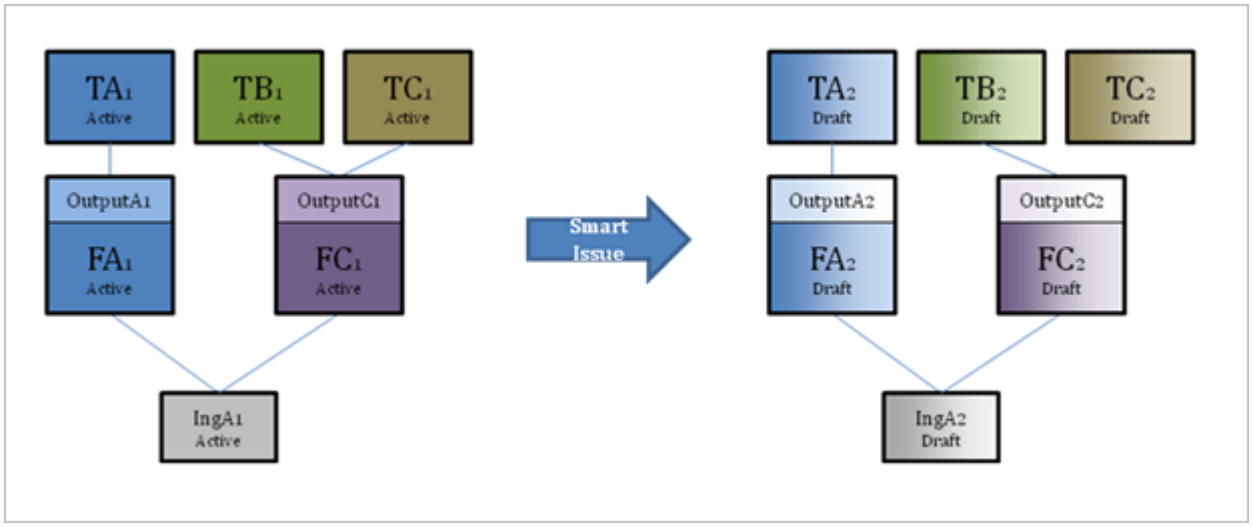
Version Hierarchy Only

Use this option to issue the hierarchy only without replacing a specification. This option is used when you want to issue an entire hierarchy without replacing a specification. Smart issue will issue every specification in the hierarchy starting from the specification given as the "Starting From" specification.

In the example below, you would be versioning all hierarchies attached to ingredient specification IngA v1. This action will also issue the ingredient specification IngA v1 to Ing A v2. You could achieve this same result if you were to manually create IngA v2 and use the replace specification type.

You may use only one option per smart issue request. The type selected will display different fields below the Type drop-down list.

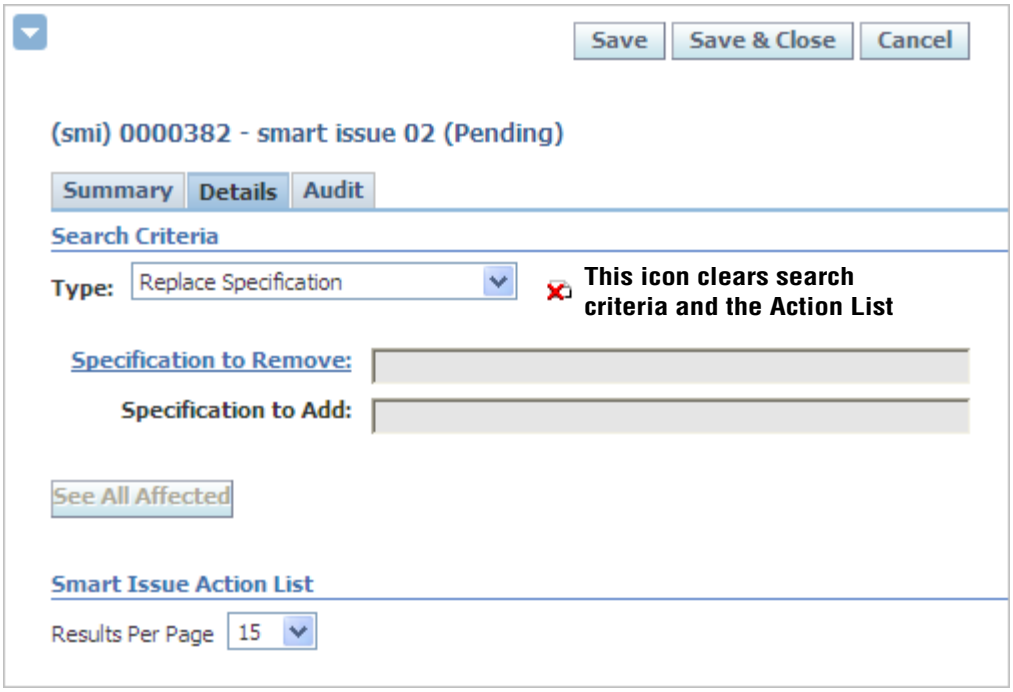
Figure 21-16: Example of issuing the hierarchy only without replacing a specification



To replace a specification:

1 From the **Type** drop-down list, select **Replace Specification**, as shown in figure 21-17 below.

Figure 21-17: Replace Specification option



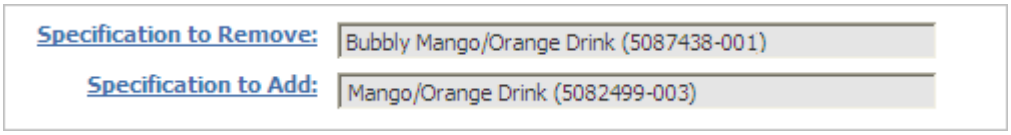
2 Click the **Specification to Remove** hyperlink to display a search form in a dialog box.

3 Use the search form to select an ingredient, menu item, packaging material, printed packaging, product, or trade specification. The search form closes.

4 Click the **Specification to Add** hyperlink to display a search form. This form contains specifications of the same type you selected to remove in step 3.

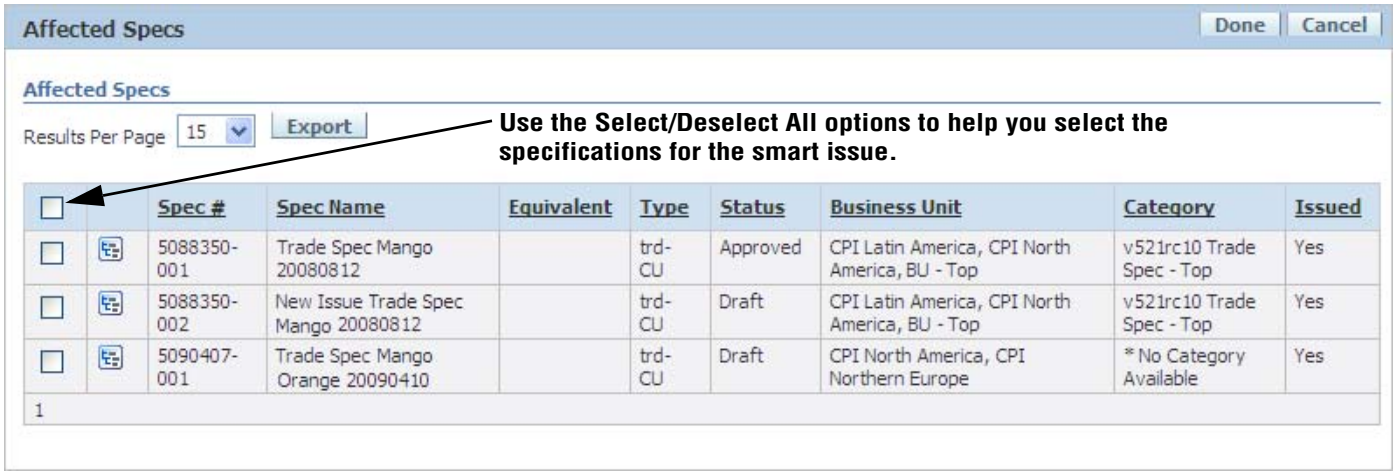
5 Use the search form to select a specification to replace the specification being removed, and then click **Done**. Your selection appears in the Specification to Add field, as figure 21-18 shows below.

