QAD Enterprise Applications
Enterprise Edition

User Guide

QAD Item Attributes and Quality Control

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Item Attributes and Quality Control Change Summary

The following table summarizes significant differences between this document and previous versions.

Date/Version	Description	Reference
September 2018 - 2018EE/IAQ 2.7.1	Rebranded to 2.7.1/2018EE	--
March 2018 - 2017EE/IAQ 2.6.1/2.7 Rev 1	Rebranded to add version 2.7	--
September 2017 - 2017EE/IAQ 2.6.1	Rebranded for 2017EE	--
April 2017/2016EE	Rebranded for IAQ 2.6.1	--
October 2016/2016EE Rev 2	Updated process map screenshots	--
	Updated Edit Specification field definition	--
September 2016/2016EE Rev1	Updated Auto Lot Number Sequence ID field definition	page 8
March 2016/2016EE	Added electronic signature functionality	--
	Added link to ERD diagrams to Appendix A	page 155
March 2015 / 2015EE	First release - general availability	--

Chapter 1

Introduction

This chapter provides information about QAD Item Attributes and Quality Control (IAQ). It discusses the following topics:

Introduction to Item Attributes and Quality Control

Item Attributes

Item attributes provides capabilities to address two basic business use cases:

- Defining and managing item attributes for an item
- Defining and maintaining lot attributes for an item lot (or lot and sublot)

Defining and Managing Item Attributes for an Item

Item attributes provides the capability to define and manage item attributes for any number of characteristics that describe an item. You can maintain item attributes for characteristics that supplement item master fields such as description, design group, promo group, item type, and group. You can define item attributes for characteristics such as those that describe appropriate use, application, packaging, shipping, handling, storage, and disposal of an item. These attributes are visible on selected browses and can be included on print functions for production and sales.

Defining and Managing Item Attributes for an Item Lot

Item attributes provides the capability to define and maintain lot attributes for characteristics that describe an item lot (or lot and sublot). You can define lot attributes to provide visibility of attribute values that can vary from one material lot to another, to qualify materials, and to access more detailed records for lot transactions. You can define lot attributes together with specifications for characteristics such as the engineering revision level, best-by date, or country of origin. Lot attributes enable you to manage materials for the execution of enterprise operations, such as allocating, picking, issuing, and qualifying material lots for enterprise operations using lot attribute values and the specifications that apply.

Item Attributes — High-Level Solution Architecture

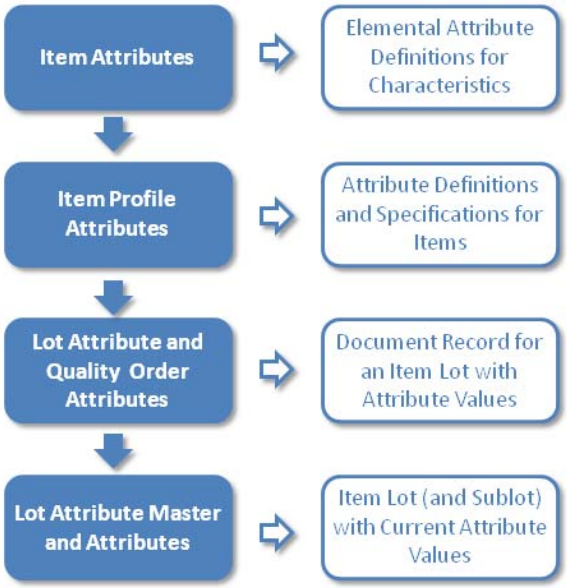
Item attributes and item lot attributes are supported at the lowest, most fundamental level, by attributes for characteristics that can be applied to one or more items. Each item attribute is defined by a universal identifier, description, label, and data parameters. These attributes are reserved for items, and not for application to other things such as customers, suppliers, sites, production lines, and so forth.

At the second level, attribute profiles provide the means of linking the predefined attributes that apply to each item. With attribute profiles, you can define the default value and specification for each attribute for an item.

At the third level, lot attribute orders (and quality orders) provide document records for updating values for lot attributes for lot master records. Values for lot (and sublot) attributes can optionally be entered when receiving inventory from suppliers or production, and by using a lot attribute or quality order.

At the fourth level, lot attribute master records include the information necessary to provide visibility of the attribute values for a lot (or sublot). This is used by functions that pick, issue, backflush, and ship material lots, that select conforming material lots, and that exclude and warn against using non-conforming lots.

Fig. 1.1
Diagram for High-Level Item Attributes Architecture



Lot attribute master data is independent from inventory detail attributes for expire date, grade, and assay. Points of data entry include:

- Receipt transactions from suppliers on purchase orders
- Receipts from production on work orders or a repetitive schedule
- Receipt into a location by a transfer transaction
- Unplanned inventory receipts
- Lot attribute orders created by receipt transactions or created manually
- Quality orders when there are test specifications

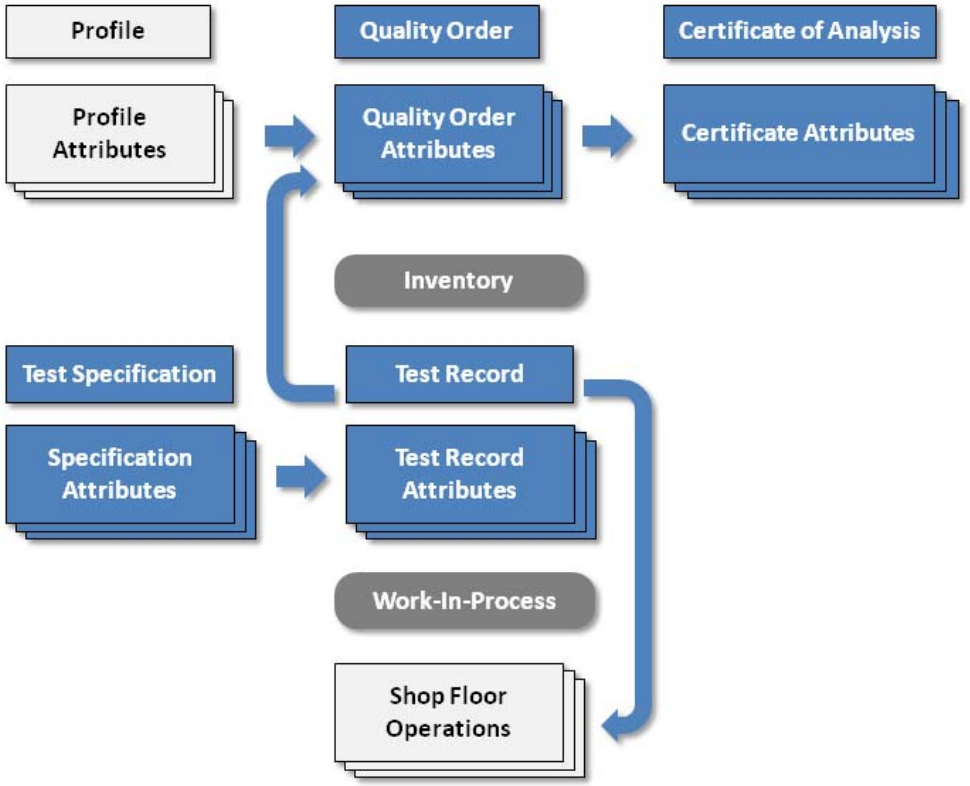
Quality Control

The QAD Quality Control module provides functions to manage test specifications, test records, and quality orders for inventory. Test specifications are managed very much like attribute profiles, by linking item attributes with specification data to a test specification document. Quality records for inventory are captured using quality orders that contain one or more test records for the applicable test specifications. Quality records for work-in-process (WIP) materials are captured using test records for production operations.

Figure 1.2 shows how quality control is integrated with item attributes and work-in-process.

- Integration with item attributes to maintain quality specifications.
- Integration with attribute profiles to capture quality records for non-test data.
- Integration with attribute deviations to recognize variances to specifications.
- Integration to update item lot (master) attribute values from quality records.

Fig. 1.2
Quality Control Components



Certificates of Analysis

The certificate of analysis (COA) is evidence of quality control and compliance for material. It serves as the document of test results for material characteristics, specifications, and acceptance criteria. It also serves as a printed report that displays the lot attributes and information about how they were obtained. The COA is the published product of the quality control process.

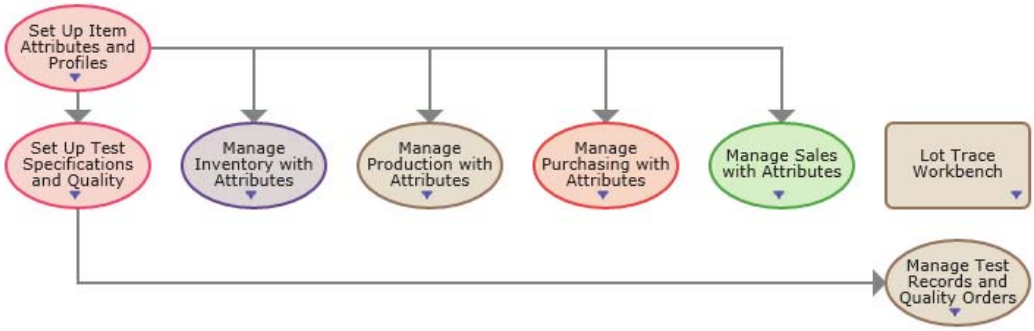
The COA is based on a closed quality order. It can be printed for an item lot, without regard to a specific customer order, or for an item lot on a sales order.

Navigation and Process Maps

To navigate through the programs and collections in Item Attributes and Quality Control (IAQ), use the process maps included in QAD EE. The IAQ solutions are supported using browse collections and browses that are designed to be accessed from process maps or saved as favorites. Menu-level functions for item attributes and quality control should only be accessed from a browse collection. When selected from the .NET Applications search or using a character user interface, those menu level functions are not supported.

Note Do not use Attribute Definition Maintenance (7.19.2, gpattrmt.p) to define item attributes. It is a specialized function that should only be used by qualified Information Technology personnel to define attributes for other applications other than Item Attributes and Quality Control.

Fig. 1.3
IAQ Process Map



Training Material

For information, see *QAD Item Attributes/Quality Control Training Guide*.

Chapter 2

IAQ Setup

This chapter provides information about the foundational elements that must be set up before using Item Attributes and Quality (IAQ). It discusses the following topics:

Setting Up Item Attributes

The following foundational elements are required to be set up before day-to-day use of item attributes and quality (IAQ):

- **Item Attribute Control.** See “Item Attribute Control” on page 8.
- **Label Master.** See “Creating Labels for Attributes and Categories” on page 10.
- **Attribute Categories.** See “Creating Item Attribute Categories” on page 11.
- **Item Attributes.** See “Item Attributes” on page 12.

Note IAQ setup should be performed by the master data administrators.

Item Attribute Control

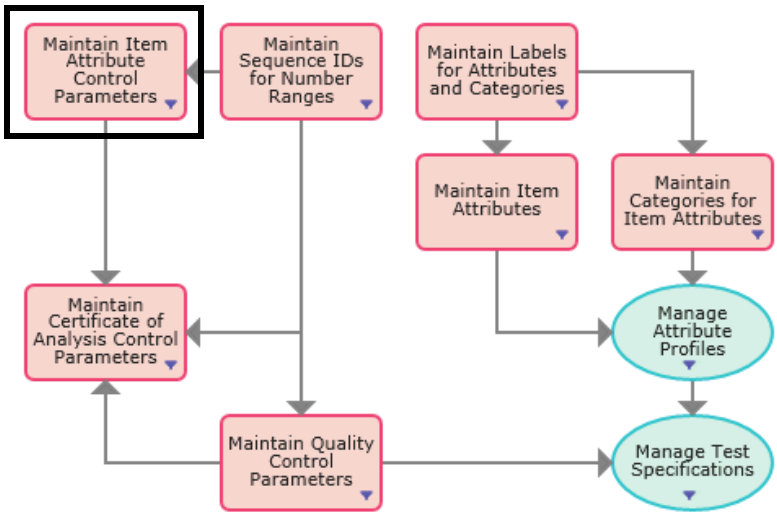
In Item Attribute Control, you can define control parameters that determine the default values for fields associated with item attribute or QAD EE programs. You can:

- Set up the default status for a new attribute when it is added to an attribute profile.
- Set the default inventory status code to be used for processing a non-conforming item lot.
- Determine if the specifications for lot and sublot profile attributes are displayed when using receipt transaction.
- Determine if the inventory detail Reference field identifies a sublot.
- Set the Number Range Management (NRM) sequence code for lot attribute order IDs, automatically assigned lot numbers, and item attribute IDs.

Follow these steps to set up item attribute controls:

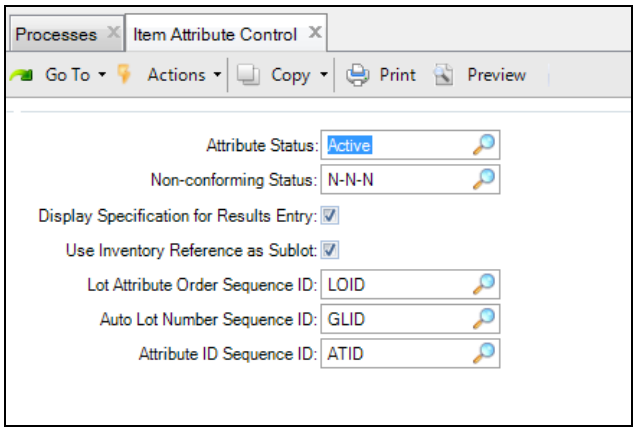
1 Open Item Attribute Control by selecting Maintain Item Attribute Control Parameters from the Manage Enterprise Item Attributes process map.

Fig. 2.1
Manage Enterprise Item Attribute Process Map



2 Enter the required information in the following fields:

Fig. 2.2
Item Attribute Control



Attribute Status. Set the default status to Active or Inactive. It is recommended that you set the default status to Active, which is the default status for a new attribute when it is added to an attribute profile. For more information about attribute status, see "Adding Attributes to an Item Profile" on page 23.

Non-conforming Status. Select the inventory status code that is applied to an inventory lot when the result for that lot on a quality or lot attribute order is non-conforming. The inventory status code is applied when you close the quality or lot attribute order for that inventory lot. For more information about inventory status codes, see the *QAD Master Data User Guide*.

Display Specification for Results Entry. Select this check box to have the system display the profile specifications for lot and sublot attributes when entering values for those attributes using supported receipt transactions.

Use Inventory Reference as Sublot. Select this check box to have the inventory detail Reference field identify the sublot for an inventory lot record. This check box should only be selected if:

- The Reference field for inventory records will never be used to identify a location such as a shelf, a bin, a pallet, or a container.

  and,

- There is no integration with QAD Warehousing.

Note If you are using QAD Warehousing, do not select this check box because Warehousing uses the Reference field for pallets.

Lot Attribute Order Sequence ID. Enter the Number Range Management (NRM) sequence used to automatically assign the ID for lot attribute orders. The system uses this code to generate sequence numbers for all lot attribute order numbers. When setting up the sequence in NRM, use ql_id as the target dataset. For information on setting up NRM sequences, see the *QAD System Administration User Guide*.

Auto Lot Number Sequence ID. Enter the NRM sequence code that the system can use when processing a PO Shipper Receipt to automatically assign lot numbers for inventory. This sequence code is used when auto lot numbering has not been set up using Lot Group Maintenance in the Regulatory Attributes module and the lot number that is specified on the

PO shipper already exists in inventory. When setting up the sequence in NRM, use attrlot_lot as the target dataset. For information on setting up NRM sequences, *QAD System Administration User Guide*.

Attribute ID Sequence ID. Enter the NRM sequence code used to automatically assign the attribute ID for an item attribute. When setting up the sequence in NRM, use attr_name as the target dataset. For information on setting up NRM sequences, see the *QAD System Administration User Guide*.

Creating Labels for Attributes and Categories

Labels determine how attributes appear on reports and within the system, and they allow multiple attributes to measure the same characteristic using different datatypes. This enables you to create variants of an attribute that are distinct within the system.

QAD EE uses label master records to provide support for multiple languages for all applications, including IAQ. In IAQ, label master records help standardize the attribute descriptions for multiple languages. For more information about creating labels, see *QAD System Administration User Guide*.

Note Best practice is to create labels before creating attributes. Label master records are system-level data that should be secured and accessed by Information Technology personnel.

Item Attribute Categories

Overview

Use the Attribute Categories function to browse, create, and maintain attribute categories that you can use with item attributes. For certificate of analysis functions, the system uses attribute categories to organize and label groups of attributes.

Within collections, selections you make at the top of the display cause the supporting data within other supporting browses and functions in the collection to reflect your selection.

You can identify ways that attributes are classified for items, then create attribute categories for each classification. In some cases, an attribute can belong to multiple attribute categories. For example, you can create attribute categories for:

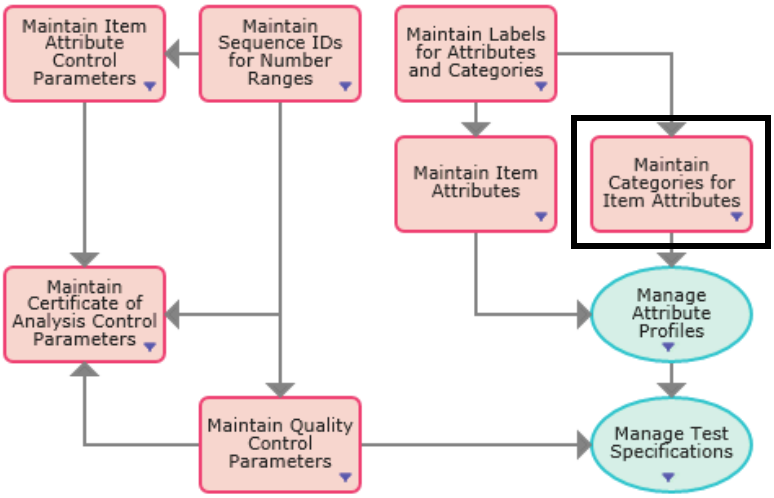
- Classes and sub-classes of attributes that need to be verified or measured when items are received or produced.
- Item attributes that have values that you need to maintain, store, and report for inventory quantities and/or item lots.
- Item attributes that have specifications that you need to communicate to suppliers or customers.
- Item attributes that have specifications and typical or actual values that you need to communicate to suppliers or customers.

Creating Item Attribute Categories

Follow these steps to set up attribute categories:

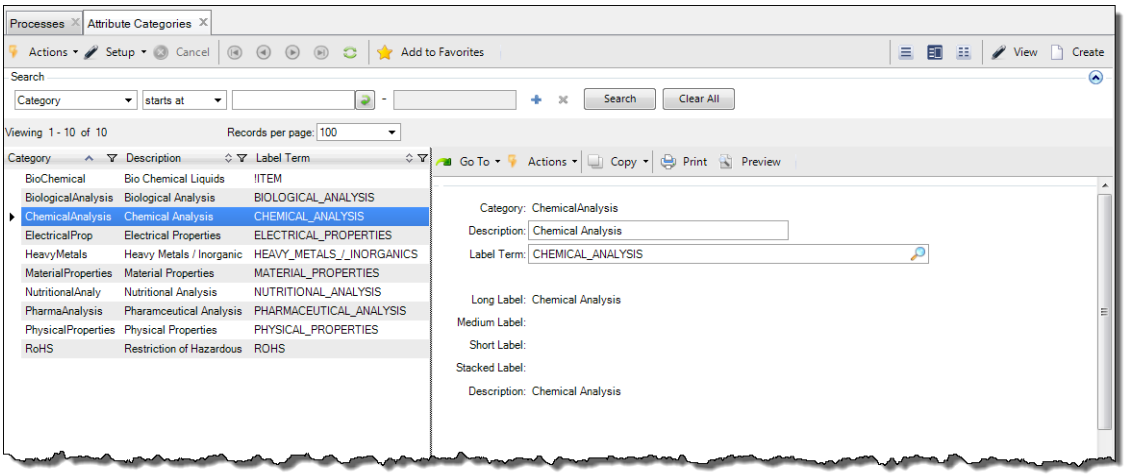
1 Open Attribute Categories by selecting Maintain Categories for Item Attributes from the Manage Enterprise Item Attributes process map.

Fig. 2.3
Manage Enterprise Item Attribute Process Map



2 The Attributes Category browse displays a list of item attribute categories. To create a category, click Create.

Fig. 2.4
Attributes Categories



3 Enter the required information in the following fields:

Category. Enter a unique identifier for the attribute category.

Note Attributes can be classified in different ways and optionally have one or more attribute categories to classify them.

Description. Enter a short description of the attribute category.

Label. Select a valid label term defined in Label Master Maintenance. The system uses this term and the defined attribute to determine the label that displays on the user interface.

Note If the value for Label Term is left blank or if a label master record does not exist for the label term, the attribute functions display the attribute description in place of a label.

Long Label. Displays the Label Term's primary display label from the label master record.

Medium Label. Displays the Label Term's medium display label from the label master record. The medium label is only displayed if the long label is too long to display on the screen.

Short Label. Displays the Label Term's short display label from the label master record. The short label is only displayed if the long and medium labels are too long to display on the screen.

Stacked Label. Displays the Label Term's stacked display label from the label master record.

Description. Displays the Label Term's description from the label master record.

Item Attributes

Overview

Item attributes are specific characteristics that can be applied to items. Attributes serve as the basic building blocks necessary to support item attributes, lot attributes, quality control specifications, and quality control results. Attributes, which are used for items and quality control, can be applied across all domains.

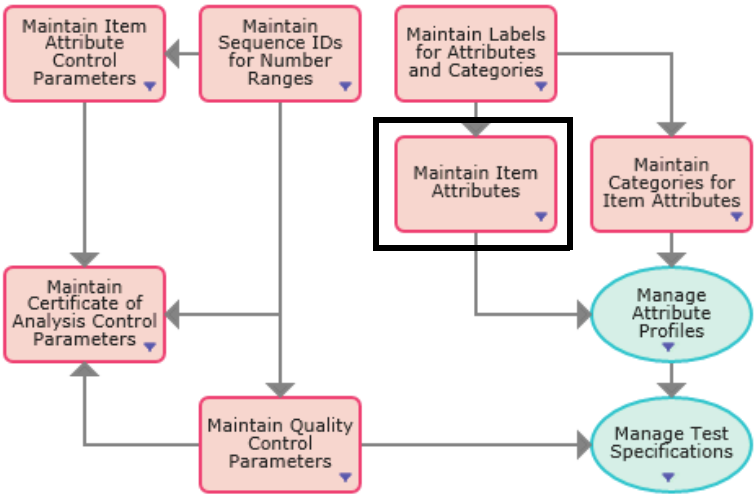
An item attribute consists of an identifier, description, label identifier, and additional data for a characteristic that can be applied to an item. Each attribute has a unique identifier and an optional label identifier that supports the capability for an attribute to have labels that are appropriate for a user's language. Like labels, once item attributes are defined in one domain, they are shared and available across all domains.

Creating an Item Attribute

Follow these steps to create an item attribute:

1 Open Item Attributes by selecting Maintain Item Attributes from the Manage Enterprise Item Attributes process map.

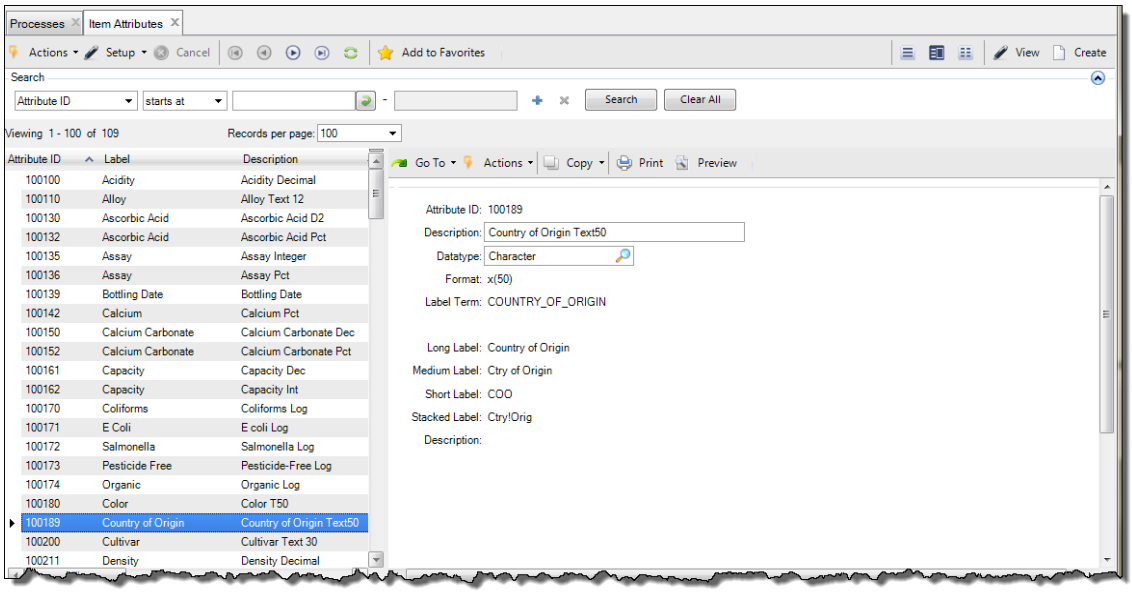
Fig. 2.5
Manage Enterprise Item Attribute Process Map



2 The Item Attribute browse displays a list of item attributes that can be assigned to items. To create an item attribute, click Create. A blank item attribute record opens.

Note You can also use the Setup Item Attribute browse collection to create item attributes. Item Attributes, like label master records, are not limited to a single domain; they are available across domains.

Fig. 2.6
Item Attribute Browse



3 Enter the required information in the following fields:

Attribute ID. Leave this field blank and click Next; the system automatically inserts an ID in this field. Otherwise, enter a unique alphanumeric ID of up to 32 characters for the attribute.

Note For information about setting up the automatic assignment of attribute ID numbers, see "Item Attribute Control" on page 8.

Description. Enter a short description to identify the attribute. When entering a description, the best practice is to indicate the name of the attribute and information about its datatype and format. This information is particularly useful when multiple attributes share the same label, but have different combinations of datatype and format. For example, if there are two attributes for capacity with integer and decimal datatypes, you can enter Capacity Int and Capacity Dec for the descriptions.

Datatype. Use the lookup and select the datatype (character, decimal, integer, date, or logical) associated with the attribute. If you select the date or logical datatype, the system automatically enters the datatype format in the Format field.

Note Once an attribute is referenced by an attribute profile or test specification, you cannot modify the value for Datatype.

Format. Define the format for the datatype that was selected using standard programming and database conventions.

- **Character.** For a character datatype, enter the value in the form x(n), where n is the maximum number of characters that can be entered in this field. The value for n cannot be greater than 50.
- **Decimal.** For a decimal datatype, the following table contains examples of formats that can be entered depending on the desired value range:

Format	Value Range that can be entered
>.99	0.00 - 9.99
>,>>9.99	0.00 - 9,999.99
>>>.9999%	0.00 - 999.9999%

- **Integer.** For an integer datatype, the following table contains examples of formats that can be entered depending on the desired value range:

Format	Value Range that can be entered
>9	0 - 99
>,>>9	0 - 9,999
>9%	0 - 99%

- **Date.** For a date datatype, the format is system-defined as MM/DD/YY.
- **Logical.** For a logical datatype, the format is system-defined as Yes/No.

Note If this item attribute is referenced by an attribute profile, you can modify the format for an item attribute. However, existing transaction history records are not updated. The system applies the updated format definition to records created after the change.

Label Term. Select a valid label term defined in Label Master Maintenance. The system uses this term and the defined attribute to determine the label that displays on the user interface. For more information about creating labels, see *QAD System Administration User Guide*.

Note If the value for Label Term is left blank or if a label master record does not exist for the label term, most attribute functions display the attribute description in place of a label.

Long Label. Displays the Label Term's primary display label from the label master record.

Medium Label. Displays the Label Term's medium display label from the label master record. The medium label is only displayed if the long label is too long to display on the screen.

Short Label. Displays the Label Term's short display label from the label master record. The short label is only displayed if the long and medium labels are too long to display on the screen.

Stacked Label. Displays the Label Term's stacked display label from the label master record.

Description. Displays the Label Term's description from the label master record.

Input Value. Enter a valid value for this attribute to verify that you have correctly set up the datatype and format for the attribute.

Display With Format. Displays how the attribute appears in the user interface with its datatype and format for the input value.

Set Up Quality Control

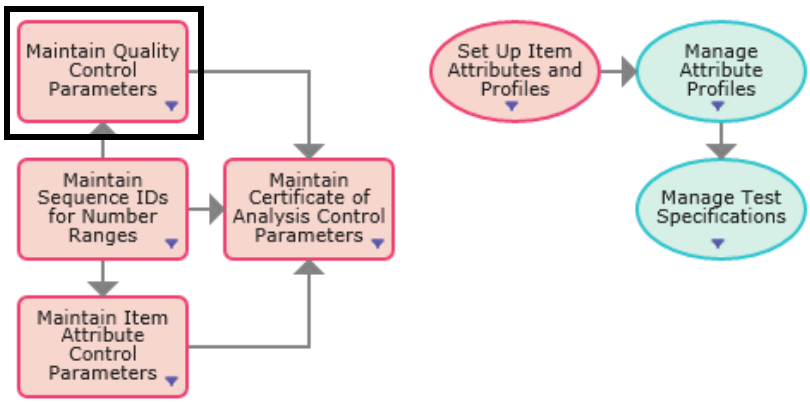
Quality Control File

Use this function to specify automatic quality order numbering, set the sequence identifier, and specify whether the system maintains non-test attribute data.

Follow these steps to set up the quality control parameters:

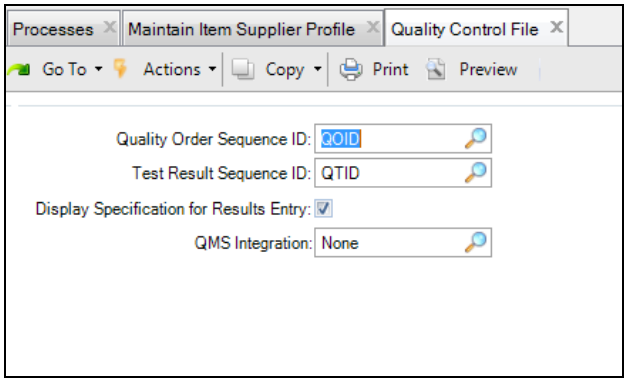
1 Select Maintain Quality Control Parameters from the Set Up Test Specifications and Quality process map.

Fig. 2.7
Set Up Test Specifications and Quality Process Map



2 Enter the required information in the following fields:

Fig. 2.8
Quality Control File



Quality Order Sequence ID. Enter the NRM sequence code that determines the ID for quality orders. The system uses this code to generate sequence numbers for all quality orders. When setting up the sequence in NRM, use a ql_id target dataset. For information on setting up NRM sequences, see the *QAD System Administration User Guide*.

Test Result Sequence ID. Enter the NRM sequence code that determines the ID for test records. The system uses this code to generate sequence numbers for all test records. When setting up the sequence in NRM, use a qltr_id target dataset. For information on setting up NRM sequences, see *QAD System Administration User Guide*.

Display Specification for Results Entry. Select this check box so that the system displays the specification description when entering attribute values for a test record or quality order.

QMS Integration. Select this check box to activate the integration between the QAD EE Quality module and the QAD QMS NCR/CAPA module.

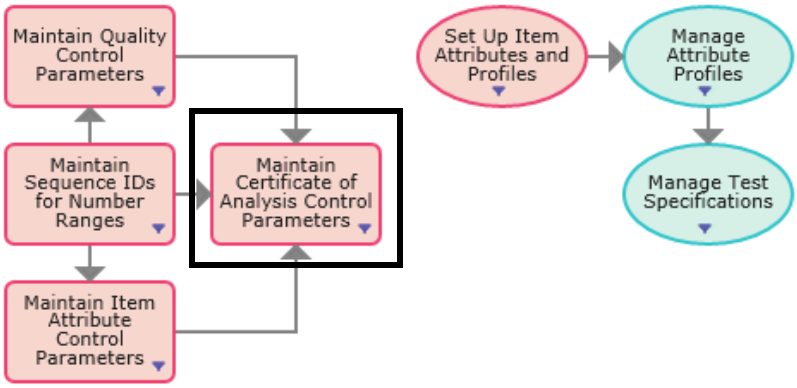
Certification of Analysis Control

Set parameters in Certificate of Analysis Control to determine the content of a certificate of analysis for lot attribute orders or quality orders.

Follow these steps to set up the parameters of the certificate of analysis:

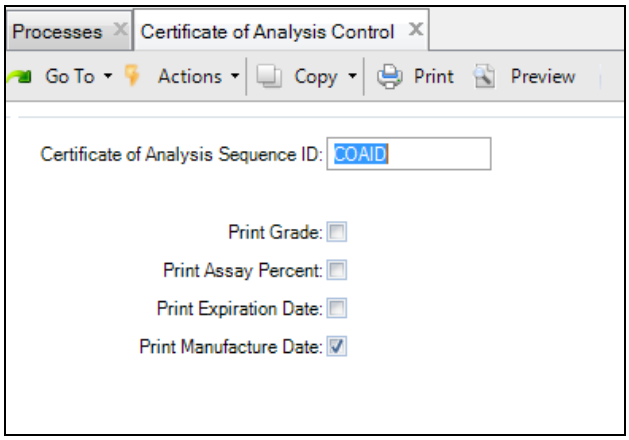
1 Select Maintain Certificate of Analysis Control Parameters from the Set Up Test Specifications and Quality process map.

Fig. 2.9
Set Up Test Specifications and Quality Process Map



2 Enter the required information in the following fields:

Fig. 2.10
Certificate of Analysis Control



Certificate of Analysis Sequence ID. Enter the NRM sequence code used to create identification numbers for printed certificates of analysis. The system uses this code to generate sequence numbers for all certifications. When setting up the sequence in NRM, use a target qlcoa_id dataset. For information on setting up NRM sequences, see *QAD System Administration User Guide*.

Print Grade. Select this option to print the quality or lot attribute order value for grade on the certificate of analysis. The system does not print the grade value if this option is not selected. By default, this option is not selected.

Print Assay Percent. Select this option to print the quality or lot attribute order value for assay% on the certificate of analysis. The system does not print the assay% value if this option is not selected. By default, this option is not selected.

Print Expiration Date. Select this option to print the quality or lot attribute order value for expiration date on the certificate of analysis. The system does not print the expiration date if this option is not selected. By default, this option is not selected.

Print Manufacture Date. Select this option to print the quality or lot attribute order value for manufacture date on the certificate of analysis. The system does not print the manufacture date if this option is not selected. By default, this option is not selected.

Select this option to set the default value for the Print Manufacture Date field in Certificate of Analysis Print (19.8.1). If this option is selected, the Print Manufacture Date field by default will be set to Yes. If this option is not selected, the Print Manufacture Date field by default will be set to No.

Chapter 3

Item Profiles and Lot Attribute Orders

This chapter provides information about item profiles, lot attribute orders, and managing attribute deviations. It discusses the following topics:

Item Profiles

In Item Attributes and Quality Control (IAQ), item profile is a collection of attributes that apply to a specific item. Item profiles allow you to associate item attributes with specific items.

Maintain Item Profile Collection

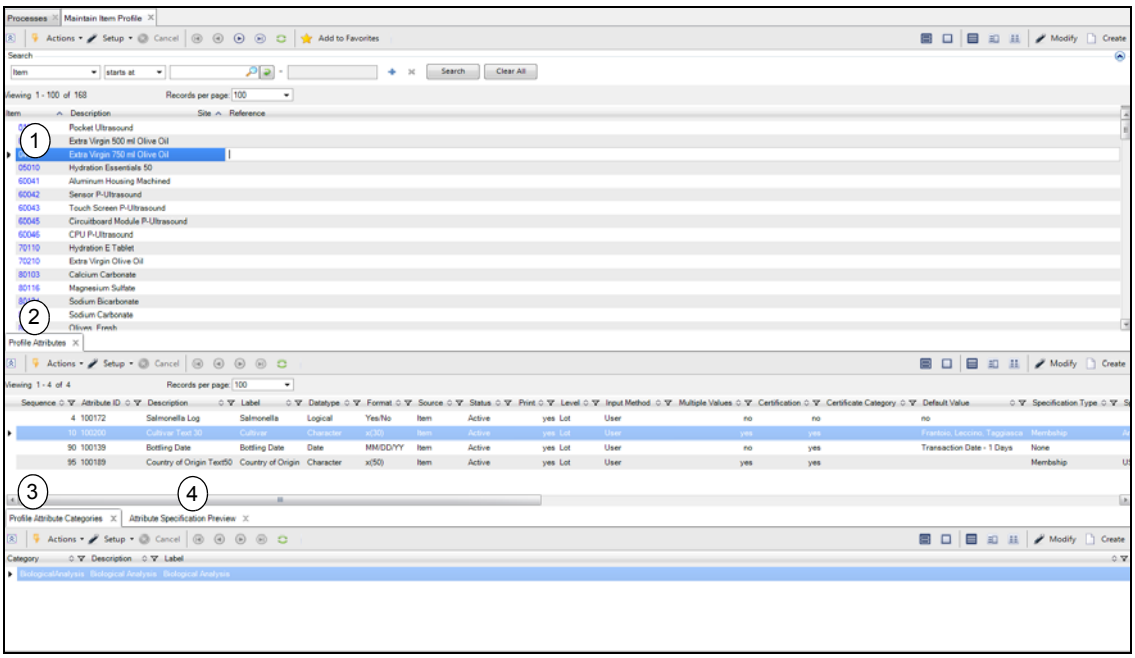
The Maintain Item Profile collection allows you to link and maintain one or more item attributes to a specific item to be used as:

- A descriptive attribute for that item
- A lot or sublot attribute for that item and additional details for the attribute, such as the default value and specification
- A control parameter

Note In IAQ, you can create additional kinds of attribute profiles known as deviations that are associated with specific items, suppliers, PO lines, customers, and so on. See “Managing Attribute Deviations” on page 49.

Access the Maintain Item Profile collection by selecting Maintain Item Profile from the Manage Item Profiles process map.

Fig. 3.1
Maintain Item Profile Collection



The item profile collection consists of the following browses and tabs:

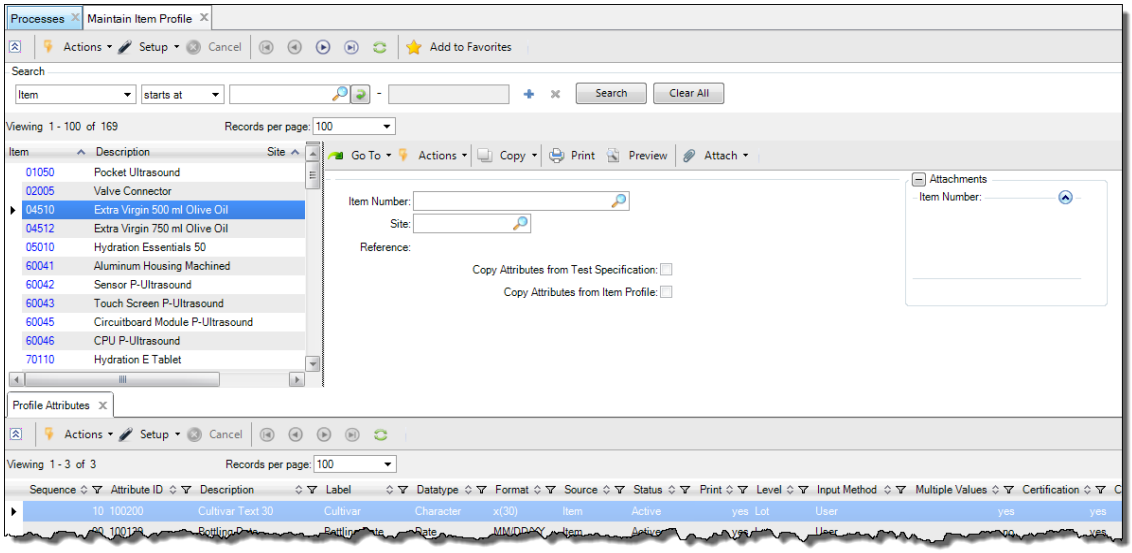
1. **Item Profile.** Displays a list of all item profiles for items and for deviations for items and sites. Double-click the item profile to view detailed information, such as item number, site, and reference information. In this browse, you can view, modify, or add new item profiles.
2. **Profile Attributes tab.** Displays the attributes associated with this item profile. In this tab, you can view, modify, or add new attributes to the profile. See “Adding Attributes to an Item Profile” on page 23.
3. **Profile Attribute Categories tab.** Displays the attribute categories associated with the item attribute selected in the Profile Attributes tab. For more information, see “Link Attribute Categories to an Item Profile” on page 28.
4. **Attribute Specification Preview tab.** Allows you to verify if the item profile has been set up correctly. For more information, see “Verify Item Attribute Setup” on page 29.

Creating an Item Attribute Profile

Follow these steps to create an item attribute profile:

1. Open Maintain Item Profile by selecting Maintain Item Profile from the Manage Item Profiles process map.
2. To create an item profile, click Create in the top-level browse.
3. Enter the required information in the following fields:

Fig. 3.2
Creating an Item Attribute Profile



Item Number. Select or enter the item number for the attribute profile.

Site. Leave this field blank when first creating a set of attributes for an item. When the Site field is blank, the attributes defined for the item apply to the item, across all sites for the domain. You should only specify a site when defining a deviation for an attribute specification for an item at a site.

Reference. Enter any reference information in this field, such as a reference document for the item and its attribute profile.

Copy Attributes from Test Specification. Select this check box to copy the attributes from a test specification to the item. If an attribute exists in the item profile, the system proceeds to the next attribute. The copied attributes are added after the last one in the target profile.