Figure 21-18: Specifications selected to remove and add



6 Click **See All Affected**. The Affected Specs dialog box displays a listing of all of the specification hierarchies that are linked to the specification to remove, as figure 21-19 shows below:

Figure 21-19: Affected Specs dialog box



All hierarchies are listed using the top level specification to represent the hierarchy. For any hierarchy listed, you can click on the hierarchy investigation icon ( ) to display a popup window listing all specifications in the hierarchy that will be issued. Take notice of the Issued column, which will state whether the specification will be issued or not based on the get latest revision setting on the specification.

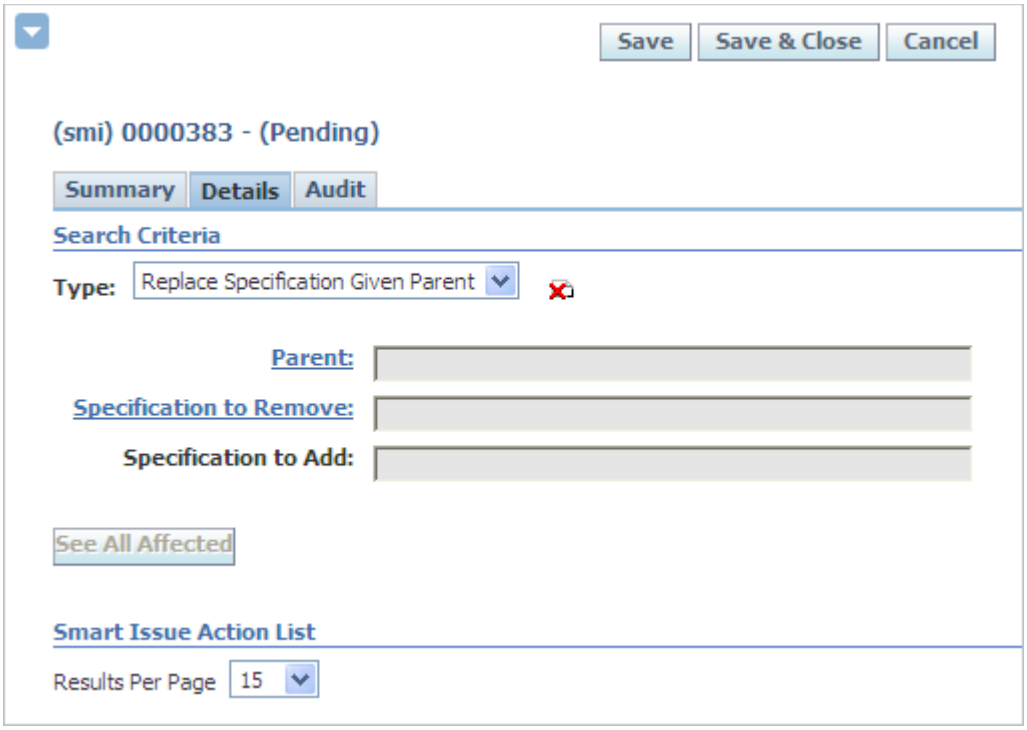
7 Click the checkbox next to the hierarchies to issue, and then click **Done**. The dialog box closes, and selected specifications appear in the Smart Issue Action List. The Action List represents all of the hierarchies that will be issued when the smart issue request is performed.

You can now perform the smart issue, as described in *Exporting the Affected Specifications* on page 21-21.

To replace a specification based on a parent specification:

1 From the **Type** drop-down list, select **Replace Specification Given Parent**, as shown in figure 21-20 below.

Figure 21-20: Replace Specification Given Parent option

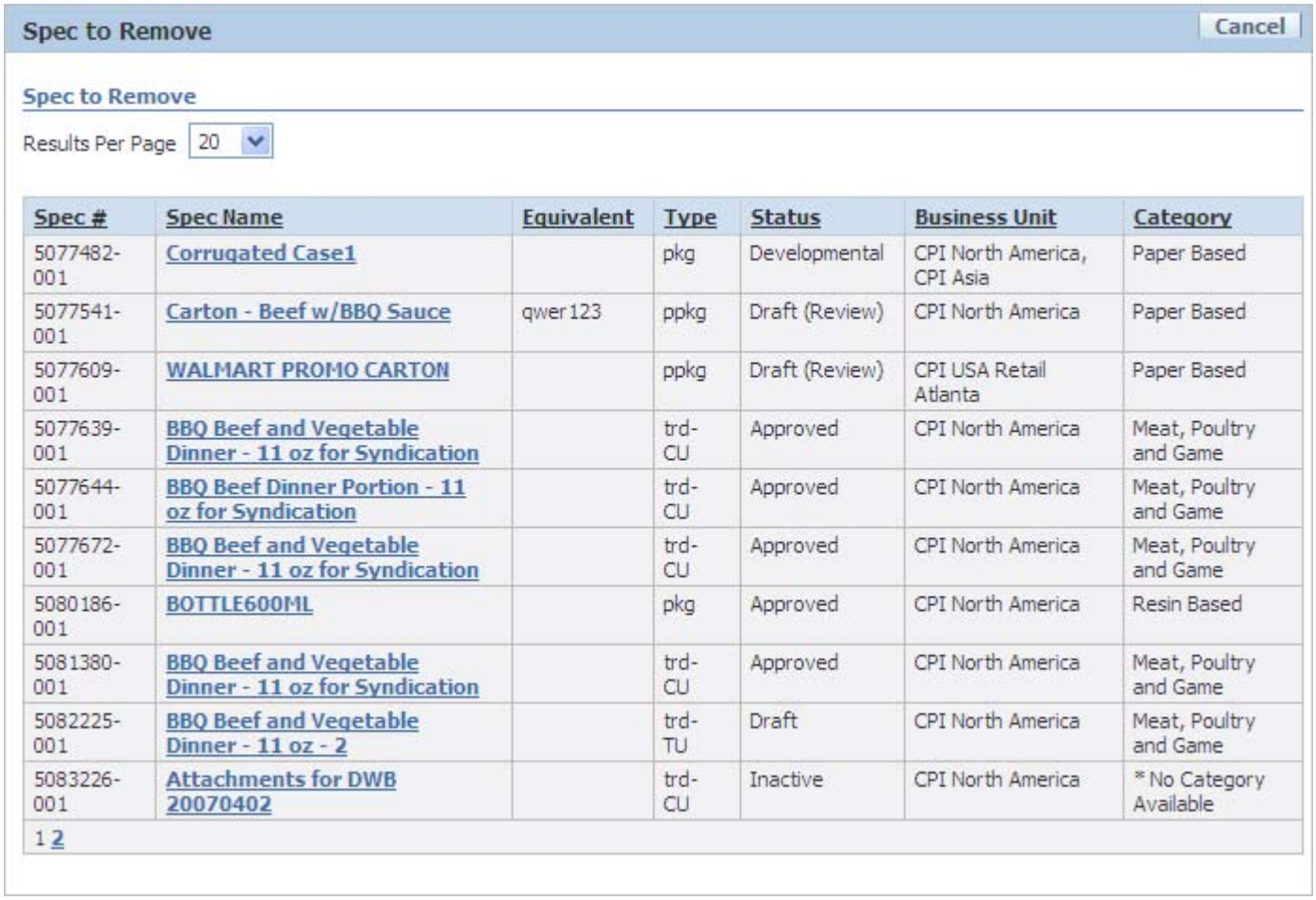


2 Click the **Parent** hyperlink to display a search form in a dialog box.

3 Use the search form to select a formulation, menu item, or trade specification to designate as the parent specification. The search form closes.

4 Click the **Specification to Remove** hyperlink to display the Spec to Remove dialog box, as shown in figure 21-21 below. This dialog box will display all lower level specifications associated with the parent specification selected.