Copy Attributes from Item Profile. Select this check box to copy the attributes from another item profile to an item. If an attribute exists in the item profile, the system proceeds to the next attribute. The copied attributes are added after the last one in the target profile.

Test ID. Select or enter the test ID to copy the attributes from.

Revision. Select or enter the revision level of the test ID to copy the attributes from.

Item. Select or enter the item number to copy the attributes from.

Site. Displays the site for the item profile that is selected in the Item field. Typically the value for site is left blank.

4 Add attributes to the item profile. See “Adding Attributes to an Item Profile” on page 23.

5 Optionally, link attribute categories to the item profile. See “Link Attribute Categories to an Item Profile” on page 28.

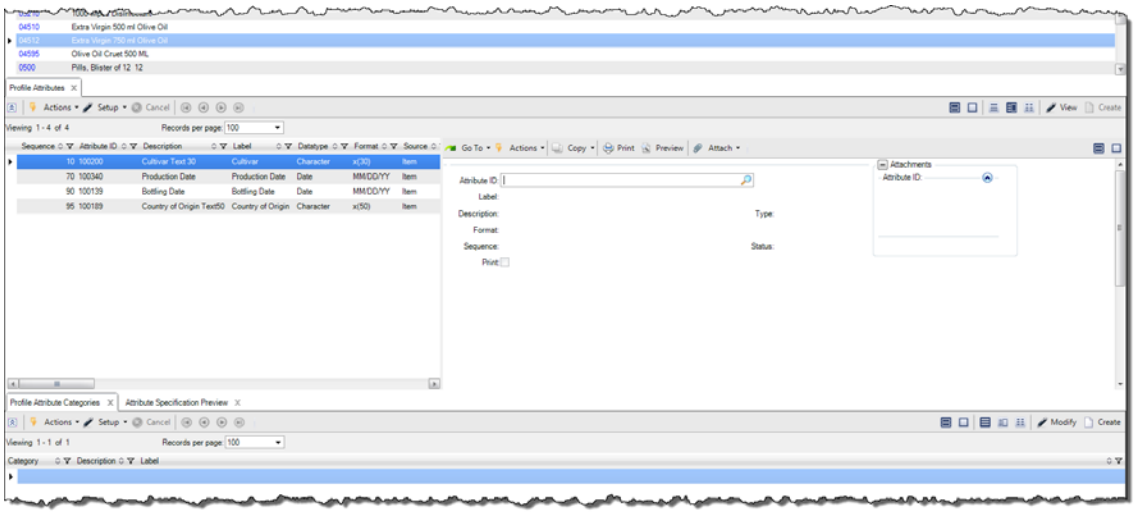
6 Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

Adding Attributes to an Item Profile

Follow these steps to add an item attribute to a profile:

1 Add item attributes to the item profile by clicking Create in the Attributes tab.

Fig. 3.3
Adding Attributes to a Profile



2 Enter the required information in the following fields:

Attribute ID. Select or enter an attribute ID to apply to the profile. When you select the attribute ID, the system pulls in the label, description, type, format, and status from the attribute master record.

Source. Displays the source profile for the attribute. For example, if there is a deviation for an item and supplier, the source field indicates whether the attribute is specific to the item and supplier, the item, supplier, and site, or if it applies generally to the item.

Label. Displays the label for the selected attribute.

Description. Displays the label description for the selected attribute.

Type. Displays the datatype of the selected attribute, such as integer, decimal, character, and so on.

Format. Displays the datatype format for the selected attribute.

Sequence. Enter a sequence number for the attribute on this profile. The sequence determines the order in which attributes print on reports.

Status. Select Active or Inactive to set the status of the attribute:

- **Active.** When the status is set to Active, the attribute and its parameters are considered when the system processes the item for printing documents and for inventory transactions, such as receiving, allocating, picking, and shipping.
- **Inactive.** When the status is set to Inactive, the attribute and its parameters are not recognized by inventory transactions and by functions that manage materials. The attribute appears in the profile but it is not recognized elsewhere. When the status of an

item profile attribute is Inactive, the system does not recognize the attribute for the item. The system also does not recognize the attribute on higher-level profiles for the same item and attribute, such as those for the item and a customer, or for the item and a sales order line.

Print. Select this check box if you want the attribute to be printed on documents such as sales orders, work orders, and purchase orders.

Level. Select or enter the Level parameter, which determines how the attribute and its parameters are applied to the item.

- **Item.** Set the level to Item when the attribute is a characteristic of the item. For example, an item-level attribute would be a field that is defined for an item master record, such as Item Type, Status, and Design Group. Item-level attributes can be defined with parameters to specify a value, specification, and measurement. The values for item-level attributes are fixed and they do not vary from lot to lot, like the fields in Item Master Maintenance (1.4.1).
- **Lot.** Set the level to Lot when the value for the attribute is specific to an item and a lot and when the attribute is a characteristic of a lot master. The attributes for a lot master apply to that item and lot across all sites and locations within a domain. You can define the default value and specifications of lot-level attributes to determine if an item and a lot are conforming or non-conforming.
- **Sublot.** Set the level to Sublot when the value for the attribute is specific to an item, a lot, and an inventory detail reference and the attribute is a characteristic of a lot master and sublot. Like lot-level attributes, you can define the default value and specifications of sublot-level attributes to determine if an item and a lot are conforming or non-conformingnon-conforming.

  The use of sublot-level attributes should be restricted to implementations where the inventory reference field is used to always identify a sublot. Sublot-level attributes should not be used when the reference field is used to identify objects such as a pallet, container, shelf, or location, or when there is an integration with QAD Warehousing.

Input Method. If the level is set to lot or sublot, select or enter the Input Method parameter:

- **User**. For a lot-level or sublot-level attribute, set the input method to User so that the attribute value can be updated when processing the receipt for an item using supported inventory transactions, such as Purchase Order Receipts.
- **System**. For a lot-level or sublot-level attribute, when the input method is set to System, the attribute is not visible when processing receipt transactions. However, it is recorded for an item lot (and sublot) using functions such as Maintain Lot Attribute Order and Maintain Quality Order.

Multiple Values. For a character attribute, select this check box to allow a person to record multiple values for an item lot (and sublot), each value separated by a comma. An example of an attribute that may have multiple values is a blend of olive oil with a Country of Origin attribute that permits more than one country.

Note Do not select this check box if the character attribute will only have a single value.

Certification. The item profile must include all attributes that should be printed on a Certificate of Analysis (COA), including any attributes that are controlled on test specifications that are used to determine if a lot is conforming or non-conforming.

Select this check box to display the item attribute on COA reports.

- For an item-level attribute, if the check box is selected, the COA includes the label, the specification, and the default value for the attribute defined on the profile.
- For a lot-level or sublot-level attribute, if the check box is selected, the COA includes the attribute label and the specification and value on the quality or lot attribute order.

Certification Category. When attributes are displayed on the COA, they are grouped by certification category. If the Certification check box is enabled, select the certification category.

Label. This field displays the label for the selected category.

Default Value. Enter the default value according to the datatype of the attribute. Depending on the Level setting of the attribute, enter the following for the default value:

Datatype	Level Setting	Default Value
Character	Item	Enter the value of the item attribute.
	Lot and Sublot	Enter the initial value the system displays when a user enters the value for a lot (or sublot) attribute when processing a supported receipt transaction or when recording values on a lot attribute order, quality order, or test record. For example, if the item is olives and there is a character attribute for country of origin that allows multiple values, enter the countries that are considered conforming
Decimal/Integer	Item	Enter the value of the item attribute. For example, if the item is a 100-ml bottle and the integer attribute is Size, you would enter 100 in the Default Value field and ml in the Measurement field.
	Lot and Sublot	Enter the initial value that the system displays when a user enters the value for a lot (or sublot) attribute when processing a supported receipt transaction or when recording values on a lot attribute order, quality order, or test record.
Date	Item	For a date attribute that is an item-level attribute, set Default Value to User Defined and then select or enter the value for the attribute in the Target Date field.
	Lot and Sublot	For a date attribute that is either a lot-level or sublot-level attribute, select Transaction Date or Effective Date to calculate the default value. Then enter a + or - operator in the field next to the Default Value field and a value in the Interval Value (Day) field.
Logical		Specify the initial value the system displays when a user enters the value for a lot (or sublot) attribute when processing a supported receipt transaction or when recording values on a lot attribute order, quality order, or test record: • **Selected**. If you select the check box, the value entered in the True Value field (Conforming) defaults in the field. • **Not Selected.** If you do not select the check box, the value entered in the False Value field (Non-conforming) defaults in the field.

Specification Type. For a lot-level or sublot-level attribute that is not a logical attribute, select the specification type that is appropriate for the attribute's datatype. The value that is listed in the lookup depends on the datatype and format for the attribute. Specification types include:

- **None**. For all attributes, when there is no specification required to determine if an attribute value is conforming or not.

- **Greater Than.** For character, integer, and decimal datatype attributes that are expressed in terms such as greater than, greater than or equal to, minimum, and not less than.
- **Min Max Value.** For character, integer, and decimal datatype attributes that are expressed in terms such as min max, between, and range.
- **Less Than.** For character, integer, and decimal datatype attributes that are expressed in terms such as less than, less than or equal to, maximum, and not more than.
- **Tolerance Value.** For integer and decimal datatype attributes that are based on tolerances relative to a target value.
- **Tolerance Percentage.** For integer and decimal datatype attributes that are based on percentage tolerances relative to a target value for decimal, and for integer attributes that do not have a format for percentage.
- **Membership.** For character datatype attributes that specify a list of conforming or non-conforming values for an attribute.
- **Rule Expression.** For more complex specifications that are configured by using software coding that follows Progress Software Corporation constructs and conventions and the variable attribute_value. For more information, see “Frequently Asked Questions” on page 156.

Measurement. For character, integer, and decimal datatypes, provide a short description for how the attribute is measured or determined (12 characters maximum). For example, a measurement for flow rate might be expressed as ppm, psi, or cl/sec.

Specification. A short description for the attribute specification (48 characters max). For example, if the item attribute is Country of Origin, this field could display the countries that are acceptable. You can use the Reference field to make note of additional information or to refer to a document for the attribute or specification.

Test. For an item-level attribute, enter the test that determines if the item conforms to the specification. The system uses this value if the QAD EE Quality Control module is not implemented.

Test Method. For an item level attribute, enter the test method for this attribute. The system uses this value when the QAD EE Quality Control module is not implemented.

Value Required. When a lot or sublot attribute appears on a quality or lot attribute order, select this check box to require that a value for the lot-level or sublot-level attribute is entered and processed for the order status to be changed to closed.

Validation. For a lot-level or sublot-level attribute, select this check box if the entered value and result for this attribute must fall within specification to determine whether the overall result of the quality or lot attribute order is conforming or non-conforming. Do not select this check box for nominal attributes that do not determine whether the result for the order is conforming or non-conforming, such as supplier ID, supplier lot number, or manufacturing part number.

Edit Specification. For a lot-level or sublot-level attribute, select this check box to allow the specification to be overridden by a deviation that is defined on a higher-level profile. For example, an attribute specification on an item profile can have attribute deviations on higher-level profiles defined for the item and customer, the item, customer, and ship-to, or for a sales order line for the item.

When Edit Specification is selected, deviations can be defined on a higher-level profile by editing specification-related parameters including:

- Specification Type, Specification, and Specification Detail
- Default Value
- Test, Test Method

Note To prevent higher-level profiles from overriding attribute specifications, leave this check box unchecked.

Reference. Optionally, specify a reference related to the profile attribute, such as a document or standard.

Specification Fields

Depending on the datatype and the specification type that is selected when you click Next, additional fields appear that require you to enter the attribute specifications.

True Value. Enter the conforming value for the attribute.

Note This field is used in conjunction with the logical datatype, which contains True and False values, such as Organic and Conventional, < 10 ppm and Fail, or Pass and Fail.

False Value. Enter the non-conforming value for the attribute.

Note This field is used in conjunction with the logical datatype, which contains True and False values, such as Organic and Conventional, < 10 ppm and Fail, or Pass and Fail.

Target Value. Enter the target value for the attribute specification.

Minimum Number. Enter the minimum acceptable value for the attribute. This field is available if you select the Greater and Min Max specification types.

Minimum Inclusive. Select this check box to include the Minimum Number value in the specification range. For example, if the Minimum Number is 10 and this check box is selected, values that are greater than or equal to 10 will be conforming. If this check box is not selected, values that are greater than 10 will be conforming. This field is available if you select the Greater and Min Max specification types.

Maximum Number. Enter the maximum acceptable value for the attribute. This field is available if you select the Less Than and Min Max specification types.

Maximum Inclusive. Select this check box to include the Maximum Number value in the specification range. For example, if the Maximum Number is 10 and this check box is selected, values that are less than or equal to 10 will be conforming. If this check box is not selected, values that are less than 10 will be conforming. This field is available if you select the Greater and Min Max specification types.

Tolerance (-). Enter the minimum amount of variation from the target value. This field is available if you select the Tolerance Percentage and Tolerance Value specification types.

Tolerance (+). Enter the maximum amount of variation from the target value. This field is available if you select the Tolerance Percentage and Tolerance Value specification types.

Include List. Enter the list of conforming character values in this field, each separated by a comma.

Note If you enter values in both the Include and Exclude List fields, only the values in the Include list are validated. Values entered in Include List take precedence over the values in Exclude List.

Exclude List. Enter the list of non-conforming character values in this field, separated by commas.

Note If you enter values in both the Include and Exclude List fields, only the values in the Include list are validated. Values entered in Include List take precedence over the values in Exclude List.

Link Attribute Categories to an Item Profile

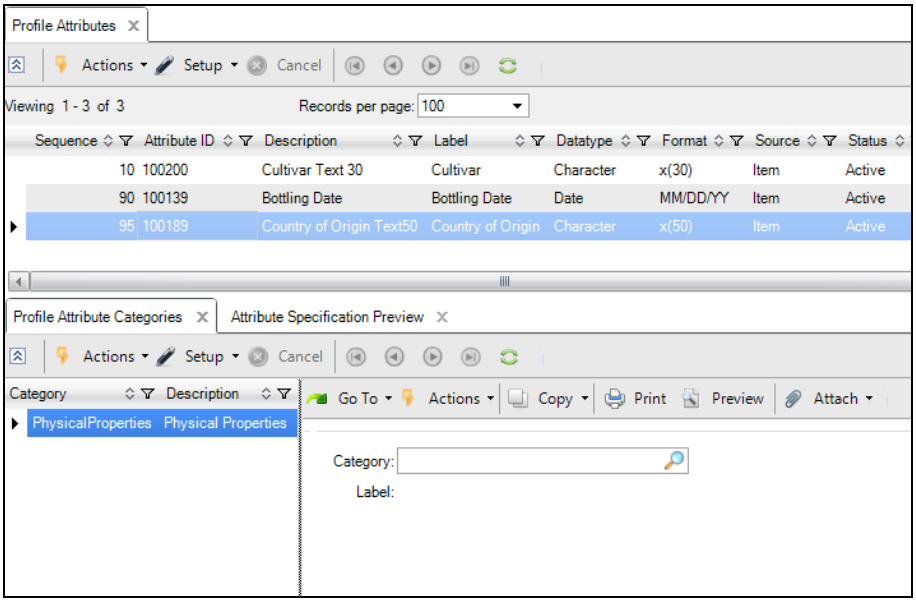
The Item Category Maintenance function allows you to optionally assign an item profile attribute to an attribute category. A profile attribute can be assigned to one or more categories.

Follow these steps to link one or more attribute categories to an item profile:

1 Open the item profile.

2 Select Create in the Profile Attribute Categories tab.

Fig. 3.4
Profile Attribute Categories Tab



3 Enter the required information in the following fields:

Category. Select an attribute category from the available list. For information about adding attribute categories, see “Item Attribute Categories” on page 10.

Label. Displays the label for the selected category.

Verify Item Attribute Setup

Use the Attribute Specification Preview tab in the Maintain Item Profile browse collection to verify that you have properly set up a profile attribute, its specification type, and specification details. You can test the setup by entering values for the attribute to see if the result is either conforming or non-conforming.

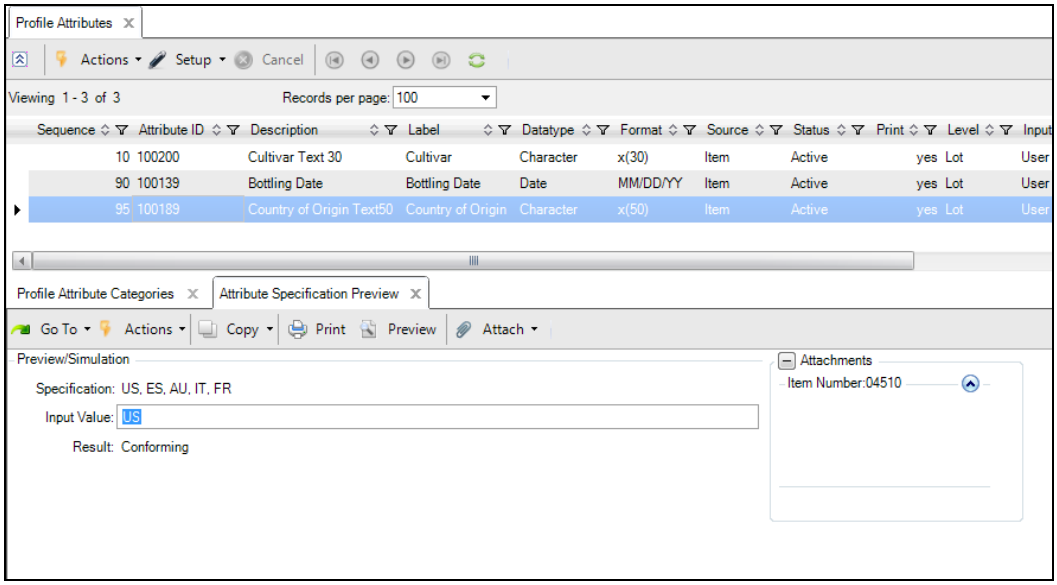
Follow these steps to verify that the attribute profile is set up properly:

1 Open the item profile.

2 Highlight the item attribute in the Profile Attributes tab.

3 Select the Attribute Specification Preview tab.

Fig. 3.5
Attribute Specification Preview Tab



4 The attribute profile information is displayed in the fields. Verify that the attribute profile is set up properly by entering attribute values in the Input Value field and verifying the correct result (conforming or non-conforming) is displayed in the Result field.

Item Number. Displays the item number associated with the item attribute profile.

Site. Displays the site associated with the item attribute profile.

Attribute. Displays the attribute ID associated with the profile.

Source. Displays the source profile for the attribute. For example, if there is a deviation for an item and supplier, the source field indicates whether the attribute is specific to the supplier or is applied generally to the item.

Specification. A short description for the attribute specification (48 characters max). For example, if the item attribute is Country of Origin, this field could display the countries that are acceptable.

Input Value. Enter the attribute value in this field.

Result. This field displays the quality result (conforming or non-conforming) that is determined by the attribute value entered in the Input Value field and its specification parameters.

Entering Lot Attribute Values

Overview

Item lot attribute values can be entered in one of following ways:

- **Inventory Transactions.** A number of inventory transactions provide the capability for entering values for lot and sublot attributes.
- **Lot Attribute Orders.** Lot attribute orders provide the capability for recording values for lot and sublot attributes with test records that are not required.
- **Quality Orders.** Quality orders provide the capability for recording values for lot and sublot attributes and results for test records.
- **Receipt Transactions.** Values for an items lot and sublot attributes can optionally be entered using the following receipt transactions:
  - Purchasing receipts
  - Production receipts using Advanced Repetitive or work orders
  - Unplanned receipts
  - Inventory transfer transactions with a receipt in a different location

Note Values can be entered for attributes configured with Level = Lot or Sublot and Input Method = User. Attributes configured with Input Method = System must be entered using a lot attribute order or quality order.