Figure 21-21: Spec to Remove dialog box



Spec to Remove — Cancel

Spec to Remove

Results Per Page 20

Spec #	Spec Name	Equivalent	Type	Status	Business Unit	Category
5077482-001	Corrugated Case1		pkg	Developmental	CPI North America, CPI Asia	Paper Based
5077541-001	Carton - Beef w/BBQ Sauce	qwer123	ppkg	Draft (Review)	CPI North America	Paper Based
5077609-001	WALMART PROMO CARTON		ppkg	Draft (Review)	CPI USA Retail Atlanta	Paper Based
5077639-001	BBQ Beef and Vegetable Dinner - 11 oz for Syndication		trd-CU	Approved	CPI North America	Meat, Poultry and Game
5077644-001	BBQ Beef Dinner Portion - 11 oz for Syndication		trd-CU	Approved	CPI North America	Meat, Poultry and Game
5077672-001	BBQ Beef and Vegetable Dinner - 11 oz for Syndication		trd-CU	Approved	CPI North America	Meat, Poultry and Game
5080186-001	BOTTLE600ML		pkg	Approved	CPI North America	Resin Based
5081380-001	BBQ Beef and Vegetable Dinner - 11 oz for Syndication		trd-CU	Approved	CPI North America	Meat, Poultry and Game
5082225-001	BBQ Beef and Vegetable Dinner - 11 oz - 2		trd-TU	Draft	CPI North America	Meat, Poultry and Game
5083226-001	Attachments for DWB 20070402		trd-CU	Inactive	CPI North America	* No Category Available

1 2

5 Select a specification to remove. The dialog box closes and the selected specification displays in the Specification to Remove field.

6 Click the **Specification to Add** hyperlink. GSM displays a search page containing specifications of the same type you selected to remove in step 5.

7 Use the search page to select a specification to replace the specification being removed, and then click **Done**. Your selection appears in the Specification to Add field, as figure 21-22 shows below.

Figure 21-22: Selected specifications

Parent: BBQ Beef and Vegetable Dinner - 11 oz (5077539-002)

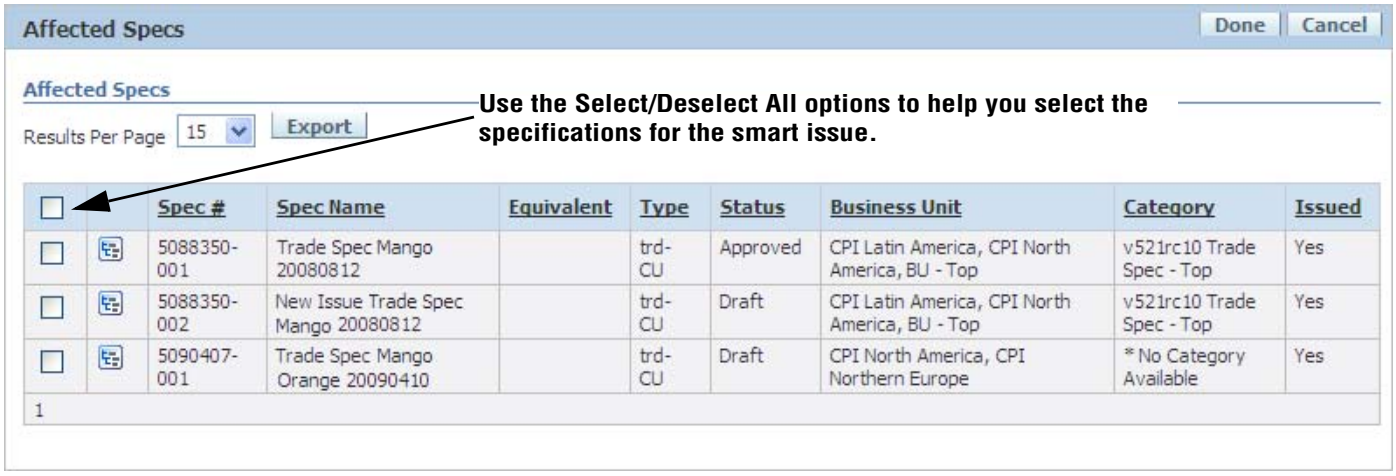
Specification to Remove: BBQ Beef and Vegetable Dinner - 11 oz for Syndication (5077

Specification to Add: BBQ Beef and Vegetable Dinner - 11 oz (5077539-010)

See All Affected

8 Click **See All Affected**. The Affected Specs dialog box displays a listing of all of the specification hierarchies that are linked to the specification to remove, as figure 21-23 shows below:

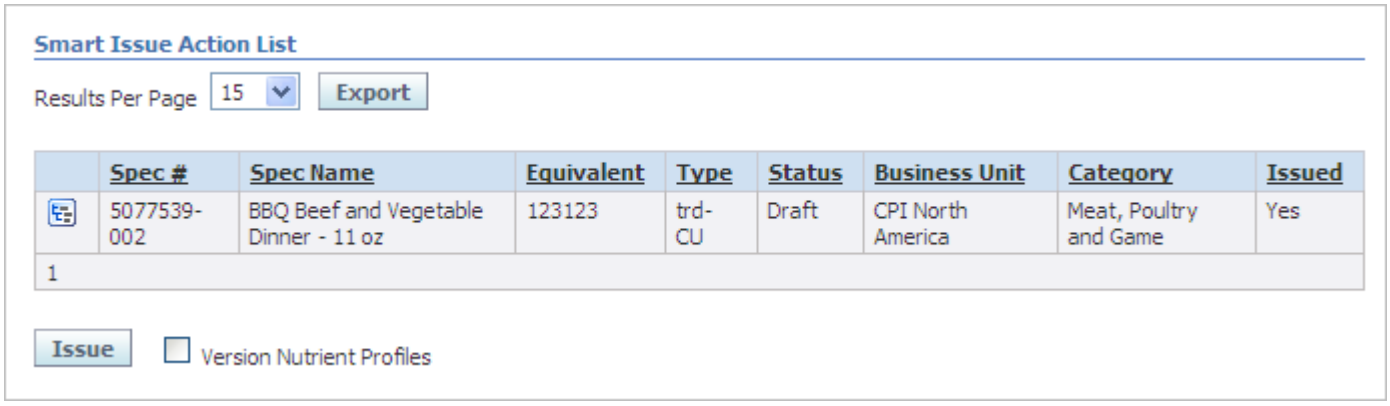
Figure 21-23: Affected Specs dialog box



All hierarchies are listed using the top level specification to represent the hierarchy. For any hierarchy listed, you can click on the hierarchy investigation icon ( ) to display a popup window listing all specifications in the hierarchy that will be issued. Take notice of the Issued column, which will state whether the specification will be issued or not based on the get latest revision setting on the specification.

9 Click the checkbox next to the hierarchies to issue, and then click **Done**. The dialog box closes, and selected specifications appear in the Smart Issue Action List, as figure 21-24 shows below. The Action List represents all of the hierarchies that will be issued when the smart issue request is performed.