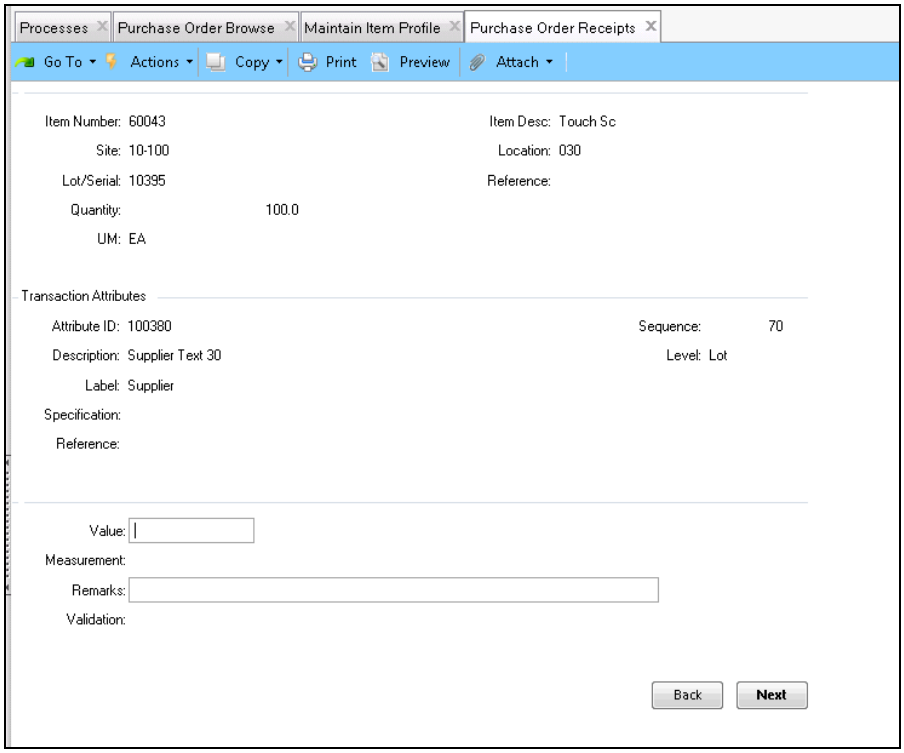
Entering Values During Receipt Transactions

Follow these steps to enter the item attribute values during a PO or WO receipt:

1. Open the PO or WO receipts function and enter the PO/WO number.
2. Click Next and enter the required receipt information, including line number, quantity, location, and so on. For more information about PO receipts, see *QAD Purchasing User Guide*. For more information about WO receipts, see *QAD Manufacturing User Guide.*
3. Enter the lot number in the Lot/Ser field and click Next.

   Note Lot attributes require an associated lot. You can only generate a lot attribute or lot attribute order if you specify a lot or serial when receiving an order.
4. Enter the required information in the fields. Repeat this step until you have entered values for all attributes.

Fig. 3.6
Entering Attribute Values During a PO Receipt



Attribute ID. Use the lookup to select an attribute. The lookup displays a list of the attributes associated with the item being received.

Sequence, Description, Level, Label, Specification, and Reference. Displays the information for the attribute that was selected.

Value. Enter the attribute value in this field.

Measurement. Displays how the attribute is measured or determined. For example, a measurement for flow rate might be expressed as “psi" or “liters/min.”

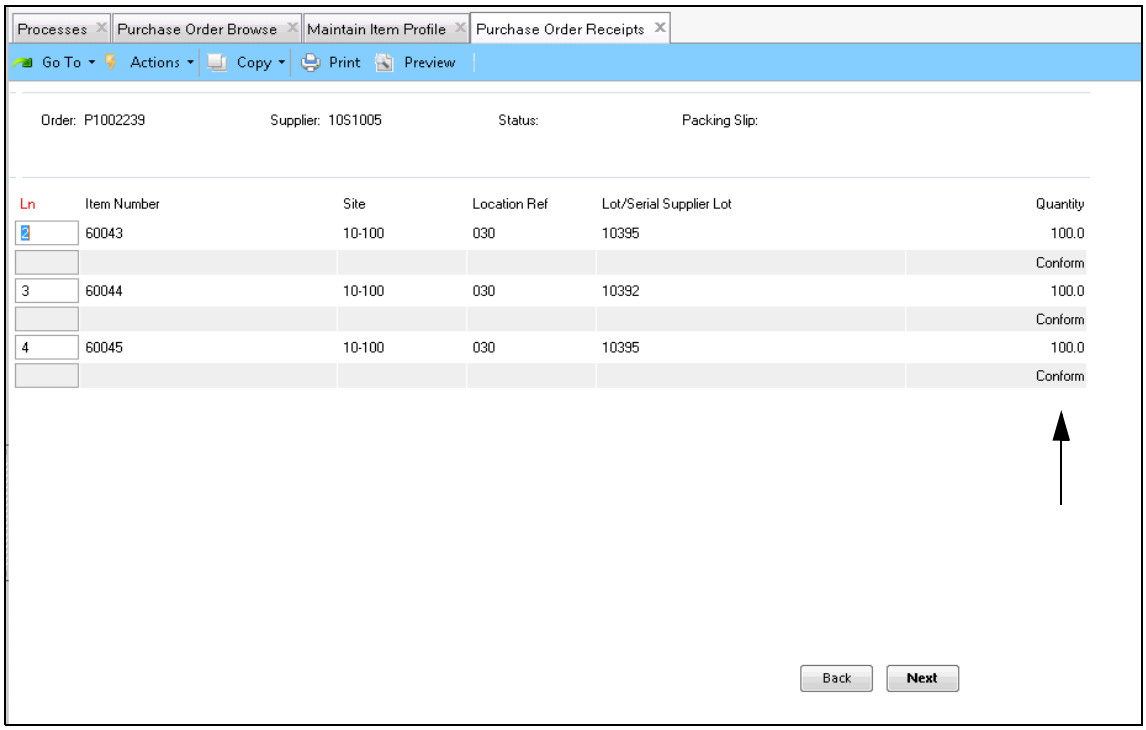
Remarks. Optionally, enter any remarks in this field.

Result. Displays the result of the attribute value (Not Entered, Conforming, or Non-Conforming).

5 Once you have entered all the values for the attributes, click Back to finish receiving the PO.

6 Once you have received all the lines on the PO, you can view the lines for the order and the results for each lot.

Fig. 3.7
Checking Attribute Value Results During PO Receipt



Lot Attribute Orders

A lot attribute order is a document of record for an item lot or sublot and its attribute values. Lot attribute orders provide the capability to verify and maintain values for attribute values for an item lot and sublot.

If attribute values are not entered during receipt transactions, the system automatically creates lot attribute orders after processing purchasing and production receipts.

Note If the item being received has an associated test specification, a quality order is created instead of a lot attribute order. See “Quality Control for Inventory” on page 94.

You can manually create a lot attribute order for existing item lots and item lots that were received using other kinds of inventory transactions, such as Distributed Order Receipt (12.15.20, dsdorc.p). See “Manually Creating Lot Attribute Orders” on page 35.

Creating Orders From Receipt Transactions

* A lot attribute or quality order is only created for items that have associated attributes, which must be checked or tested. A lot attribute order is created if the attribute values are not entered during a receipt transaction, such as a PO or WO receipt.

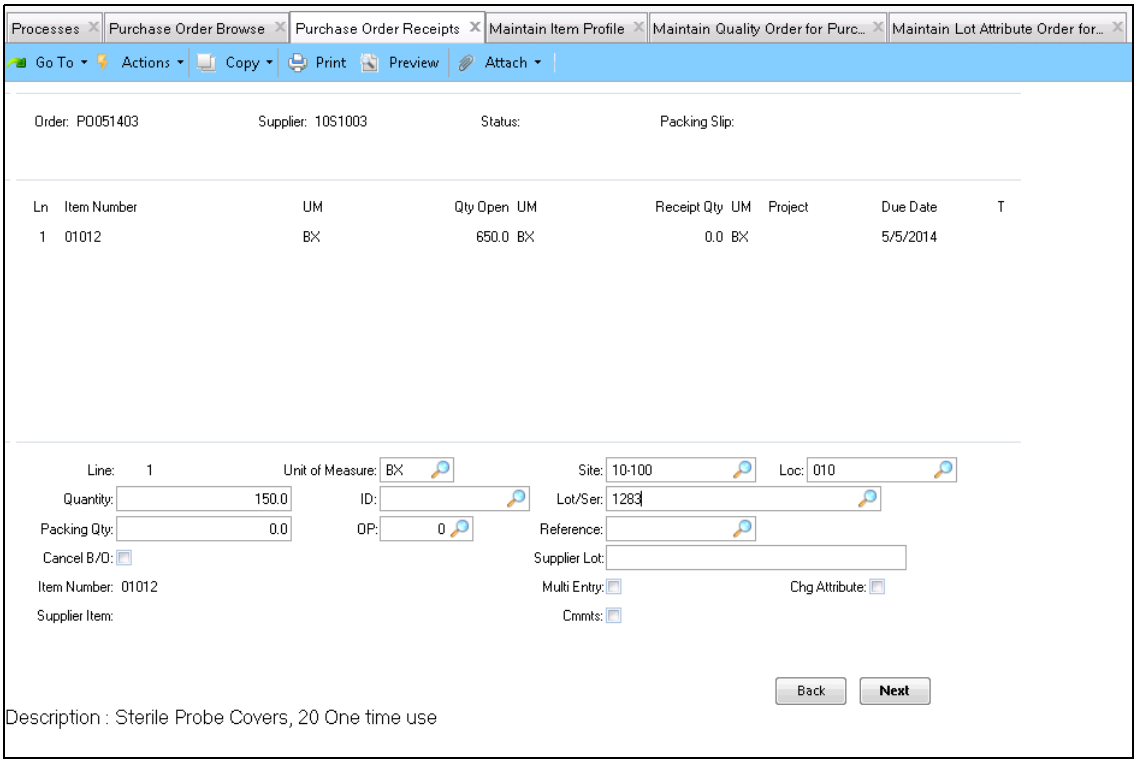
Follow these steps to create a lot attribute or quality order from a PO receipt:

1 Open Purchase Order Receipts and enter the PO number. Click Next and enter the required receipt information, including line number, quantity, location, and so on. For more information about PO receipts, see *QAD Purchasing User Guide*.

2 Enter the lot number in the Lot/Ser field and click Next.

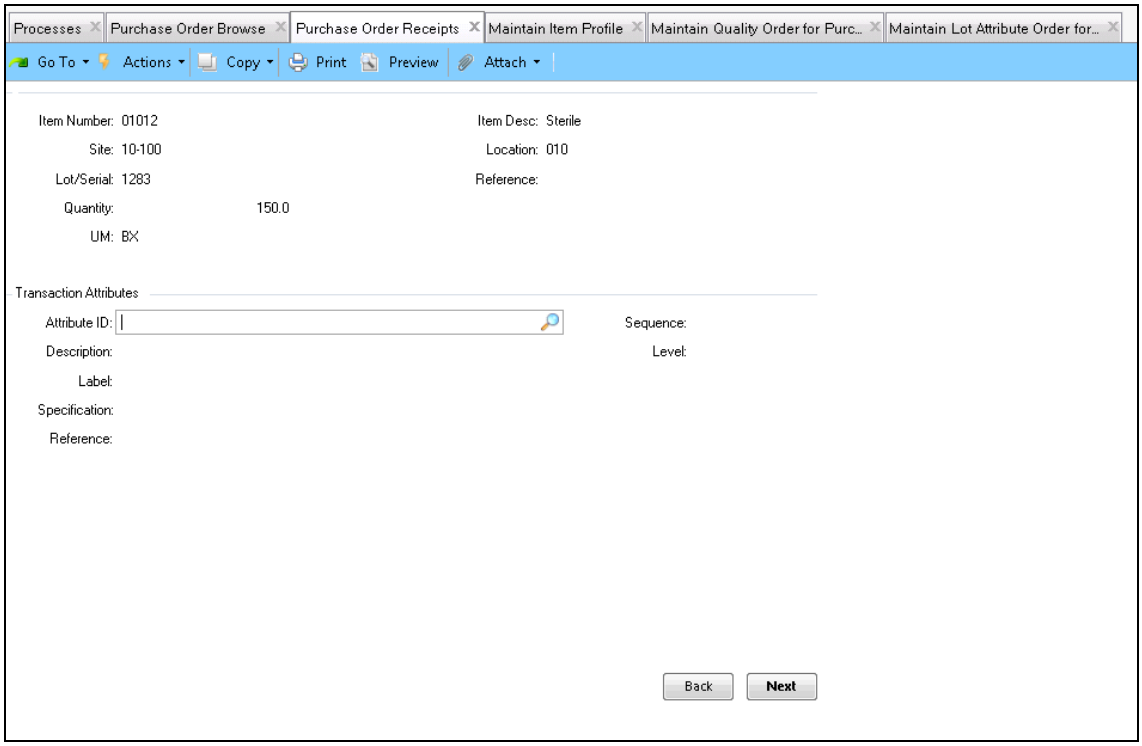
Note Lot attributes require an associated lot. You can only generate a lot attribute order if you specify a lot or serial when receiving an order.

Fig. 3.8
Creating a Lot Attribute Order from a PO Receipt



3 The attribute fields are displayed. To create a lot attribute order and enter the attribute values later, click Back to return to the PO receipts menu.

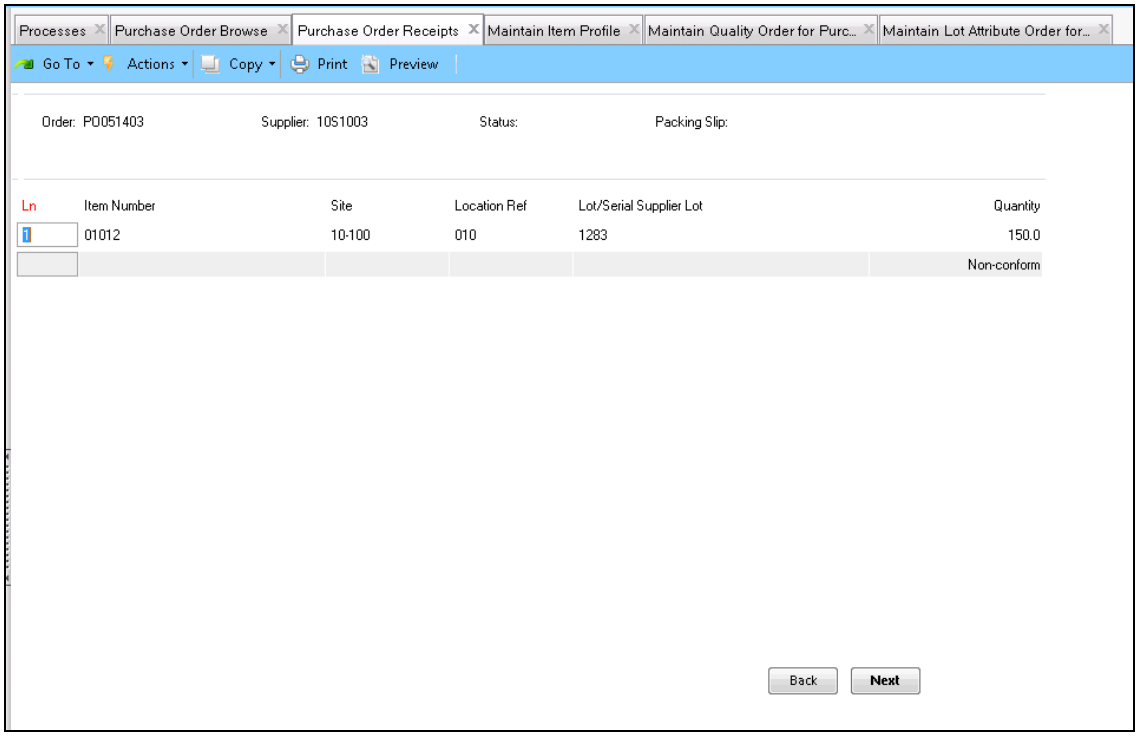
Fig. 3.9
Creating a Lot Attribute Order from a PO Receipt



4 Click Next and then click Yes to display the PO lines being received.

5 The system displays the PO lines that have been received. If you did not enter the attribute information, the system displays the lines that are non-conforming.

Fig. 3.10
Creating a Lot Attribute Order from a PO Receipt



6 Click Next and then click Yes to confirm that all the information is correct.

7 Click Next to complete the PO receipt transaction.

8 The lot attribute order has been created. To view the order, see “Navigating to the Correct Type of Order” on page 37.

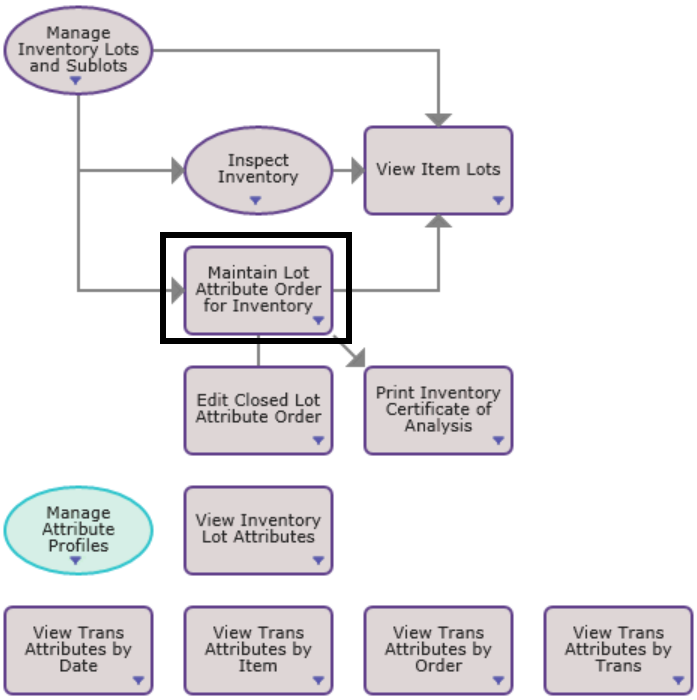
Manually Creating Lot Attribute Orders

Follow these steps to manually create a lot attribute order:

1 You can manually create lot attribute orders for an item lot that is in inventory or for a shipment of sales inventory.

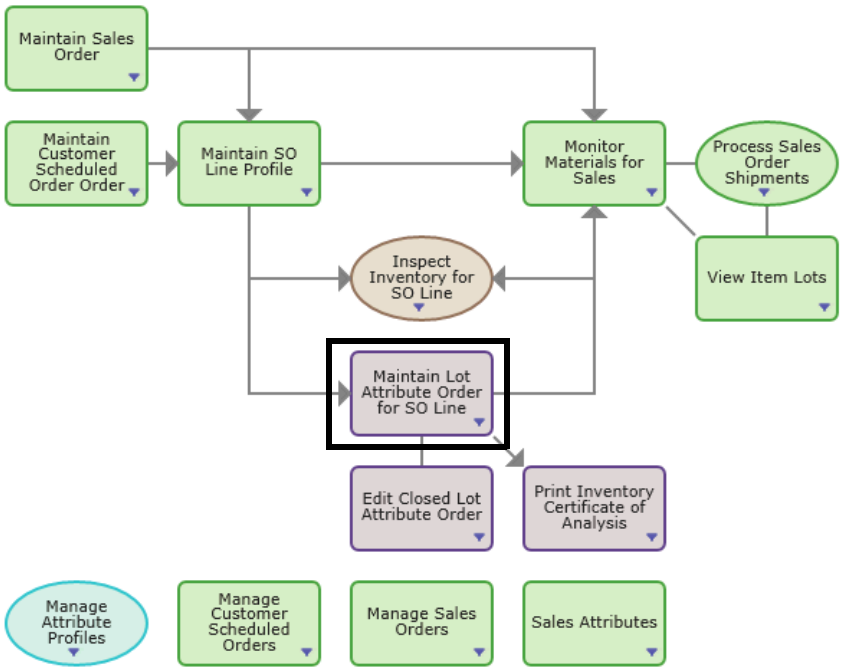
- **Inventory**. To manually create a lot attribute order for inventory, select Maintain Lot Attribute Order for Inventory from the Manage Inventory with Attributes process map.

Fig. 3.11
Manage Inventory with Attributes Process Map



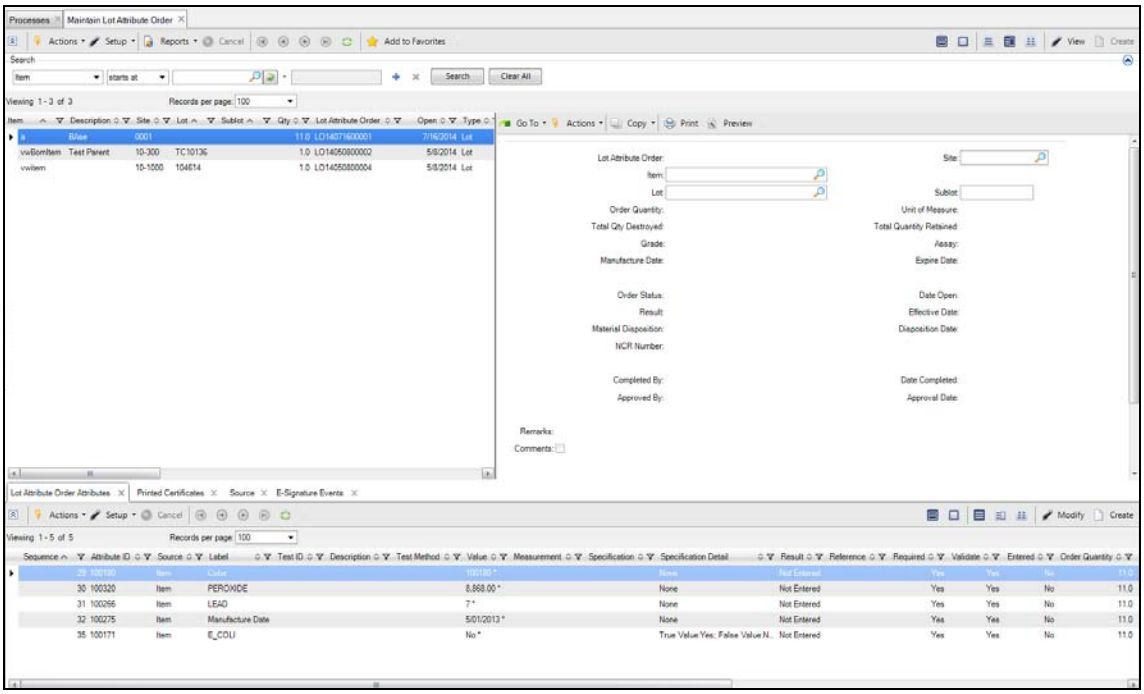
- **Sales**. To manually create a lot attribute order for an item lot, select Maintain Lot Attribute Order for SO Line from the Manage Sales with Attributes process map.