Figure 21-24: Smart Issue Action list

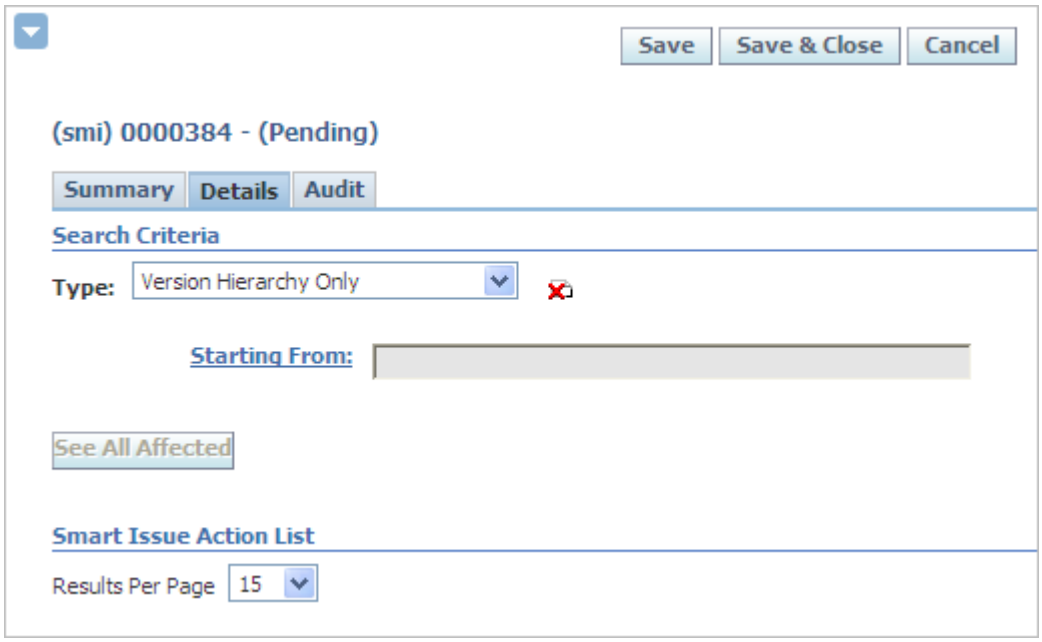


You can now perform the smart issue, as described in *Exporting the Affected Specifications* on page 21-21.

To version a specification hierarchy:

1 From the **Type** drop-down list, select **Version Hierarchy Only**, as shown in figure 21-25 below.

Figure 21-25: Version Hierarchy Only option

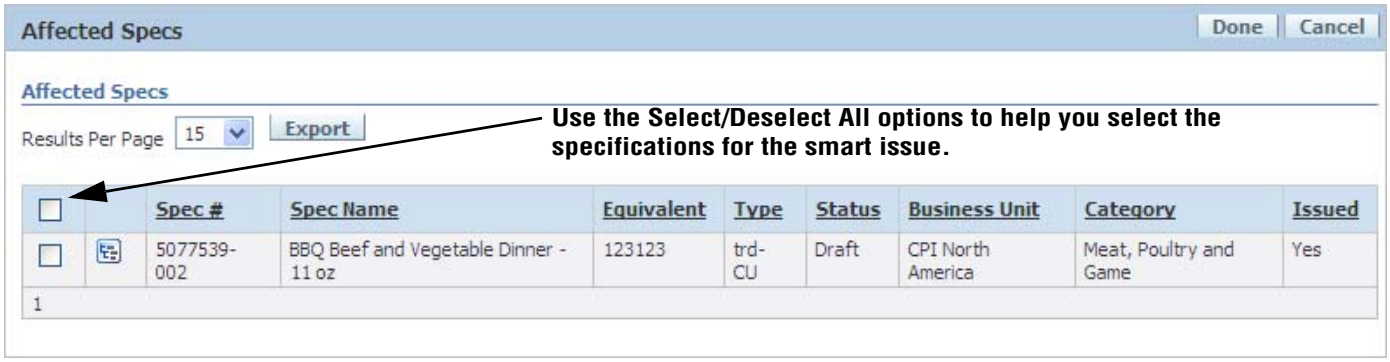


2 Click the **Starting From** hyperlink to display a search form in a dialog box.

3 Use the search form to select an ingredient, menu item, packaging material, printed packaging, product, or trade specification. The search form closes. This specification serves as a bottom-level specification and displays in the Starting From field.

4 Click **See All Affected**. The Affected Specs dialog box displays a listing of specifications available for smart issue, as figure 21-26 shows below.

Figure 21-26: Affected Specs dialog box



All hierarchies are listed using the top level specification to represent the hierarchy. For any hierarchy listed, you can click on the hierarchy investigation icon ( ) to display a popup window listing all specifications in the hierarchy that will be issued. Take notice of the Issued column, which will state whether the specification will be issued or not based on the get latest revision setting on the specification.

5 Click the checkbox next to the hierarchies to issue, and then click **Done**. The dialog box closes, and selected specifications appear in the Smart Issue Action List. The Action List represents all of the hierarchies that will be issued when the Issue button is selected.

You can now perform the smart issue, as described in *Exporting the Affected Specifications* on page 21-21.

Exporting the Affected Specifications

You can export a listing of ALL specifications affected (top-level and the lower specifications related to each). The resulting spreadsheet includes the following columns: Spec #, Spec Name, Equivalent, Type, Status, Issued, Business Unit, Category, Top-Level Parent, Level and specification Pkid. The Export button is available in Read and Edit mode. The export includes all affected hierarchies regardless of what checkboxes are selected.

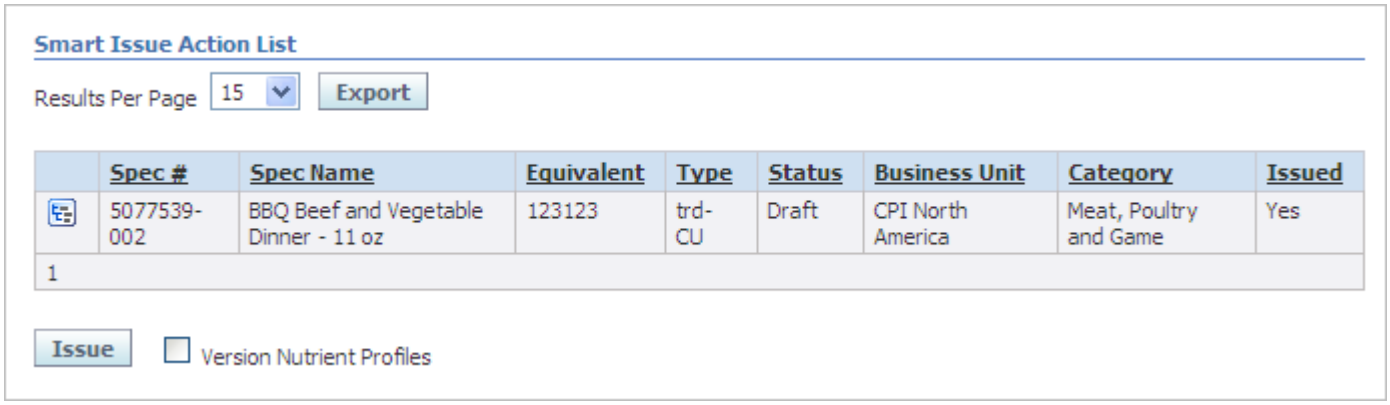
Exporting the Action List

You can export a listing of ALL specifications in your Action List (top-level and the lower specifications related to each). The resulting spreadsheet includes the following columns: Spec #, Spec Name, Equivalent, Type, Status, Issued, Business Unit, Category, Top-Level Parent, Level and specification Pkid. The Export button is available in Read and Edit mode. The export will only include the hierarchies included in the Action List.

Performing the Smart Issue

Once hierarchies selected for the smart issue are displayed in the Smart Issue Action List, you are able to select the Issue button, as figure 21-27 shows below.

Figure 21-27: Smart Issue Action List



Linked pages allow you to page through the results. You can also sort the data by clicking the column head.

To issue the smart issue request, the request must have a status of 'Pending' or 'Failed.'

To perform the smart issue:

1. If desired, click the Version Nutrient Profiles checkbox. If selected, the approved nutrient profiles associated to any specification that is re-versioned will also be re-versioned. The new version of the nutrient profile will be attached to the new revision of the specification and the old version will be removed. **Only Nutrient Profiles that are in a workflow step with a system tag of 'is Approved' will be versioned.** The new version of the nutrient profile that was marked as Active will become the active profile on the new specification.
2. Click **Issue** to perform the smart issue and the status is changed to executing. At this point the fields become read-only.

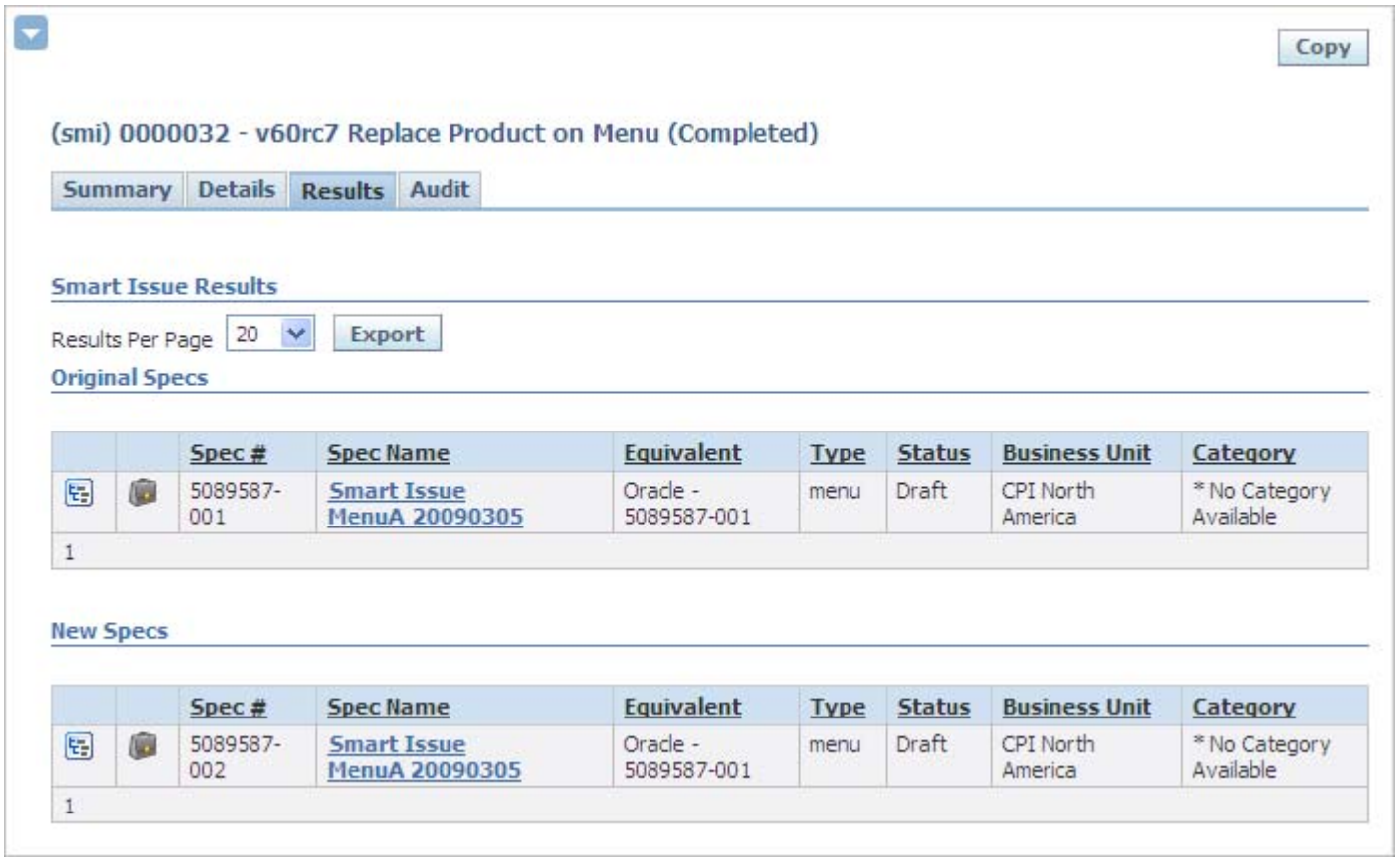
   When the smart issue request reaches either a "Failed" or "Complete" status, an email is sent to the owner(s) and issuer of the request.

   Once the smart issue request is in either a "Failed" or "Complete" state, the Results tab will be available.

Verifying the Smart Issue

Agile PLM for Process displays the Results tab upon completion of the smart issue request. This page shows two grids, one for the original hierarchies, and one displaying the newly issued hierarchies, as figure 21-28 shows below.

Figure 21-28: Results tab



You can sort results grids by column by clicking the column head. View specifications by clicking the hyperlinked Spec Name field.

Exporting the Results

You can export a listing of ALL specs (Top-level and the lower specifications related to each) from the original and the new hierarchies. The resulting spreadsheet will include the following columns: Original/New marker, Spec #, Spec Name, Equivalent, Type, Status, Business Unit, Category, Top-Level Parent, Level and specification Pkid. The Export button is available in Read and Edit mode.

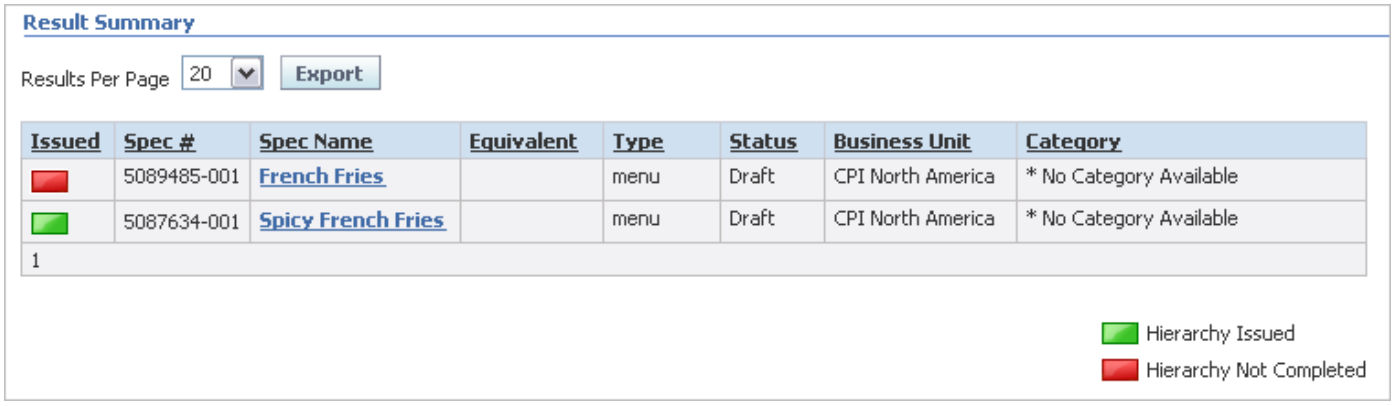
Failed Requests

If the request is in a status of "Failed," this Results tab displays the reason the smart issue request failed and a results summary. Generally a smart issue request will fail because the link to the specification can no longer be found. Once the problem is corrected manually, you are able to restart the smart issue request and it will be begin re-issuing where it stopped.

The results summary grid lists all hierarchies that were attempted by smart issue. An Issued column includes status icons representing whether that hierarchy was completely issued or not.

This is intended to act as a quick summary view of the successful issues, so you will know what hierarchies still need to be addressed. If the top level shows as Completed, then that means the entire hierarchy was issued and no further action is needed. If the icon is red, that means either one or more specifications in that hierarchy were not issued.

Figure 21-29: Issued column with status icons



Exporting Failed Results

Click **Export** to receive a list of all specifications that were issued. The list includes the following columns: Top Level, Original/New, Level, Spec #, Spec Name, Equivalent, Type, Status, BU, Category, Pkid.

Workflowing Specifications

The Results grids include a briefcase icon ( ) that you can use to workflow the new and original specifications. The briefcase serves as a navigation tool to help navigate to each specification.

Clicking the briefcase icon opens a frame above the smart issue request. The frame contains two grids, Original and New. Original is a listing of all the specifications in the hierarchy before it was versioned. New is a listing of all specifications in the hierarchy after it was versioned.