Fig. 3.12
Manage Lot Attribute Order for SO Line Process Map



2 Click the Create button in the top-level browse. A blank lot attribute order opens.

Fig. 3.13
Manually Creating a Lot Attribute Order



3 Add the item lot to the order by entering the relevant information in the Item, Site, Lot, and Sublot fields. For detailed field definitions, see “Entering Values in Lot Attribute Orders” on page 37.

Note To add an item to an order, the item lot must be in inventory

4 When the item is added to the order, the associated attributes are populated into the Lot Attributes Order Attribute tab.

Entering Values in Lot Attribute Orders

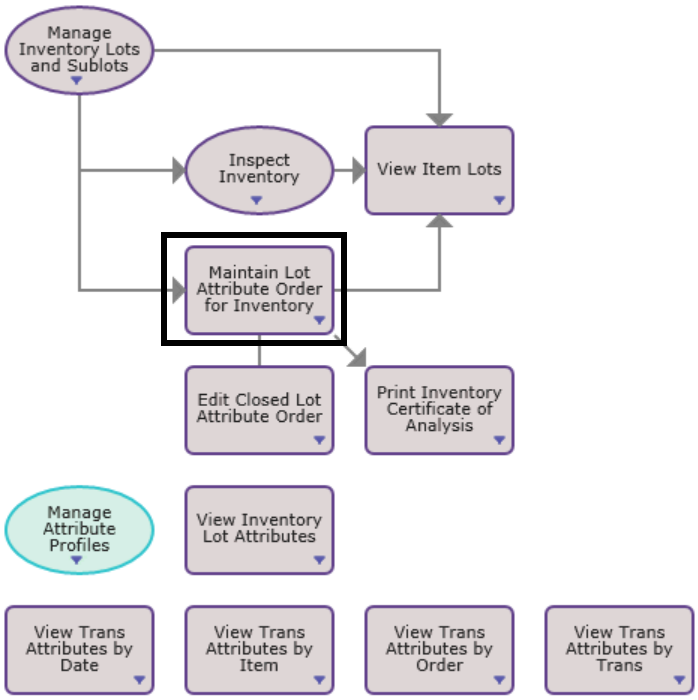
Navigating to the Correct Type of Order

In IAQ, you can create attribute orders for inventory, purchasing, production, and sales. Depending on the type of order, navigate to the correct collection when entering attribute values.

Inventory - Maintain Lot Attribute Order Collection

For inventory orders, select Maintain Lot Attribute Order from the Manage Inventory with Attributes process map.

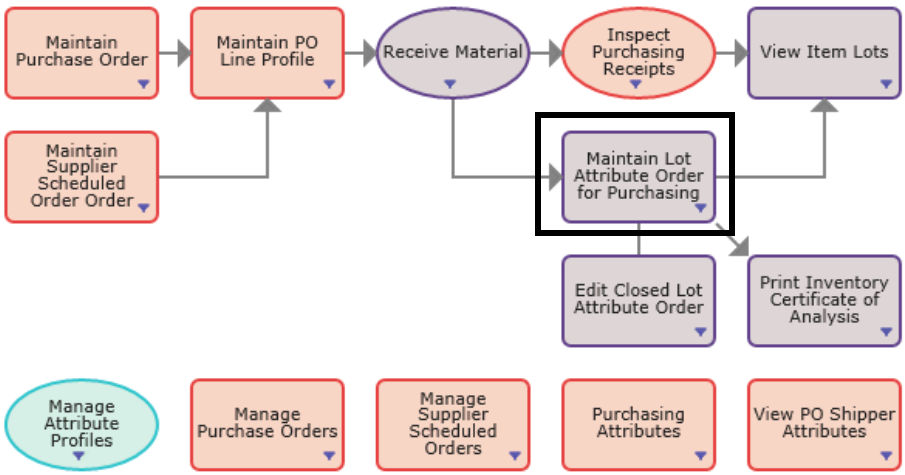
Fig. 3.14
Process Map - Manage Inventory with Attributes



Purchasing - Maintain Lot Attribute Order for Purchasing

For purchase orders, select Maintain Lot Attribute Order for Purchasing from the Manage Purchasing with Attributes process map for orders created by purchase receipts.

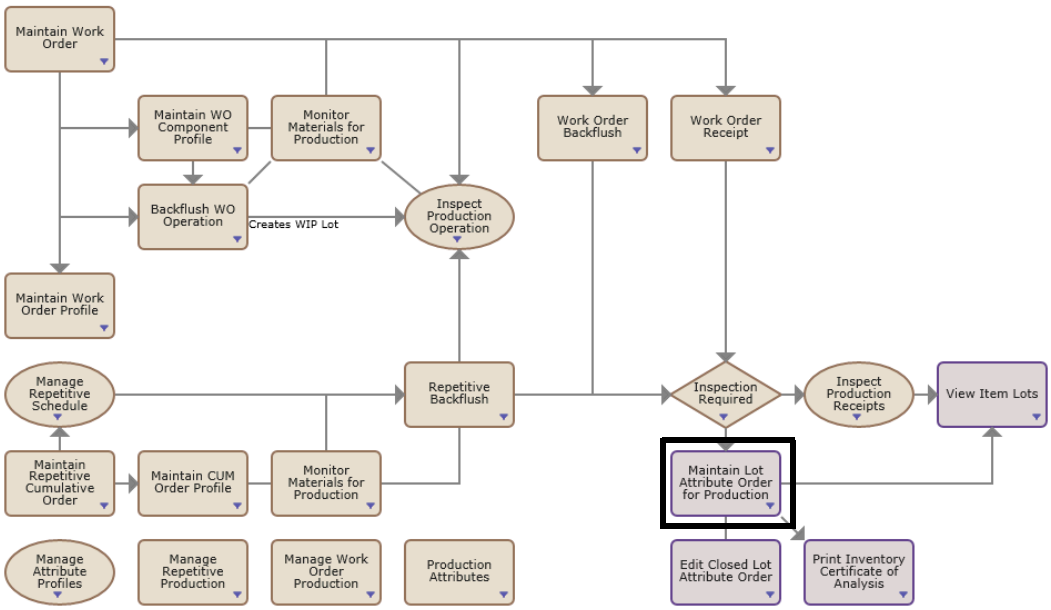
Fig. 3.15
Process Map - Manage Purchasing with Attributes



Production - Maintain Lot Attribute Order for Production

For production orders, select Maintain Lot Attribute Order for Production from the Manage Production with Attributes process map for orders created by work order and CUM order receipts.

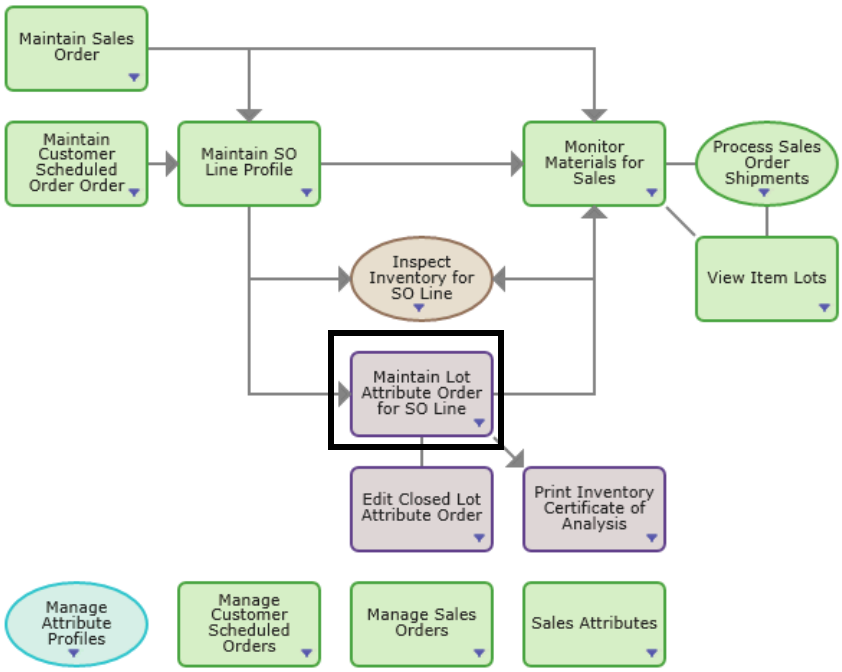
Fig. 3.16
Process Map - Manage Production with Attributes



Sales - Maintain Lot Attribute Order for Sales

For sales orders, select Maintain Lot Attribute Order for SO Line from the Manage Sales with Attributes process map for orders created for an item lot and sales order line.

Fig. 3.17
Process Map - Manage Lot Attribute Order for SO Line



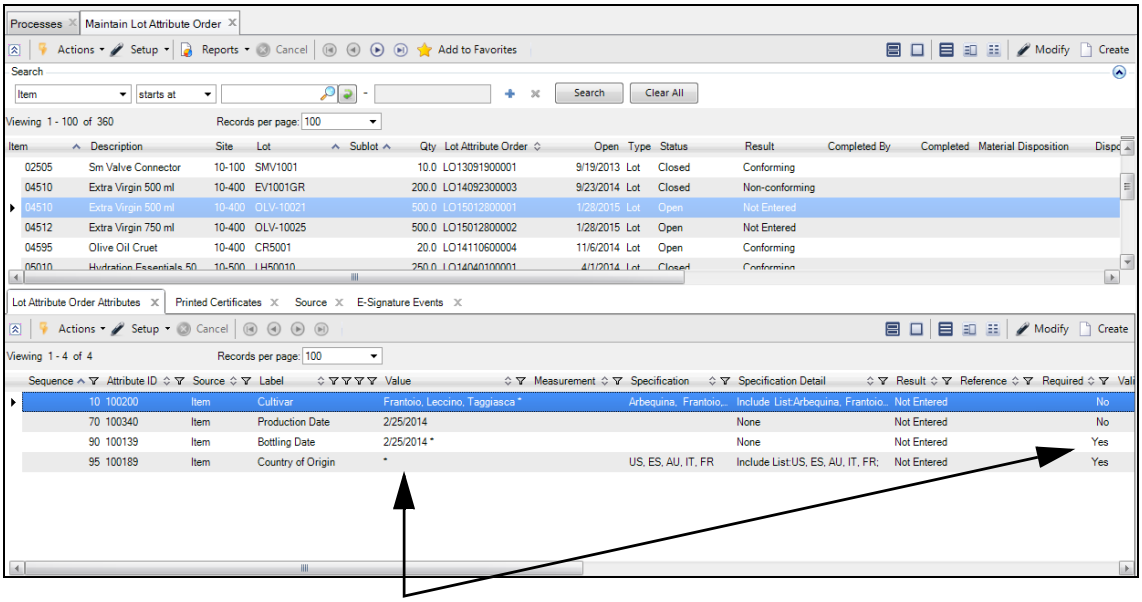
Entering Attribute Values in Orders

Follow these steps to enter attribute values for open lot attribute orders:

1 Depending on the type of order (inventory, purchasing, production, or sales), open the correct profile collection. See “Navigating to the Correct Type of Order” on page 37.

2 In the top browse, select the attribute order.

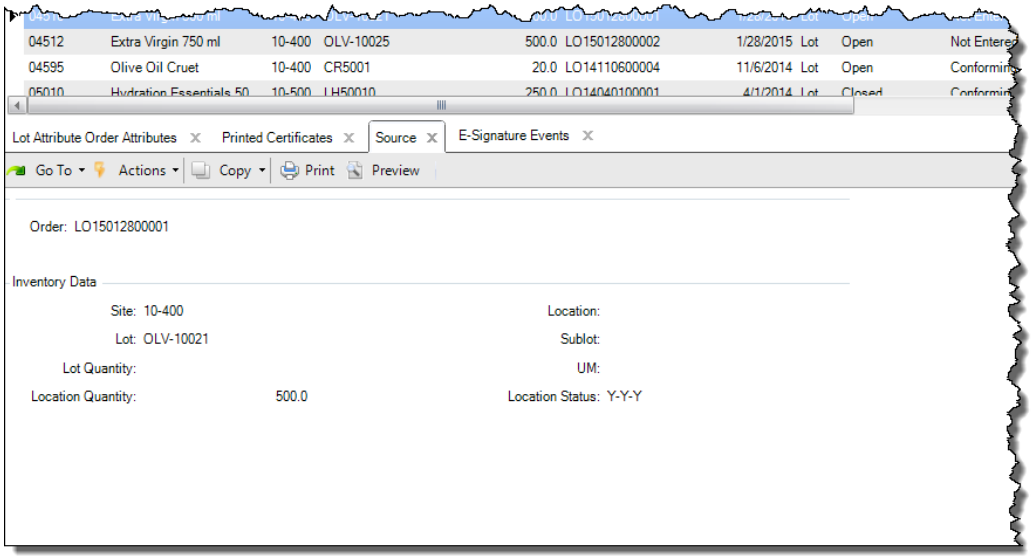
Fig. 3.18
Maintain Lot Attribute Order for Purchasing Collection



The Value field displays the default value for the attribute.
If a value has not been entered or accepted for the attribute and if the attribute is required and must be validated (Required = Yes and Validation = Yes), an asterisk is displayed with the value.

3 Optionally, select the Source tab in the second-level browse and verify that the correct attribute order is selected. The Source tab displays the associated purchasing, production, and inventory data, such as sales, work order, and transaction numbers and dates.

Fig. 3.19
Maintain Lot Attribute Order - Source Tab



4 Double-click and open the attribute. The following fields are displayed:

Sequence. The sequence number for the attribute on this profile. The sequence determines the order in which attributes print on reports.

Source. Displays the source profile for the attribute.

Attribute ID. Displays the attribute ID associated with the lot attribute order.

Label. Displays the label for the selected attribute.

Specification. Displays the specifications for the attribute.

Test ID. Displays the test ID associated with the attribute.

Test Method. Displays the test method associated with the attribute.

Value. Enter the attribute value in this field.

Level. Displays the attribute level (item, lot, or sublot).

Result. Displays the result of the attribute value:

- **Not Entered.** The initial result for a lot attribute or quality order, when values have not been entered for any of the attributes.
- **Conforming.** The result when all of the attribute specifications (Validation = Yes) have conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Non-Conforming.** The result when any of the attribute specifications (Validation = Yes) have non-conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Incomplete.** The result when some of the attribute values have been entered, and there is at least one attribute value (Required = Yes) that has not been entered.
- **Inconclusive.** The result for a quality order when the result for any one of its attributes has been manually set to Inconclusive.
- **No Data.** The result for a quality order when the result for any one of its attributes has been manually set to No Data.
- **Blank.** The result when all of the attributes (Required = Yes) have been entered and there are no attributes with the Validation setting enabled.

Measurement. Displays how the attribute is measured or determined. For example, a measurement for flow rate might be expressed as “psi" or “liters/min.”

Reference. Optionally, enter any reference information in this field.

Remarks. Optionally, enter any remarks in this field.

5 Enter the attribute value in the Value field. Repeat these steps until all the attribute values have been entered.

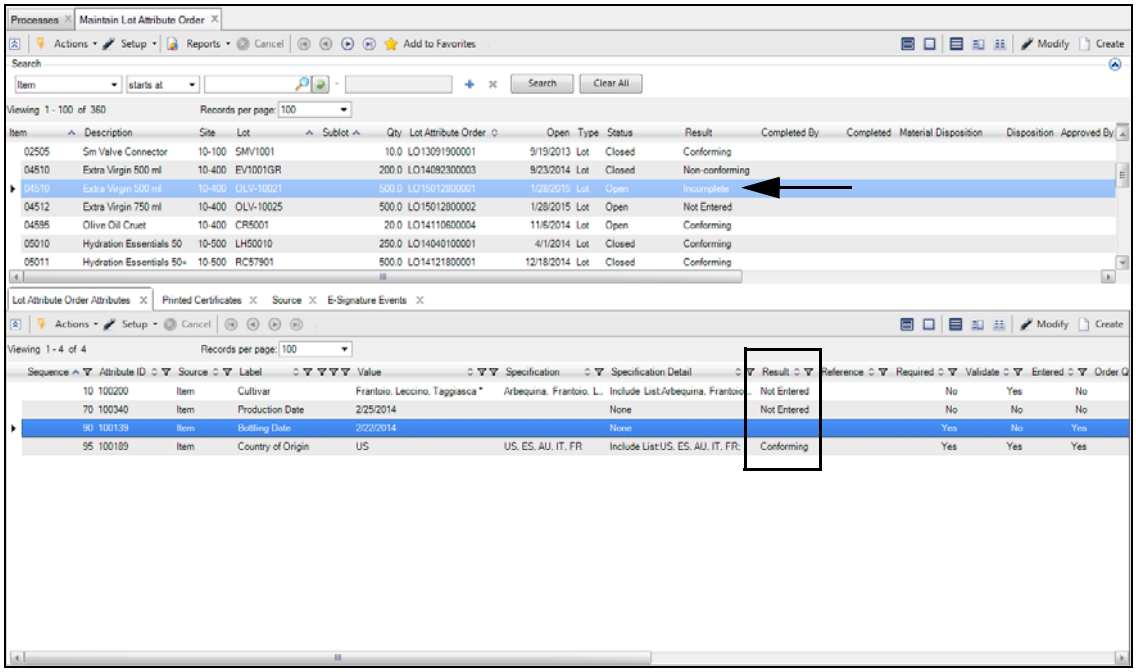
Verify That Lot Attribute Order Values Have Been Entered

Before completing a lot attribute order, verify that all the attribute values have been entered.

After values have been entered, the results are displayed in the collection.

In the following example, the Result field in the top browse is Incomplete because there is at least one attribute value (Required = Yes) that has not been entered. The Result field in the attributes tab displays various results (conforming, blank, and not entered) of each of the attribute values that were entered.

Fig. 3.20
Checking Results of a Lot Attribute Order



Completing a Lot Attribute Order

The three most common ways to complete an open lot attribute are to close it, cancel it, or delete it. Each has a specific purpose within most work flows.

Closing a Lot Attribute Order

The most common scenario when completing a lot attribute order is to record the results of the order and close it. Follow these steps to close a lot attribute order:

1. Depending on the type of order (inventory, purchasing, production, or sales), open the correct profile collection. See “Navigating to the Correct Type of Order” on page 37.
2. Select the order and verify that the attribute values have been entered and are conforming. See “Verify That Lot Attribute Order Values Have Been Entered” on page 42.
3. If necessary, enter information regarding the lot that was inspected, such as the order quantity, total quantity destroyed and retained, and so on. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.
4. If all the required information has been entered, change the Order Status to Closed.

Canceling a Lot Attribute Order

Another scenario when completing a lot attribute order is to cancel the order when it is no longer helpful but is still incomplete. After canceling an order, a record of the canceled order remains in the system.

Follow these steps to cancel a lot attribute order:

1 Depending on the type of order (inventory, purchasing, production, or sales), open the correct profile collection. See “Navigating to the Correct Type of Order” on page 37.

2 Open the order. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.

3 Change the Order Status to Canceled.

Deleting a Lot Attribute Order

The third most common scenario when completing a lot attribute order is to delete the order if it is redundant or improperly created. Deleting an order is useful when you need to remove the order from the system and a record of a canceled order would be confusing.

Note You can only delete an order if:

- The status is Open or Results Pending.
- The order attributes are not required or do not need to be validated (Required and Validated = No).

Follow these steps to delete a lot attribute order:

1 Depending on the type of order (inventory, purchasing, production, or sales), open the correct profile collection. See “Navigating to the Correct Type of Order” on page 37.

2 Open the order. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.

3 Select Delete from the Actions menu.

Editing a Closed Lot Attribute Order

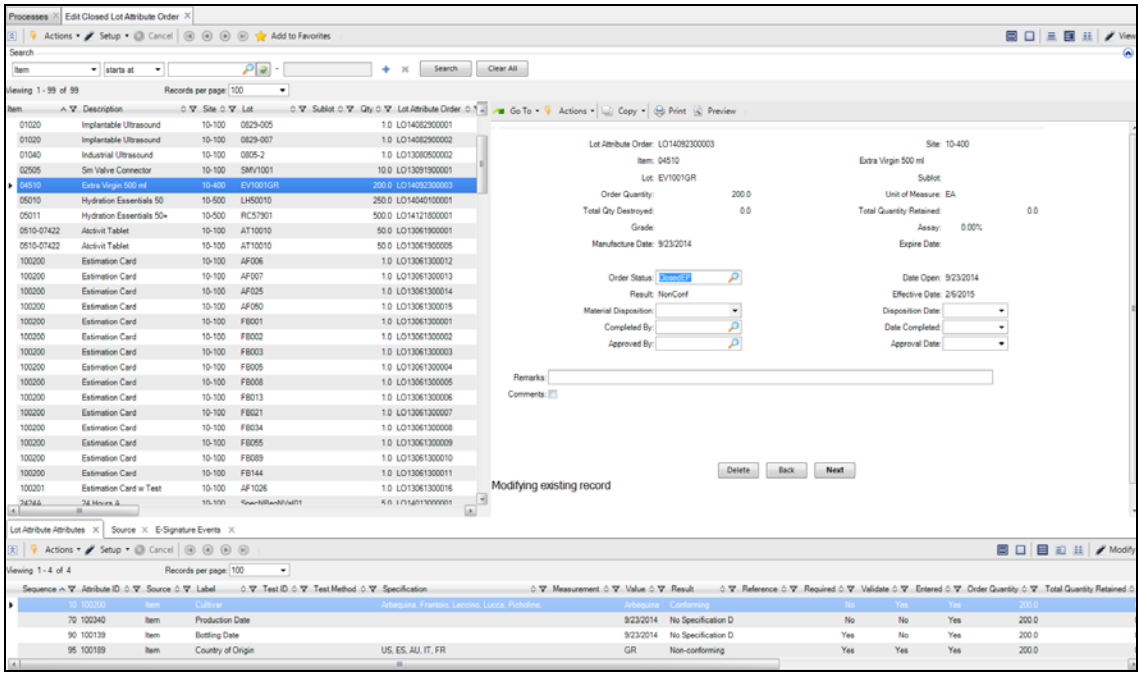
In IAQ, you can edit a limited number of fields on a closed lot attribute order by using the Edit Closed Lot Attribute Order program. Follow these steps to edit a closed order:

1 Depending on the type of order (inventory, purchasing, production, or sales), open the correct profile collection. See “Navigating to the Correct Type of Order” on page 37.

2 Select the Edit Closed Quality Order from the process map.

3 Select the order in the top level browse and click Modify. While you modify the closed quality order for corrections, the system temporarily changes the status to Closed Edit Pending, allowing you to update fields for Order Status, Material Disposition, Disposition Date, Completed By, Date Completed, Approved By, Approval Date, Remarks, and Comments. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.

Fig. 3.21
Editing a Closed Lot Attribute Order

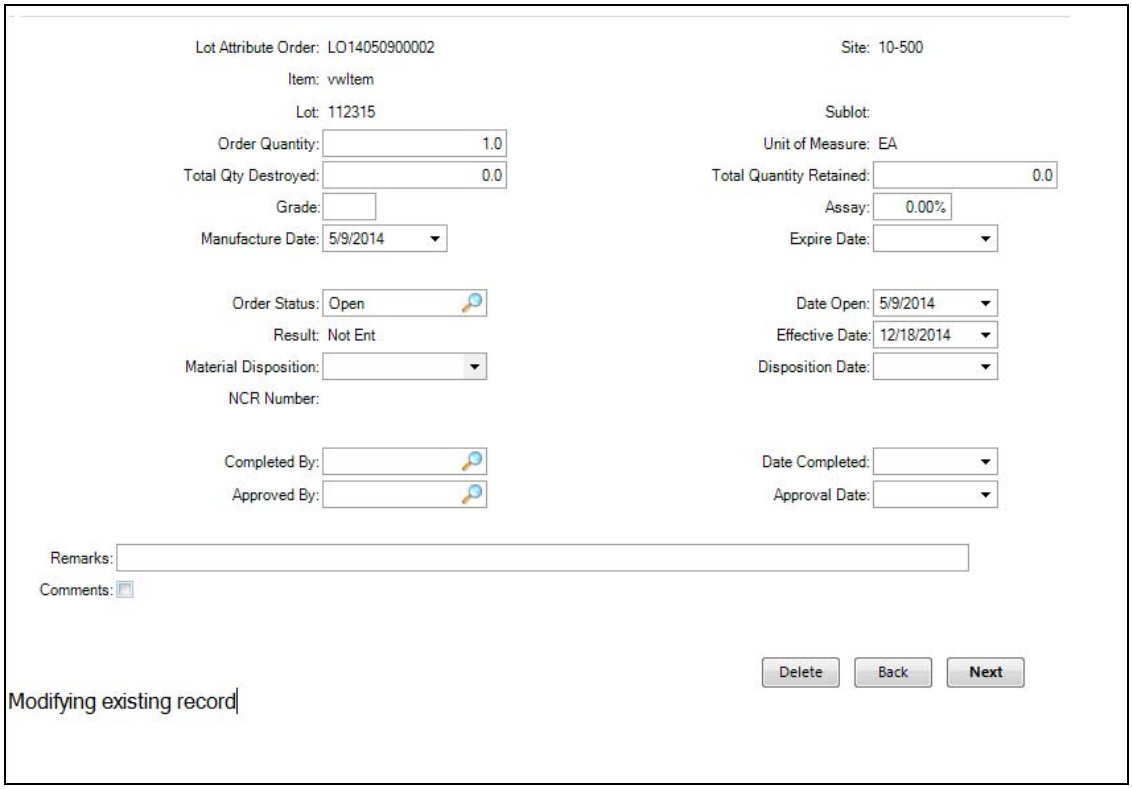


4 After you have completed the necessary changes, set the order status to Closed.

Lot Attribute or Quality Orders Field Descriptions

Note Lot Attribute and Quality Orders contain the same fields.

Fig. 3.22
Lot Attribute or Quality Orders Field Descriptions



Lot attribute and quality orders contain the following fields:

Lot Attribute Order. This field displays the unique identifier for the lot attribute or quality order.

Item. This field displays the item number on the lot attribute or quality order.

Site. This field displays the site for inventory lot when the lot attribute or quality order was created.

Lot. This field displays the lot number for the lot attribute or quality order.

Sublot. This field displays the sublot for the lot attribute or quality order. This field is only used when you select the Use Inventory Reference as Sublot check box in Item Attribute Control.

Order Quantity. The lot quantity for the lot attribute or quality order. When there are multiple receipts for a production order, purchase order, or item lot and the lot attribute or quality order status is Open, the order quantity is updated automatically by receipt transactions.

Unit of Measure. This field displays the unit of measure for the item.

Total Quantity Destroyed. Enter the lot quantity that was scrapped or destroyed from the lot attribute or quality order. Items that are destroyed are typically from destructive testing. When the order status is changed to Closed, the system processes an inventory scrap transaction to issue the quantity destroyed from inventory.

Total Quantity Retained. Enter the quantity retained at a location from the lot attribute or quality order. Items that are retained are typically held for future retesting. When the order status is changed to Closed, the system processes an inventory transaction to transfer the quantity retained to a specified site and location.

Grade. Optionally, enter the grade of the inventory detail quantity. When the status of the order is changed to Closed, the system updates the Grade from the value on the lot attribute order.

Assay. Optionally, enter the value for assay for the inventory detail quantity for the lot attribute or quality order. When the status of the order is changed to Closed, the system updates the assay for the inventory detail from the value on the lot attribute order.

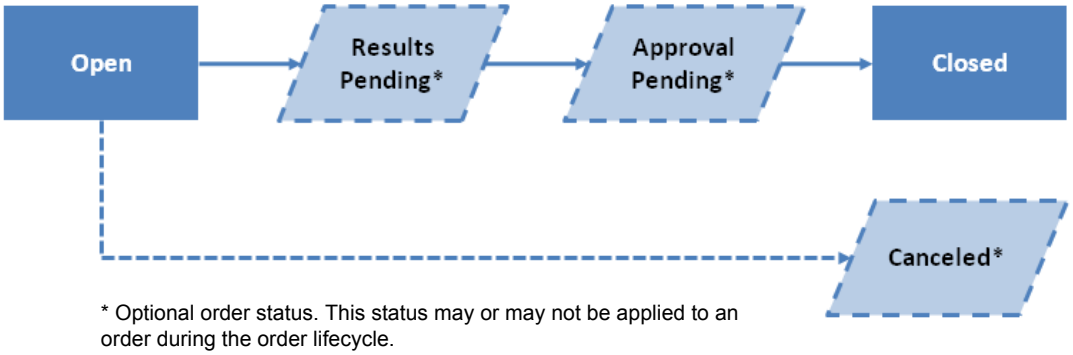
Manufacture Date. Optionally, enter the value for the manufacture date for the item lot. The initial value for this field is set to the date the item lot was created. The manufacture date for the item lot is updated when the status of the lot attribute or quality order is changed to Closed.

Note Certificate of Analysis Print (19.8.1) contains an option that determines if the Manufacture Date is printed on the certificate of analysis. See "Creating and Printing the Certificate of Analysis" on page 142.

Expire Date. Optionally, enter the expiration date for the inventory detail for the lot attribute or quality order. When the status of the order is changed to Closed, the system updates the expire date for the inventory detail from the value on the lot attribute order.

Order Status. Each lot attribute order has an order status that determines its position in the lifecycle workflow.

Fig. 3.23
Lot Attribute Order Lifecycle



Enter or select the following status codes for the lot attribute or quality order:

- **Open.** The initial status for a lot attribute or quality order. The status should be Open if the values for order attributes have not been entered or have not been fully completed. When the status is Open, modifications can be made to the lot attribute order data and orders that were manually created can be deleted.
- **Results Pending.** This status indicates that the results have not been fully completed for all the attributes. In this status, the order quantity is not automatically updated by receipts for the same item and lot. All other modifications are permitted, including changing the order status to Open.

- **Approval Pending.** The Approval Pending status indicates that attribute values have been completed, but that the material disposition and final approval for the order itself are still outstanding. When the status is Approval Pending, modification to lot order attributes is not permitted and there are no automatic changes to the lot quantity when processing additional receipts for the same lot. Other modifications for the lot attribute order record itself are permitted, including changing the order status to Open.
- **Closed.** Set the order status to Closed after all of the information for the lot attribute or quality order and its attributes has been approved. Change the status to Closed to update the item lot attributes to those recorded on the order, and to process inventory transactions for lot quantities destroyed, retained, and to be transferred to a different location or to be updated with a different inventory status code.

  When the status is Closed, there can be no further modifications to the order, including its status. The order status must be closed for a certificate of analysis to be based on and printed using the attribute values and specifications on the lot attribute order.

  To change the order status to Closed, values must have been entered for all profile attributes that have the Required setting enabled.
- **Closed Edit Pending.** This status is applied if a closed lot attribute order is being modified for corrections using Edit Closed Lot Attribute Order. If an order's status is Closed, it can only be maintained using Edit Closed Lot Attribute Order. The status of an order with the Closed Edit Pending status can only be changed to Closed. A certificate of analysis cannot be printed for a lot attribute order while it is being modified for corrections.

  If a certificate of analysis has been printed for a lot attribute order, then the lot attribute order cannot be edited for corrections.
- **Canceled.** Set the status to Canceled if no activity is required or performed for the lot attribute order. When the status is Canceled, then there can be no further modifications to the quality or lot attribute order, including its status.
- **NCR in Process.** The quality order status set by QAD QMS for a non-conforming order. QAD QMS applies this status after a person has set the order status to Approval Pending and QAD QMS has assigned an NCR number to the quality order but before the non-conformance report has been completed.
- **NCR Complete.** After the material disposition has been determined for a completed non-conformance report, QAD QMS sets the quality order status to NCR Complete.
- **Cancel NCR.** Set the status to Cancel NCR if the non-conforming order status was inadvertently set to Approval Pending and QAD QMS set the order status to NCR In Process and assigned an NCR number. Change the status from NCR In Process to Cancel NCR to notify QAD QMS to suspend and reverse the process of dispositioning the order. After QAD QMS receives and processes the notification to cancel the NCR process, it changes the order status from Cancel NCR to Results Pending.

Date Open. The date that the lot attribute or quality order was created.

Result. This field displays the result of the lot attribute or quality order. The result for the order is automatically updated as values for its attributes are entered. If necessary, you can manually override the result for an order.

- **Not Entered.** The initial result for a lot attribute or quality order before any attributes have been entered.

- **Conforming.** The result when all of the attribute specifications (Validation = Yes) have conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Non-Conforming.** The result when any of the attribute specifications (Validation = Yes) have non-conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Incomplete.** The result when some of the attribute values have been entered, and at least one attribute value (Required = Yes) has not been entered.
- **Inconclusive.** The result for a lot attribute or quality order when the result for any one of its attributes has been manually set to Inconclusive.
- **No Data.** The result for a lot attribute or quality order when the result for any one of its attributes has been manually set to No Data.
- **Blank.** The result when all of the attributes (Required = Yes) have been entered and there are no attributes with the Validation setting enabled.

Effective Date. This field displays the effective date, which determines when the general ledger (GL) Inventory account balance is updated. It has no effect on the inventory quantity-on-hand update, which always occurs immediately.

The default effective date is the system date, but you can modify it as needed. The system verifies that the effective date is within an open fiscal period.

Material Disposition. Enter or select the generalized code value that best describes the material disposition of the item lot. Generalized code values are set up using Generalized Codes Maintenance (36.2.13) for field name ql_mtl_disposition.

Disposition Date. Enter the date that the material disposition was applied to the order for the item lot.

NCR Number. This field displays the non-conformance report number. The NCR number is only displayed for quality orders and only if the integration between QAD EE Quality Module and QAD QMS NCR/CAPA Module is activated.

Completed By. Enter the employee identifier of the person who recorded the values for the lot attribute or quality order.

Date Completed. The date that the attribute values were completed.

Approved By. Enter the employee identifier of the person who reviewed and approved the contents of the lot attribute or quality order.

Approval Date. Enter the date that the lot attribute or quality order was approved.

Remarks. Enter remarks related to the lot attribute or quality order.

Comments. Select this check box to show comments when the system displays lot attribute or quality order data.

Managing Attribute Deviations

A deviation is a variance to an attribute specification. Like item and lot attributes, deviations to attribute specifications are managed using attribute profiles. When managing deviations, it is necessary to use the attribute profile that is appropriate to the nature of the deviation.

Deviations provide a documented record of exceptions made to specifications and attributes. You can create deviations for purchasing, production, and sales.

- **Purchasing**. Create deviations for a supplier or order line to determine conformance to contract deviations.
- **Production**. Create deviations for work orders and CUM order to determine conformance to engineering deviations.
- **Production**. Create deviations for product structure and WO components to determine conforming material lots for allocation, picking, and issue to production.
- **Sales**. Create deviations for a customer or order line to determine conforming material lots for allocation, picking, and shipment for customer orders.

Deviations for attributes that appear in item profiles are necessary because material quality can vary for suppliers and purchase orders, customers and sales orders, materials required to produce work orders, and materials produced by work orders. Variations in material quality may require deviations to the expected or acceptable values and specifications for one or more attributes.

When first creating an item profile, it is recommended that you create a generic item profile that does not reference a site, customer, supplier, and so on. An attribute deviation is created when you modify an attribute that appears on a generic item profile for a specific item and site, customer, sales order, or purchase order, and so on. By definition, a deviation is a variance to an attribute specification.

Like item and lot attributes, deviations to attribute specifications are managed using attribute profiles. IAQ allows you to manage deviations by using an attribute profile that is appropriate to the nature of the deviation.

The most common deviations are supported by profiles for inventory, purchasing, sales, and production:

Department	Profile	Procedure	Description
Inventory	Maintain Item Profile	Creating a Deviation - Item Profile with Site	Defining deviations for: • Item • Item and Site
Purchasing	Maintain Item Supplier Profile	Creating a Deviation - Item Supplier Profile	Defining deviations for receipts of: • Item and Supplier • Item, Supplier, and Site
	Maintain PO Line Profile	Creating a Deviation - PO Line Profile	Defining deviations for: • Purchase Order • Scheduled Order Line
Sales	Maintain Item Customer Profile	Creating a Deviation - Item Customer Profile	Defining deviations for allocations and shipments of: • Item and Customer • Item, Customer, and Ship-to • Item, Customer, Ship-to, and Site
	Maintain SO Line Profile	Creating a Deviation - SO Line Profile	Defining deviations for: • Sales Order • Scheduled Order Line

Department	Profile	Procedure	Description
Production	Maintain WO Order Profile	Creating a Deviation - Work Order and CUM Order Profile	Defining deviations for receipts of a work order
	Maintain CUM Order Profile	Creating a Deviation - Work Order and CUM Order Profile	Defining deviations for receipts of a work order
	Maintain BOM Component Profile	Creating a Deviation - WO or BOM Component Profile	Defining deviations for allocations and issues of a product structure or formula component
	Maintain WO Component Profile	Creating a Deviation - WO or BOM Component Profile	Defining deviations for allocations and issues of a work order component

Attribute Deviations - Inventory

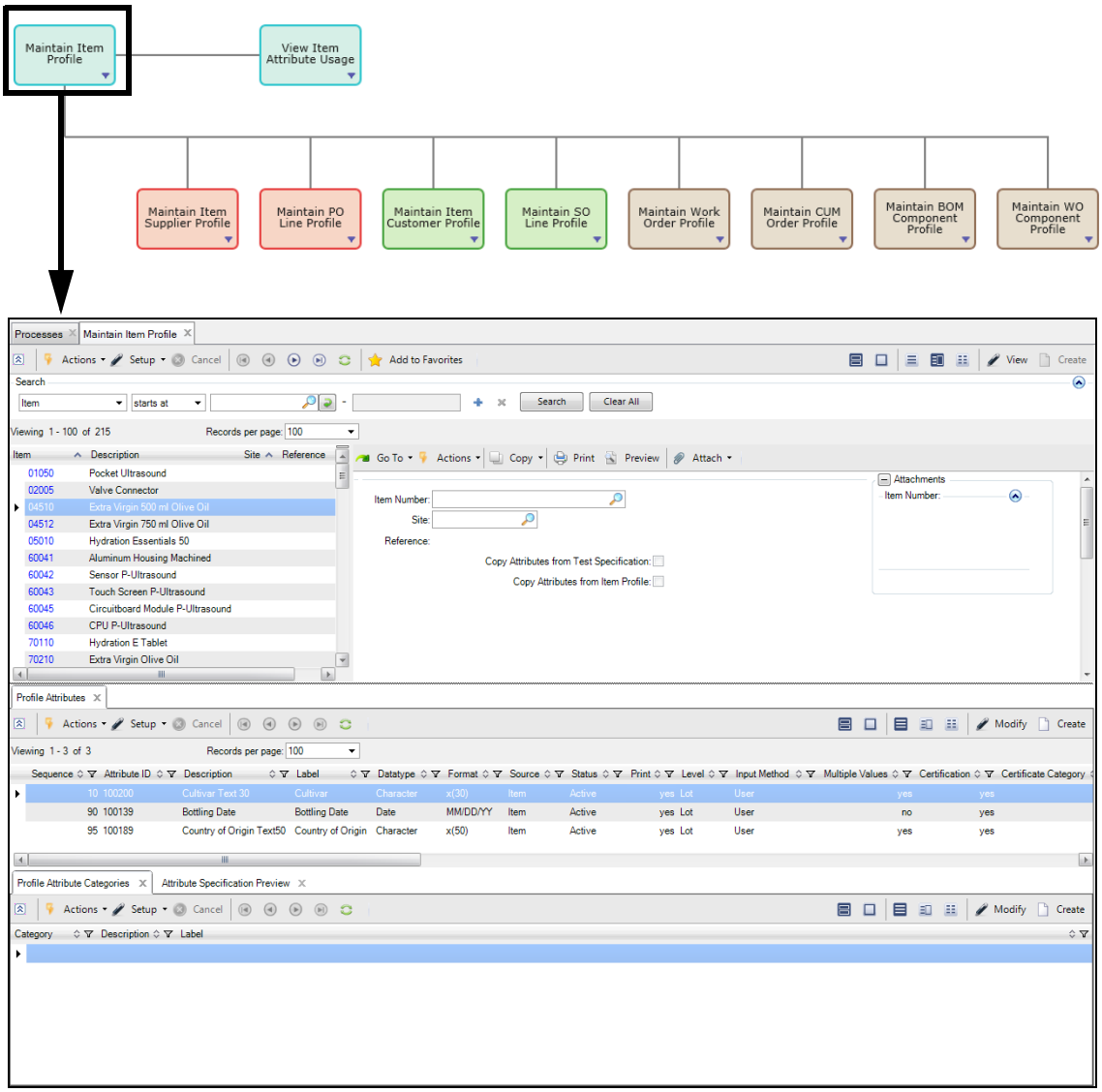
For inventory, use profiles that do not specify a site to define deviations for a specific item and inventory site.

Maintain Item Profile

In the Maintain Item Profile collection, you can create item profiles that allow you to track different attributes when dealing with a certain items.

To access the item profile collection, select Maintain Item Profile from the Manage Attribute Profile process map.