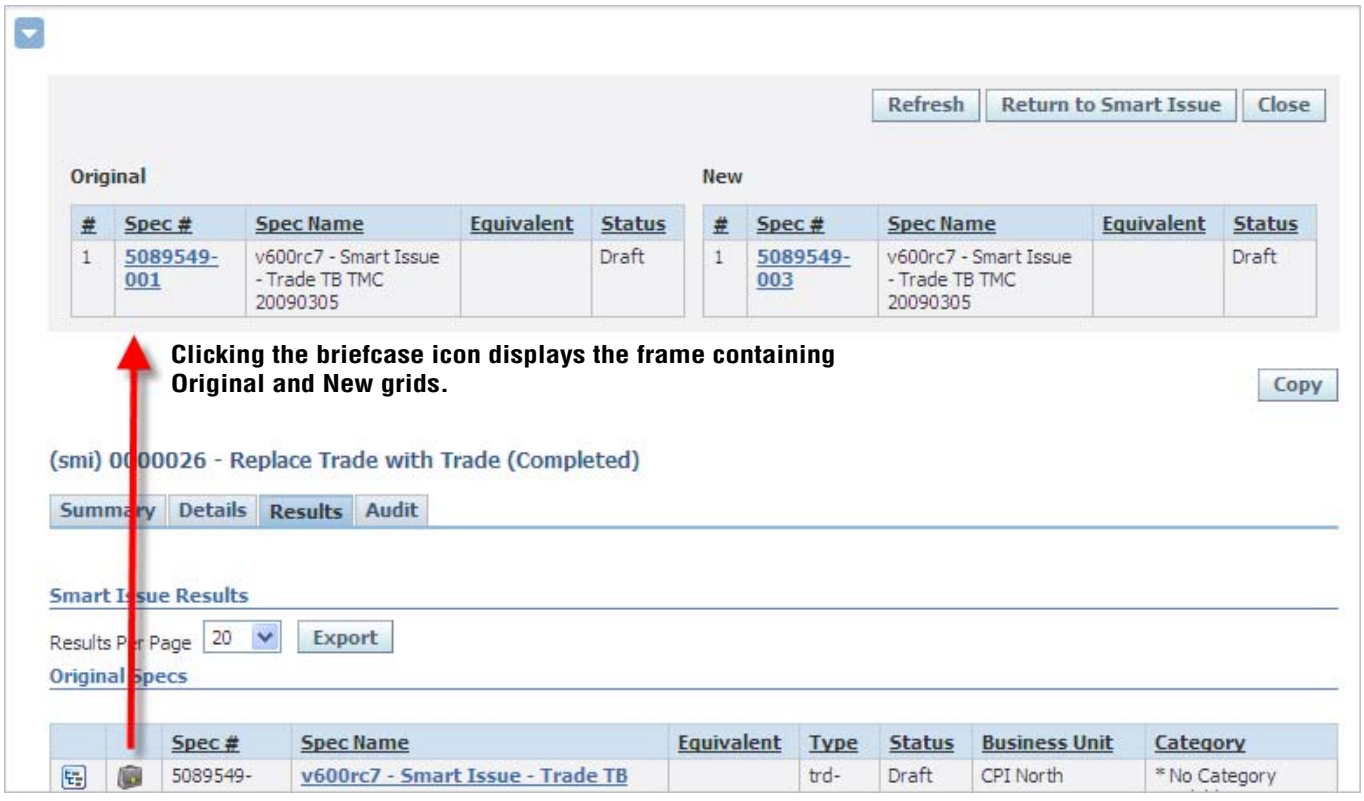
The frame contains three action buttons, as defined below:

- **Refresh**—Refreshes the briefcase, updating the specification information displayed.
- **Return to Smart Issue**—Loads the smart issue request displayed below the briefcase frame.
- **Close**—Closes the briefcase frame. The smart issue request remains.

To workflow specifications for approval:

1 Click the briefcase icon ( ). A frame displays above the smart issue request, as figure 21-30 shows below.

Figure 21-30: Briefcase frame



2 Click the **Spec #** hyperlink in either grid to view the specification.

3 You can then edit the specification and workflow it to the appropriate status.

Checking the Status of the Smart Issue

Use the Audit tab to view the status of the smart issue request. The tab includes the user that initiated the smart issue request, the data/time the request was initiated, and the status.

CHAPTER 22

Component Catalog

This chapter describes the capabilities and applied uses of the Component Catalog function. Topics in this chapter include:

- *Component Catalog*
- *Using Component Catalog Terms*

Component Catalog

If you have the necessary administrative privileges, in Component Catalog you can add terms to the database and manage certain properties about the terms. Once these terms have been created, you can use the library of predefined terms when creating percent breakdowns or when working on ingredient statements in LIO in GSM.

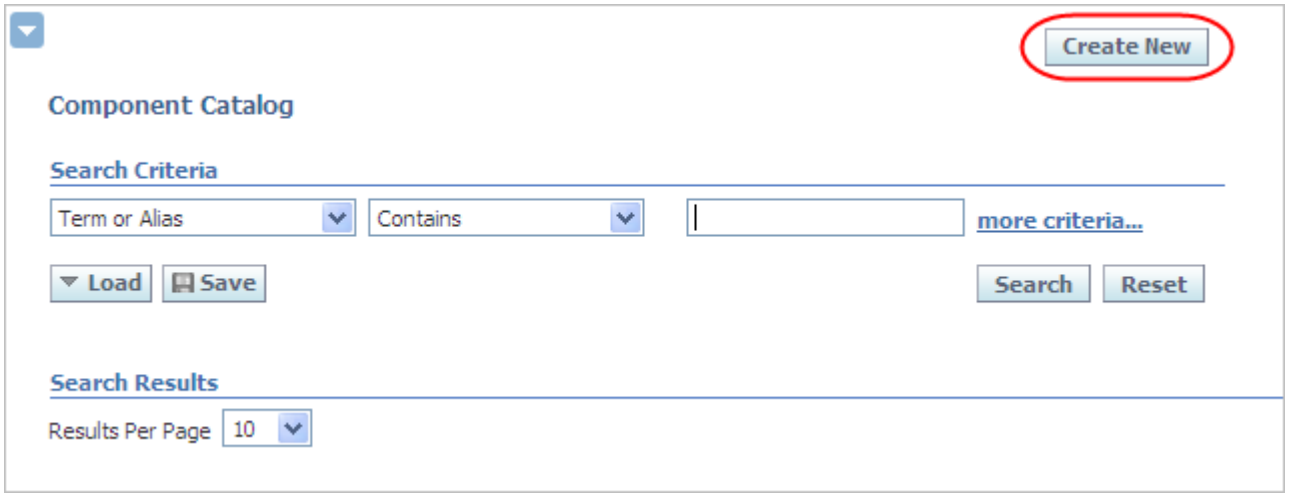
Integration with Other Applications

Component Catalog is integrated with GSM. Use Component Catalog terms when building percent breakdowns on ingredient specifications or when working on ingredient statements in LIO.

Creating a New Component Catalog Term

Create and manage Component Catalog terms inside the component catalog. The Component Catalog is available as a submenu of GSM on the left navigation panel. You can create a new term by clicking **Create New** in the upper right corner of the search page, as shown in figure 22-1 below.