Fig. 3.24
Manage Attribute Profiles



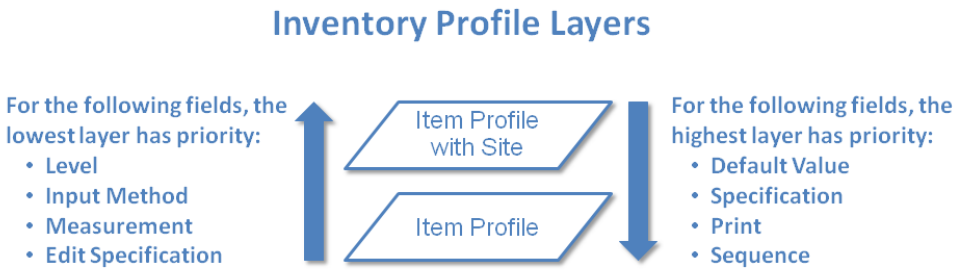
Creating a Deviation - Item Profile with Site

To create an item profile and to specify that it applies to a specific site, see “Creating an Item Attribute Profile” on page 21.

Attribute Layer Priority - Inventory

When there are multiple item profiles that specify and do not specify a site, some profiles will override other profiles. Each profile uses a different set of layers and priorities, which control how profile attributes override one another. The following graphic outlines the attribute layer priority for inventory profiles:

Fig. 3.25
Attribute Layer Priority - Inventory



The sub-layers determine how different entries within a layer override one another. The sub-layers will not, however, allow a layer to override a higher layer.

- Item Profile
  - Item and Site
  - Item

Field priority functions in both directions, depending on the field. In the case of Default Value, Specification, Print, and Sequence, the highest layer has priority. The field value of the highest layer cascades down.

For the Level, Input Method, UM, and Edit Specification fields, the lowest layer has priority. The field value of the lowest layer cascades up.

Attribute Deviations - Purchasing

In IAQ, you can create the following item profiles that are specific to purchasing:

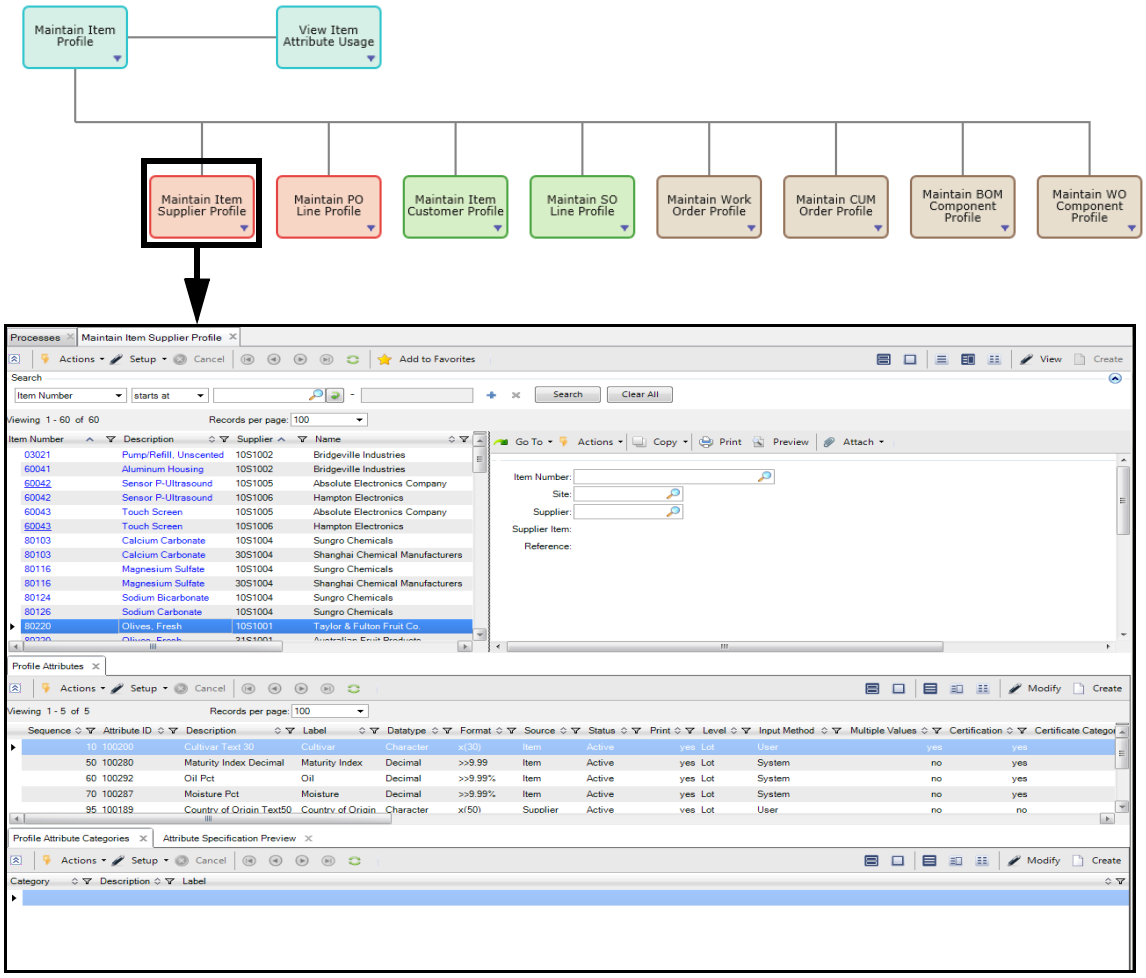
- **Item Supplier Profile.** Applies to a specific item, supplier, and site combination.
- **PO Line Profile.** Applies to a specific purchase order and scheduled order line.

Maintain Item Supplier Profile

In the Maintain Item Supplier Profile collection, you can create Item Supplier Profiles that allow you to track different attributes when dealing with a certain supplier.

To access the item supplier collection, select Maintain Item Supplier Profile from the Manage Attribute Profile process map.

Fig. 3.26
Maintain Item Supplier Profile



The top browse of the Item Supplier Profile collection contains the following fields:

Item Number. Enter or select the receiving item number for the item supplier profile.

Site. Optionally, enter or select the receiving site to associate with the item supplier profile. Leave the Site field blank if you do not want to restrict the profile to a particular site.

Supplier. Enter or select the supplier to associate with the item supplier profile.

Supplier Item. Displays the supplier's item number for the item and supplier.

Reference. Optionally, enter any reference information.

Creating a Deviation - Item Supplier Profile

Follow these steps to create an item supplier profile:

1 Select the Maintain Item Supplier Profile collection from the Manage Attribute Profile process map.

2 To create a new profile, click Create.

3 In the top browse of the item supplier profile collection, specify which item, site, and supplier are associated with the profile by entering the required information. For detailed field definitions, see “Maintain Item Supplier Profile” on page 53.

4 Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see “Creating an Item Attribute Profile” on page 21.

5 Link attribute categories to the profile. See “Link Attribute Categories to an Item Profile” on page 28.

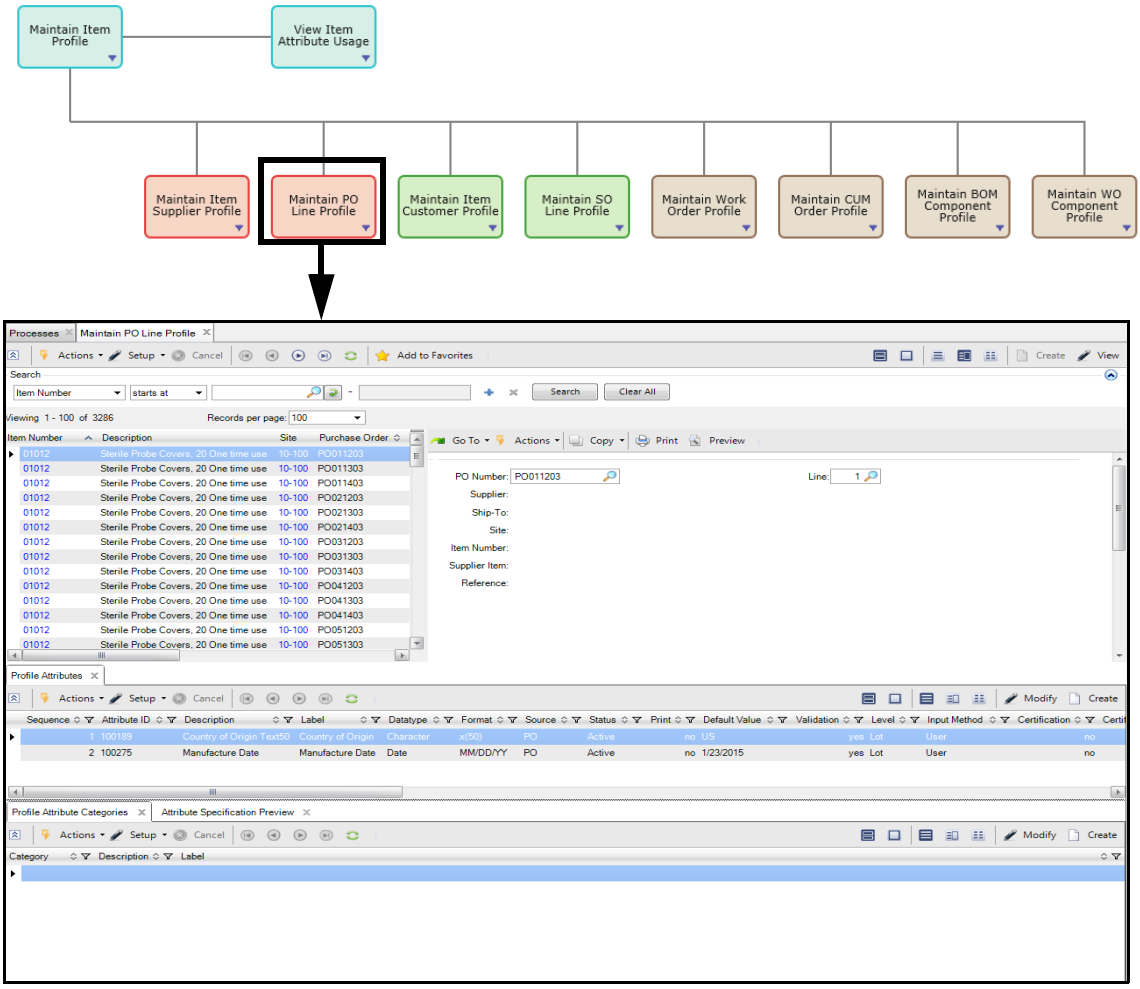
6 Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

Maintain PO Line Profile

In the Maintain PO Line Profile collection, you can create PO line profiles that allow you to track different attributes associated with a specific PO or scheduled order line.

To access the PO line profile collection, select Maintain PO Line Profile from the Manage Attribute Profile process map.

Fig. 3.27
Maintain PO Line Profile



The top browse in the Maintain PO Line Profile collection contains the following fields:

Purchase Order. This field displays the PO number associated with the PO line profile.

Line. This field displays the PO line number associated with the PO line profile.

Supplier. This field displays the address code of the supplier providing the items on this order. The address code identifies a specific supplier and related data, such as credit information.

Ship To. This field displays the address code that identifies where the items on the order should be delivered.

Site. This field displays the site on the PO that is associated with the PO line profile.

Item Number. This field displays the item number on the PO line that is associated with the PO line profile.

Supplier Item. This field displays the supplier's item number.

Reference. Optionally, enter any reference information.

Creating a Deviation - PO Line Profile

Follow these steps to create a PO line profile:

1. Select the Maintain PO Line Profile collection from the Manage Attribute Profile process map.
2. To create a new profile, click Create.
3. In the top browse of the PO line profile collection, specify which purchase order and order line are associated with the profile by entering the required information. For detailed field definitions, see "Maintain PO Line Profile" on page 55.
4. Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see "Creating an Item Attribute Profile" on page 21.
5. Link attribute categories to the profile. See "Link Attribute Categories to an Item Profile" on page 28.
6. Verify that the item profile is set up properly. See "Verify Item Attribute Setup" on page 29.

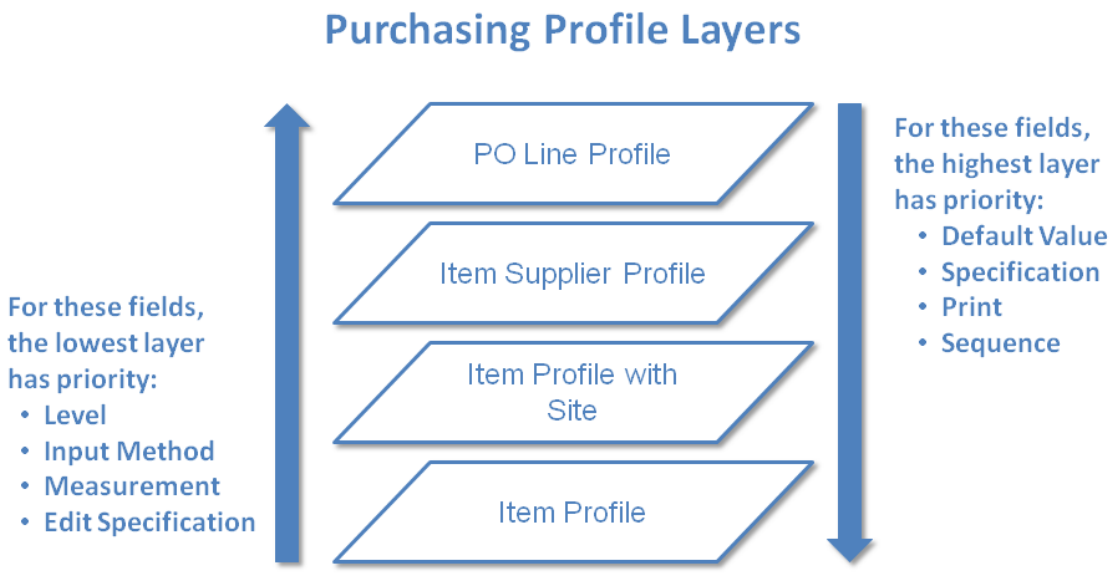
Attribute Layer Priority - Purchasing

When there are multiple item supplier and PO line profiles, some profiles will override other profiles. For example:

- What if there are multiple profiles for an item, item and supplier, as well as PO line?
- What if the same attribute appears with different default values at different levels?
- What if the same attribute appears with different specifications at different levels?

Each profile uses a different set of layers and priorities, which control how profile attributes override one another. The following graphic outlines the attribute layer priority for purchasing profiles:

Fig. 3.28
Attribute Layer Priority - Purchasing



The sub-layers determine how different entries within a layer override one another. The sub-layers will not, however, allow a layer to override a higher layer.

- PO Line Profile
- Item and Supplier Profile
  - Item, Supplier, and Site
  - Item and Supplier
- Item Profile
  - Item and Site
  - Item

Field priority functions in both directions, depending on the field. In the case of Default Value, Specification, Print, and Sequence, the highest layer has priority. The field value of the highest layer cascades down.

For the Level, Input Method, UM, and Edit Specification fields, the lowest layer has priority. The field value of the lowest layer cascades up.

Attribute Deviations - Sales

In IAQ, you can create the following item profiles that are specific to sales:

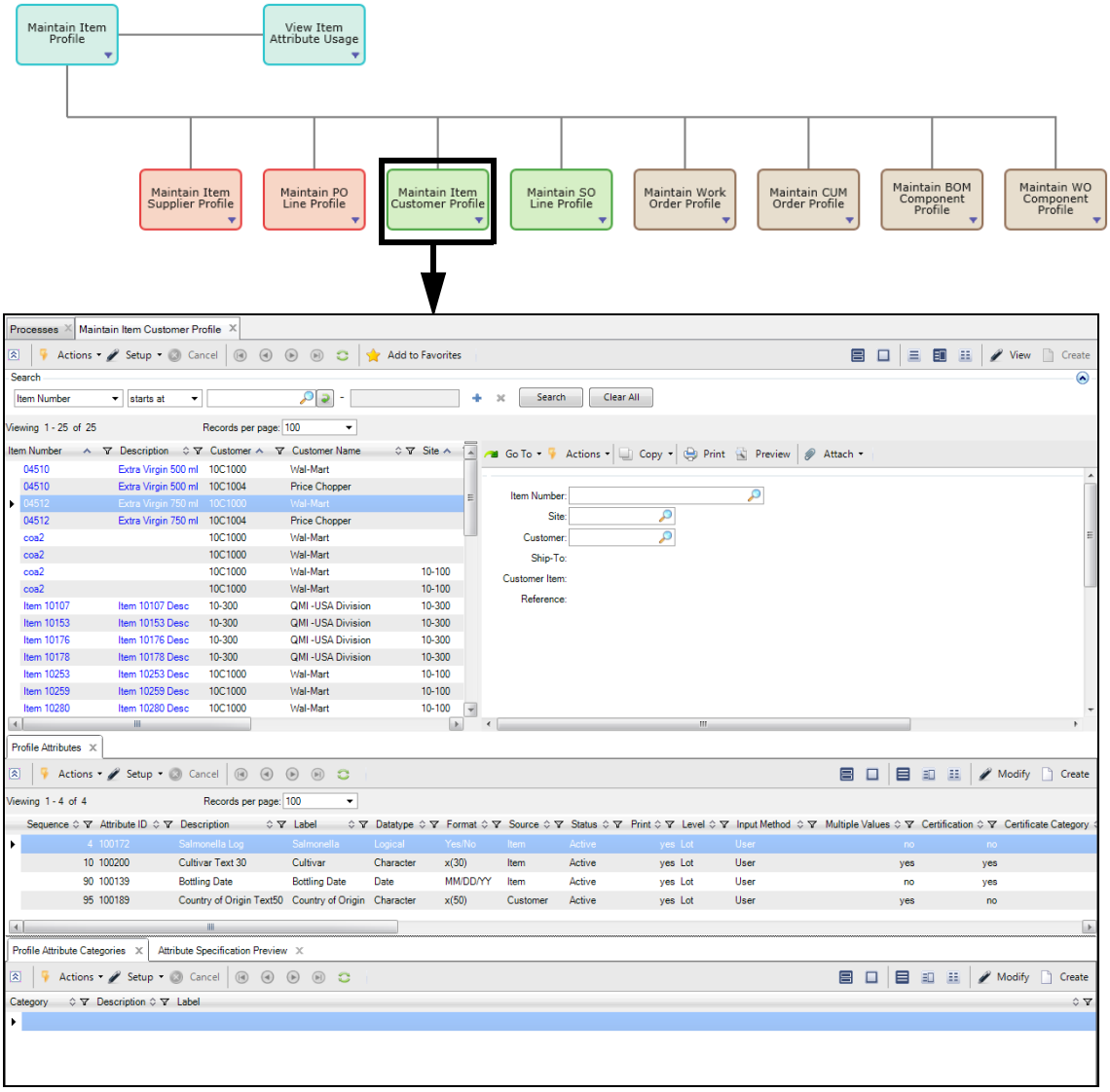
- **Item Customer Profile.** Applies to a specific item, customer, ship-to, and site combination.
- **SO Line Profile.** Applies to a specific sales order or scheduled order line.

Maintain Item Customer Profile

In the Maintain Item Customer Profile collection, you can create item customer profiles that allow you to track different attributes when dealing with a certain customers.

To access the item customer collection, select Maintain Item Customer Profile from the Manage Attribute Profile process map.

Fig. 3.29
Maintain Item Customer Profile



The top browse of the Maintain Item Customer Profile collection contains the following fields:

Item Number. Enter or select the item number for the item customer profile.

Site. Optionally, enter or select the site associated with the item customer profile. Leave the Site field blank if you do not want to restrict the profile to a particular site.

Customer. Enter or select the sold-to customer associated with the item customer profile.

Ship-To. Optionally, enter or select the address code for the customer ship-to address that identifies where the items on the order should be delivered.

Customer Item. This field displays the customer's item number that is associated with the item and customer.

Reference. Optionally, enter any reference information.