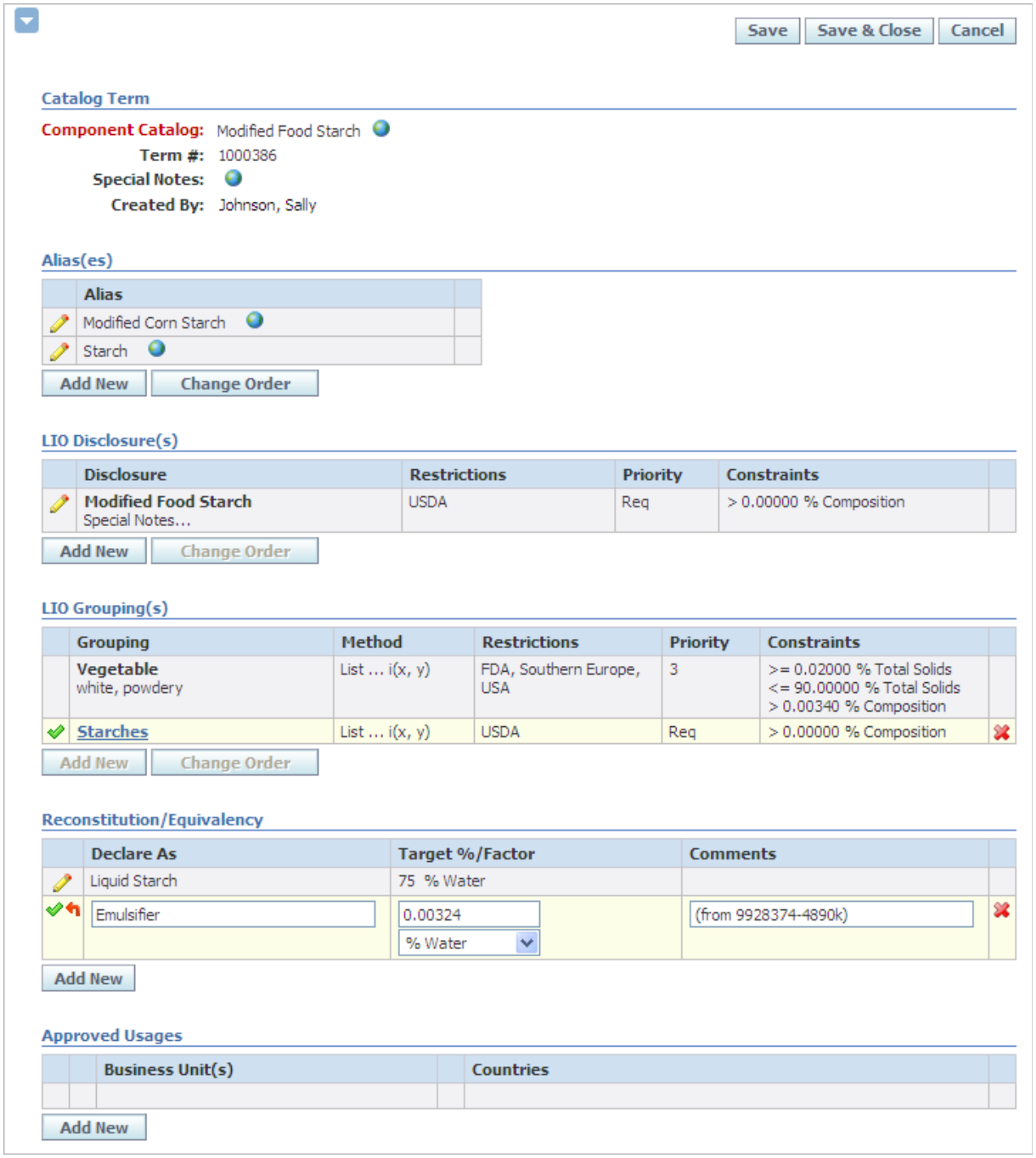
Figure 22-1: Create New button



As shown in figure 22-2 below, the Catalog Term page contains six sections of data:

- Catalog Term
- Aliases
- LIO Disclosures
- LIO Groupings
- Reconstitution/Equivalency
- Approved Usages

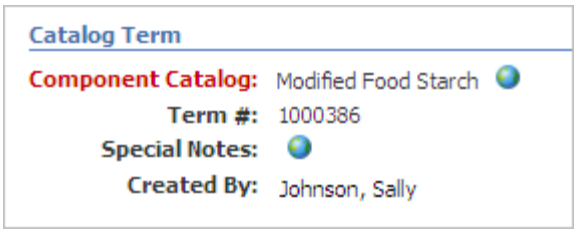
Figure 22-2: Catalog Term sections



Catalog Term Section

The Catalog Term section, shown in figure 22-3 below, defines the primary name of the term that you are defining.

Figure 22-3: Catalog Term section



The Catalog Term section contains the following fields:

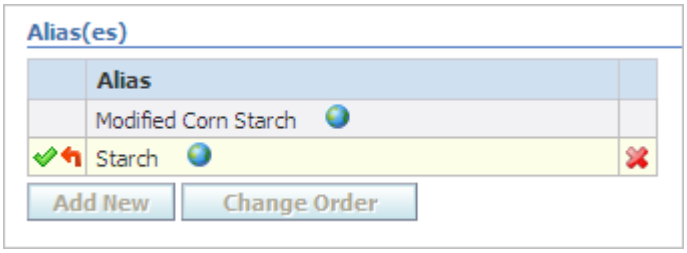
- **Component Catalog**—The name of the term being defined (required)
- **Term #**—A system defined number associated to this term
- **Special Notes**—User defined notes for the term
- **Created By**—The user who created the term

Once you have completed the term name, continue to the Aliases section.

Aliases Section

The Alias section defines the secondary name or names for the term that you are defining.

Figure 22-4: Aliases section



The Aliases section contains the following field:

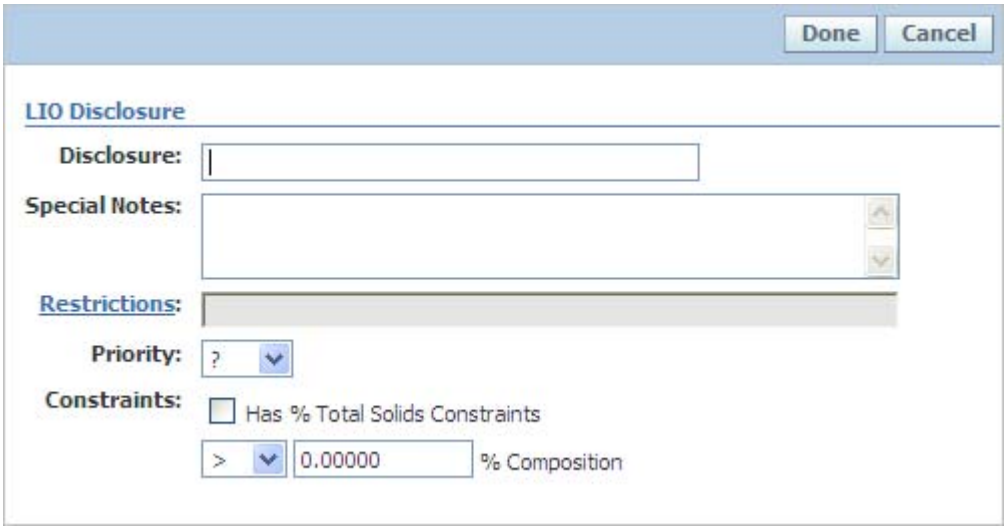
- **Alias**—Other names that you want to be treated similarly from a labeling perspective

Once you have entered all of the aliases for a given term, continue to the LIO Disclosure section.

LIO Disclosure Section

The LIO Disclosure section defines the terms that may be used (contextually) to describe the component catalog term that is being created during the LIO process. To add a new disclosure, click **Add New** under the Disclosures section. A dialog box opens for you to enter the details of the disclosure, as shown in figure 22-5 below.

Figure 22-5: LIO Disclosure dialog box



The LIO Disclosure section contains the following fields:

Disclosure—The name of this item as it might appear on the ingredient statement if the restrictions and constraints are met.

Special Notes—Your notes.

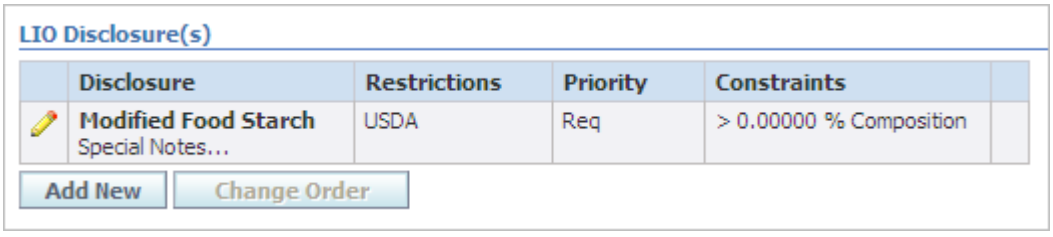
Restrictions—A list of configurable tags that you can assign to the disclosure to prevent use in the LIO process. LIO will only use disclosures with the same restriction(s) or no restrictions applied.

> **Note** Specifying no restrictions means that the disclosure will be available for all ingredient statements in LIO.

Priority—The order in which GSM presents the disclosures to you during the LIO process. If a you select a priority of "Req," that disclosure will be the only one that you see.

Constraints—Additional criteria to limit when a particular disclosure can be used.

Figure 22-6: LIO Disclosures section

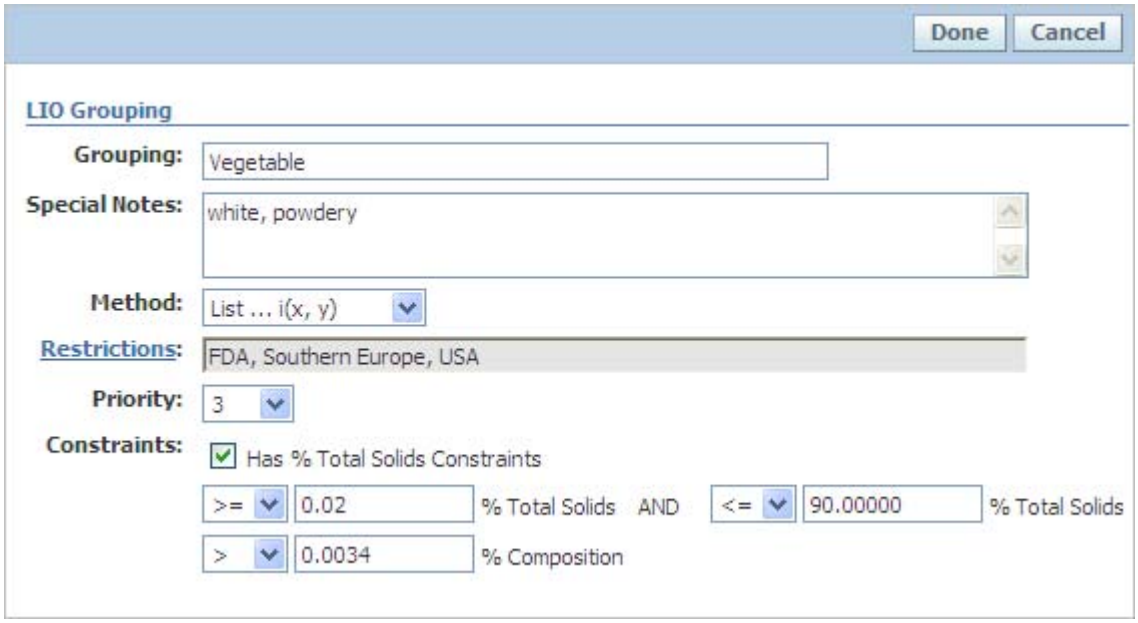


You can enter as many LIO disclosures as needed. Once you have entered all of the disclosure information for a given term, continue to the LIO Grouping section.

LIO Groupings

The LIO Groupings section defines the groups to which the component catalog term can be added during the LIO process. To add a new grouping, click **Add New** under the LIO Grouping section. A dialog box displays for you to enter details, as figure 22-7 shows.

Figure 22-7: LIO Grouping dialog box



The LIO Grouping dialog box includes the following columns:

Grouping—The name of the group that the term can be added to during the LIO process.

Special Notes—Your notes.

Method—The default declaration method for the group that is being added.

Restrictions—A list of configurable tags that you can assign to the group to prevent use in the LIO process. LIO will only use groupings with the same restriction(s) or no restrictions applied.

Note Specifying no restrictions means that the group will be available for all ingredient statements in LIO.

Priority—The order in which DWB presents the groupings to you during the LIO process. If a you select a priority of "Req," that group will be the only one that you see.

Constraints—Additional criteria to limit when a particular grouping can be used.

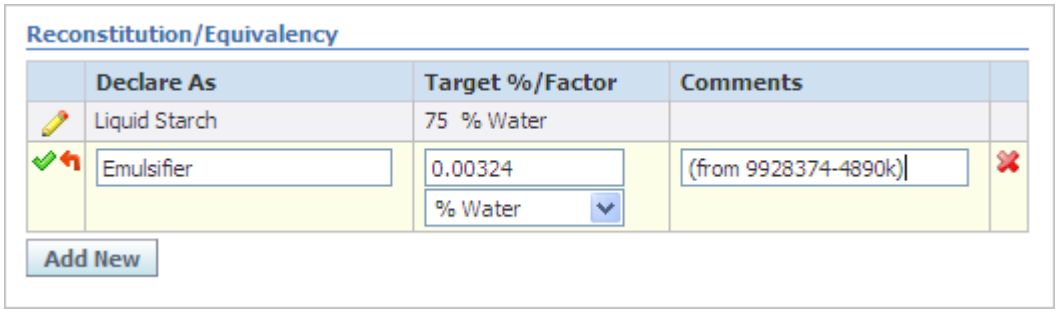
Figure 22-8: LIO Groupings section

You can enter as many LIO groupings as needed. Once you have entered all of the group information for a given term, continue to the Reconstitution/Equivalency section.

Reconstitution/Equivalency Section

The Reconstitution/Equivalency section defines the reconstitution or equivalency rules that you can use during the LIO process. To add a new reconstitution/equivalency rule, click **Add New** under the Reconstitution/Equivalency section. A dialog box displays for you to enter details of the rule, shown in figure 22-9 below.

Figure 22-9: Reconstitution/Equivalency section



The Reconstitution/Equivalency table includes the following columns:

Declare As—The name to use for the term after the reconstitution has been performed

Target %/Factor—Factor or percent change to apply during the reconstitution process

Comments—Your comments

Approved Usages Section

The Approved Usages section is for future use.

Using Component Catalog Terms

You can use Component Catalog terms in GSM when you are creating a percent breakdown on an ingredient specification or when you are performing LIO.

For more information on using LIO to create your ingredient statements, see *LIO Profiles* on page 18-1.

APPENDIX A

Key Search Fields

This appendix contains supplementary information about fields that are searchable within Global Specification Management. Topics include:

- *Searchable Fields*

Searchable Fields

Table A-1 describes search fields whose meaning or use may not be self-explanatory.

Table A-1: Key field names of note in the search criteria key field list, described

Key field	Description
Associated Specification	Search against specifications containing associated specifications matching the search criteria entered. Search criteria include: Association, Equivalent, Name, and Number.
BD (Breakdown) Component	Search against the free text name of component, declared within the percent breakdown
BD (Breakdown) Component COO	Search against Country of Origin (COO) column declared within the percent breakdown
BD (Breakdown) Component FCL	Search against Food Composition Library (FCL) terms that are declared within the percent breakdown
BD (Breakdown) Component Ing. Spec.	Search against Ingredient Specifications that are declared within the percent breakdown
BD (Breakdown) Component Term	Search against Component Catalog terms that are declared within the percent breakdown
BD (Breakdown) Component Term or Alias	Search against Component Catalog term or alias that are declared within the percent breakdown
BD (Breakdown) Component Text	Search against the free text name of component, declared within the percent breakdown
Combined Statement	Search against the free-text combined statement used to declare materials in aggregation for labeling purposes.
Concept (+Children)	Search against the concept, including concepts that exist as a child in the hierarchy
Concept (Exact Match)	Search against the exact match of the concept
Concept (Hierarchical)	Search against the hierarchy (both up and down) that the concept exists in
Equivalent	Search against the equivalent number designed to identify the material as it is referenced by other cross reference systems

Table A-1: Key field names of note in the search criteria key field list, described

Key field	Description
GTIN/UPC/EAN	Search against the Global Trade Item Number (GTIN) or European Article Number (EAN) or Universal Product Code (UPC) barcode number
Menu Item Build	Search against the Menu item specification or product specification listed in a menu item build
Supplier signed spec	Search against the flag on a sourcing approval that indicates the supplier has acknowledged a specification
System Equivalent	Search against the equivalent number designed to identify the material as it is referenced by other cross reference systems
Taxonomy	Search against the specification category of a specification. You can also browse for specifications using specification categories in the Category tab.
UDEX Classification	Search against taxonomies used by UDEX Electronic Exchange