Creating a Deviation - Item Customer Profile

Follow these steps to create an item customer profile:

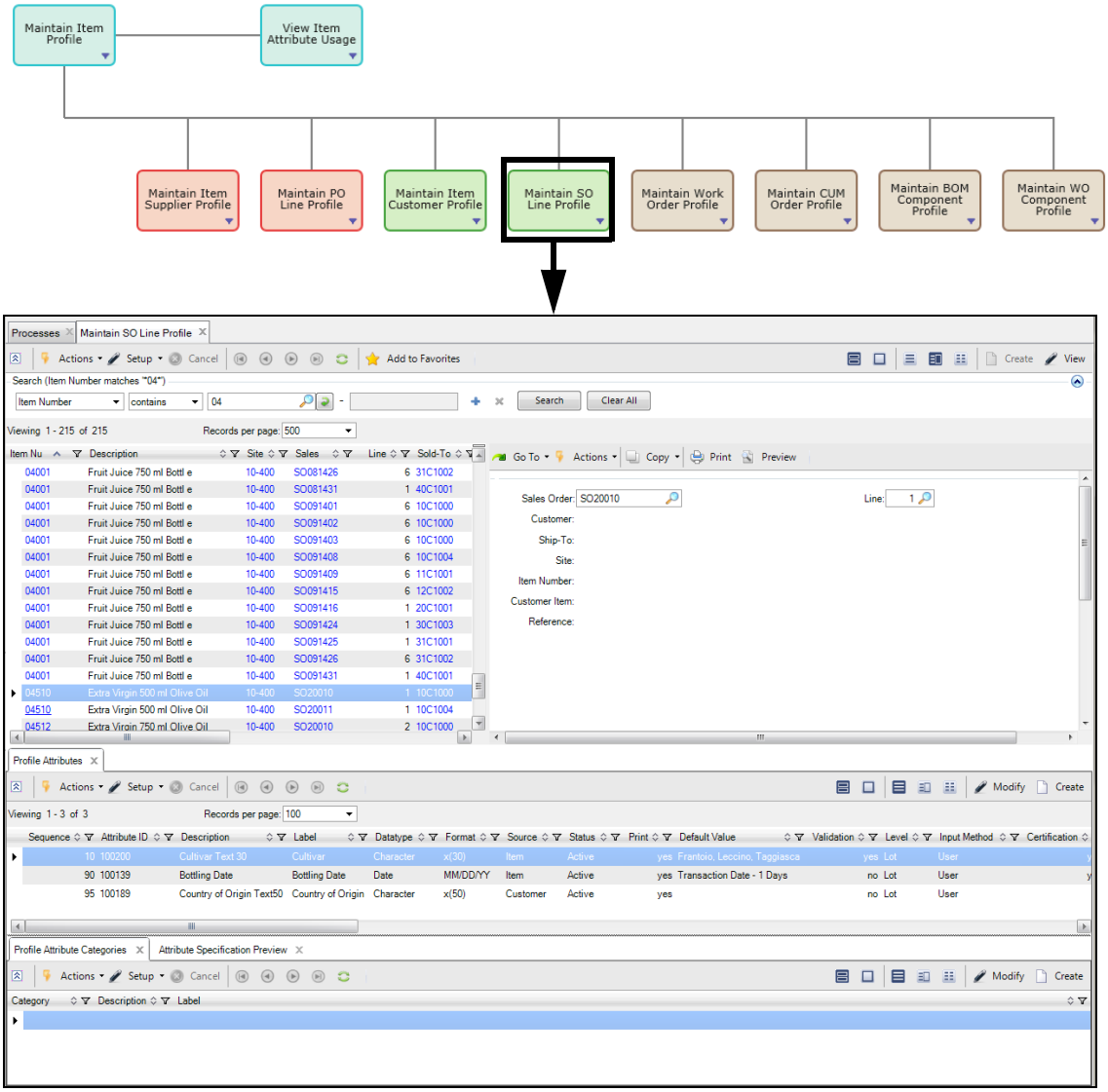
1. Select the Maintain Item Customer Profile collection from the Manage Attribute Profile process map.
2. To create a new profile, click Create.
3. In the top browse of the item customer profile collection, specify which item, site, ship-to, and customer are associated with the profile by entering the required information. For detailed field definitions, see “Maintain Item Customer Profile” on page 57.
4. Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see “Creating an Item Attribute Profile” on page 21.
5. Link attribute categories to the profile. See “Link Attribute Categories to an Item Profile” on page 28.
6. Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

Maintain SO Line Profile

In the Maintain SO Line Profile collection, you can create SO line profiles that allow you to track different attributes associated with a specific SO or scheduled order line.

To access the SO line profile collection, select Maintain SO Line Profile from the Manage Attribute Profile process map.

Fig. 3.30
Maintain SO Line Profile



The top browse in the Maintain SO Line Profile collection contains the following fields:

Sales Order. This field displays the SO number associated with the SO line profile.

Line. This field displays the SO line number associated with the SO line profile.

Customer. This field displays the sold-to customer associated with the profile.

Ship To. This field displays the address code for the customer ship-to address that identifies where the items on the order should be delivered.

Site. This field displays the site on the SO that is associated with the SO line profile.

Item Number. This field displays the item number on the SO line that is associated with the SO line profile.

Customer Item. This field displays the customer's item number.

Reference. Optionally, enter any reference information.

Creating a Deviation - SO Line Profile

Follow these steps to create an SO line profile:

1. Select the Maintain SO Line Profile collection from the Manage Attribute Profile process map.
2. To create a new profile, click Create.
3. In the top browse of the SO line profile collection, specify which sales order and order line are associated with the profile by entering the required information. For detailed field definitions, see “Maintain SO Line Profile” on page 59.
4. Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see “Creating an Item Attribute Profile” on page 21.
5. Link attribute categories to the profile. See “Link Attribute Categories to an Item Profile” on page 28.
6. Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

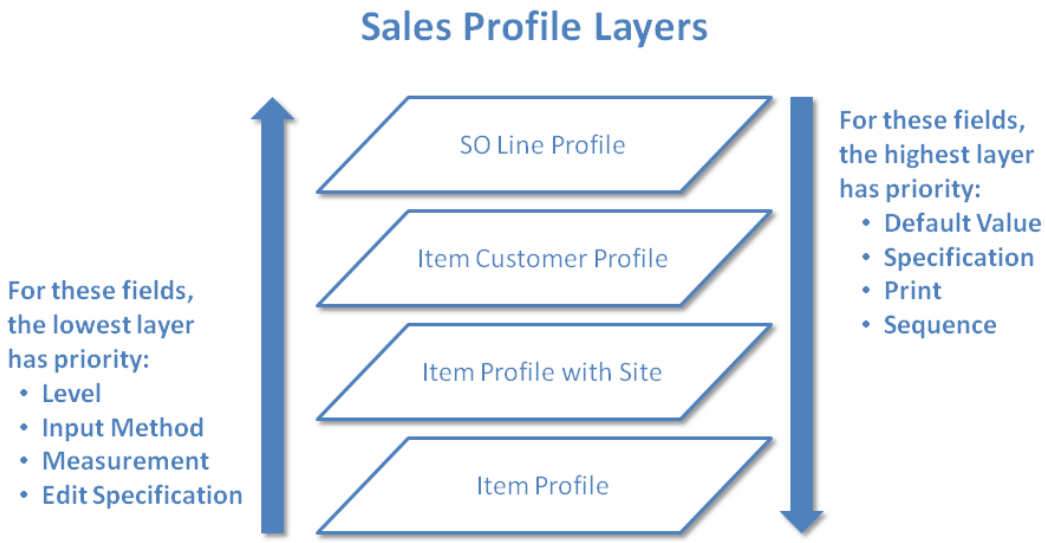
Attribute Layer Priority - Sales

When there are multiple item customer and so line profiles, some profiles will override other profiles. For example:

- What if there are multiple profiles for an item, item and customer, item, ship-to, and customer, as well as SO line?
- What if the same attribute appears with different default values at different levels?
- What if the same attribute appears with different specifications at different levels?

Each profile uses a different set of layers and priorities, which control how profile attributes override one another. The following graphic outlines the attribute layer priority for sales profiles:

Fig. 3.31
Attribute Layer Priority - Sales



The sub-layers determine how different entries within a layer override one another. The sub-layers will not, however, allow a layer to override a higher layer.

- SO Line Profile
- Item and Customer Profile
  - Item, Customer, and Site
  - Item and Customer
- Item Profile
  - Item and Site
  - Item

Field priority functions in both directions, depending on the field. In the case of Default Value, Specification, Print, and Sequence, the highest layer has priority. The field value of the highest layer cascades down.

For the Level, Input Method, UM, and Edit Specification fields, the lowest layer has priority. The field value of the lowest layer cascades up.

Attribute Deviations - Production

In IAQ, you can create the following item profiles that are specific to items that are produced and received:

- **Work Order Profile.** Applies to a specific item and work order combination in production.
- **CUM Order Profile.** Applies to a specific item and CUM order combination in production.

You can also create the following item profiles that are specific to components and raw materials required for production:

- **BOM Component Profile.** Applies to a specific product structure and component or a formula and ingredient for production.

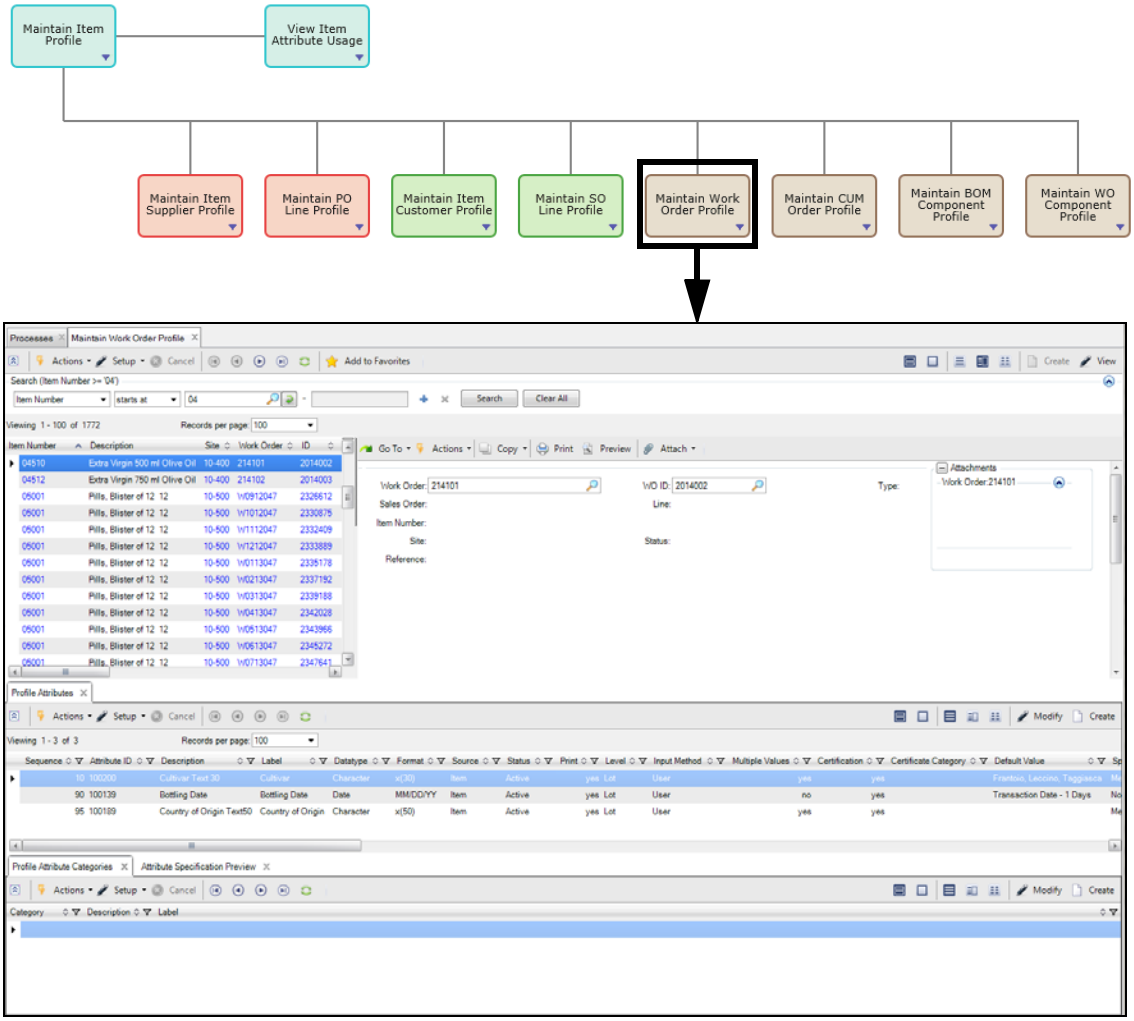
- **WO Component Profile.** Applies to a specific WO component in production.

Maintain WO Order Profile

In the Maintain Work Order Profile collection, you can create work order profiles that allow you to track attributes for specific work orders.

To access the work order profile collection, select Maintain Work Order Profile from the Manage Attribute Profile process map.

Fig. 3.32
Maintain Work Order Profile



The top browse of the Maintain Work Order Profile collection contains the following fields:

Work Order. This field displays the WO number associated with the work order profile.

WO ID. Enter or select the WO ID associated with the work order profile. The WO number and WO lot ID together identify a unique order.

Type. This field displays the type of work order. The work order type identifies the work order source and how it should be processed. The following is a list of work order types:

- **Blank.** Most work orders are created with an order type that is blank. Blank type WOs are normal manufacturing orders with a standard product structure and routing.
- **E (Expense).** Expense work orders are used for non-inventory jobs, such as engineering prototypes or design projects. They are tracked by a work order so costs can be accumulated. Usually a special GL account and project code are entered. Expense work orders do not have any routing operations or components. These are added manually.
- **R (Rework).** Rework work orders are used for products needing repair or reworking. This type of order is created with no routing and only one component (the product being reworked). Rework expenses can be tracked separately by entering a different GL account and project code.

The system generates work order types S, C, F, or W:

- **S (Scheduled).** Generated by the system when a Repetitive schedule is entered. The work order number is the item number scheduled for production. Scheduled orders can be tracked using Repetitive feedback functions or released to create work orders. To release it, change the status field from exploded to allocated or to released. The system automatically changes the type to blank and treats it like a normal work order. The system also updates the repetitive schedule to exclude the order.
- **C (Cumulative).** Generated by the system to track repetitive production costs. These cannot be processed by work order functions.
- **F (Final Assembly).** Generated when a sales order for a configured product is released to manufacturing. It uses the standard routing for the item, but the product structure contains only the items chosen on the sales order configuration. These orders are released and processed as regular work orders. You must specify Type as F in Multiple WO Release/Print to release the work order, however.
- **W (Flow).** Generated when you use Flow Schedule Maintenance to create a flow scheduled order that does not reference an existing work order. These cannot be processed by work order functions.

Sales Order. This field displays the SO number associated with the work order profile. The option to specify a sales order and SO line provides linkage to profiles defined for the SO line and customer.

Line. This field displays the SO line number associated with the work order profile.

Item Number. This field displays the work order item number.

Site. This field displays the site on the WO that is associated with the work order profile.

Status. This field displays the current status of the WO. Work order status tracks a work order through the manufacturing process. Status mainly determines whether the work order quantity and due date can be changed by MRP, and whether the work order should be affected by engineering changes before release. Most functions can specify order status — in particular, capacity planning recalculations. The following is a list of WO status codes:

- **P (Planned).** Planned orders are created, changed, or deleted by MRP, not manually. Once approved, the status of a planned order is changed to one of the other status codes.

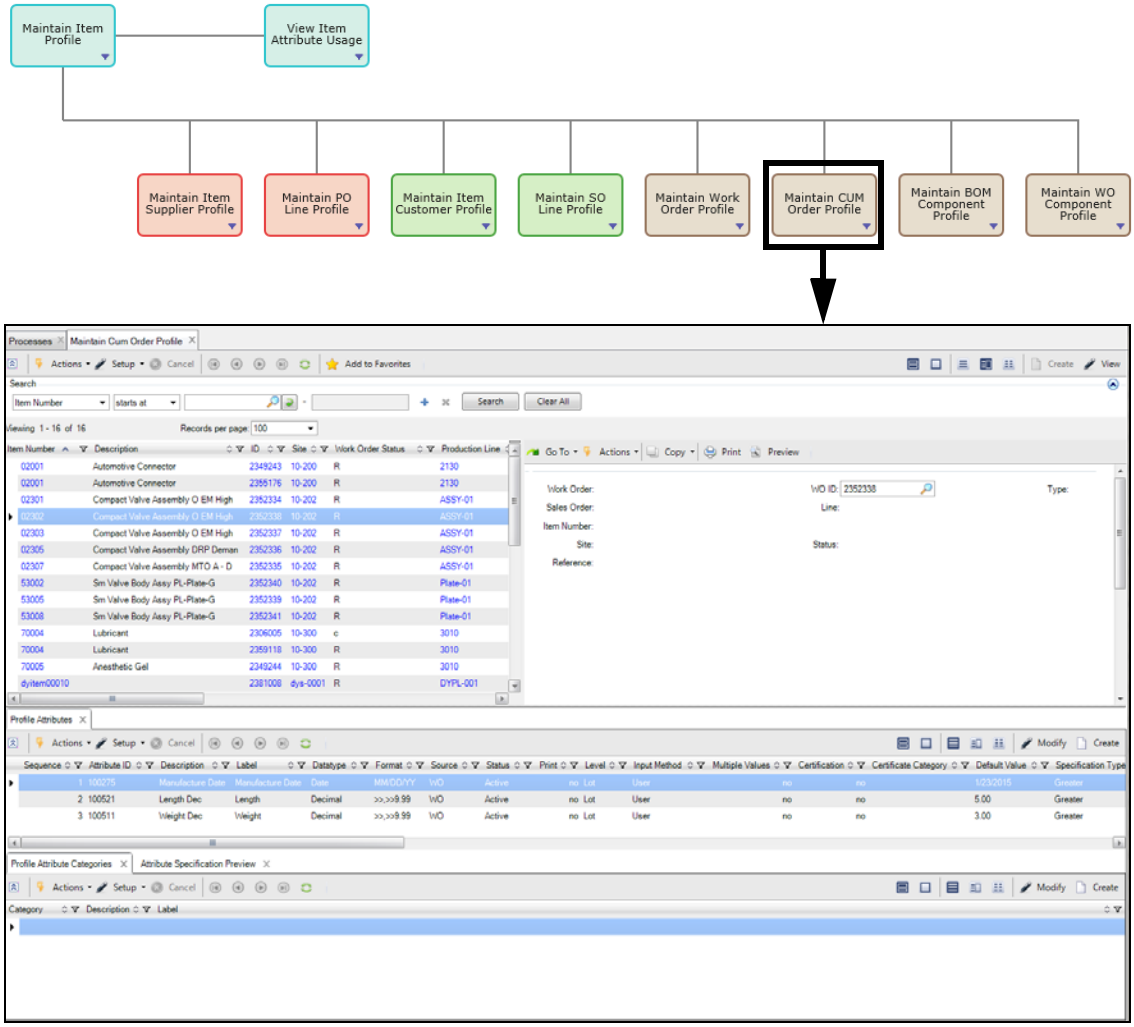
- **F (Firm Planned).** Defaults to F when a new work order is added. Approved orders that cannot be rescheduled automatically by MRP. They are fixed in quantity and time relative to the MRP process, although they can be changed manually. A bill and routing are associated with these orders, but they are not frozen from engineering changes. Operations are scheduled.
- **B (Batch Input Firm Planned).** Firm planned orders entered in batch. They do not have a bill or routing, and do not generate component requirements until their status is changed to F, E, A, or R.
- **E (Exploded).** Similar to a firm planned order, but its bill and routing are not affected by engineering changes to the product structure, formula, routing, or process.
- **A (Allocated).** An exploded order on which components are allocated, phantom components are exploded, and work orders are created and exploded for routable components. Items can be issued to allocated orders.
- **R (Released).** Allocated orders that have been released to the shop, and the picklist and routing have been printed. Component items have been detail allocated and picked. Labor can be reported and items can be issued.
- **C (Closed).** This work order has been completed. Additional component issues cannot be recorded. Labor can continue to be reported. This work order cannot be deleted until the Accounting Close function has been processed.

Maintain CUM Order Profile

In the Maintain CUM Order Profile collection, you can create CUM order profiles that allow you to track different attributes when dealing with specific advanced repetitive cumulative orders.

To access the CUM order profile collection, select Maintain CUM Order Profile from the Manage Attribute Profile process map.

Fig. 3.33
Maintain CUM Order Profile



The top browse of the Maintain CUM Order Profile collection contains the following fields:

Work Order. This field displays the WO number associated with the CUM order profile.

WO ID. Enter or select the WO ID associated with the CUM order profile. The WO number and WO lot ID together specify a unique order.

Type. The WO type. See “Maintain WO Component Profile” on page 70.

Sales Order. Enter or select the SO number associated with the CUM order profile. The option to specify a sales order and SO line provides linkage to profiles defined for the SO line and customer.

Line. Enter or select the SO line number associated with the CUM order profile.

Item Number. This field displays the cumulative order item number.

Site. This field displays the site on the WO that is associated with the CUM order profile.

Status. See “Maintain WO Order Profile” on page 63.

Reference. Optionally, enter any reference information.

Creating a Deviation - Work Order and CUM Order Profile

Follow these steps to create a work order or CUM order profile:

1. Select the Maintain Work Order Profile collection from the Manage Attribute Profile process map. If you are creating a CUM order profile, select Maintain CUM Order Profile.
2. To create a new profile, click Create.
3. In the top browse of the work order profile collection, specify which work order and WO ID are associated with the profile by entering the required information. For detailed field definitions, see “Maintain WO Order Profile” on page 63 or “Maintain CUM Order Profile” on page 65.
4. Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see “Creating an Item Attribute Profile” on page 21.
5. Link attribute categories to the profile. See “Link Attribute Categories to an Item Profile” on page 28.
6. Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

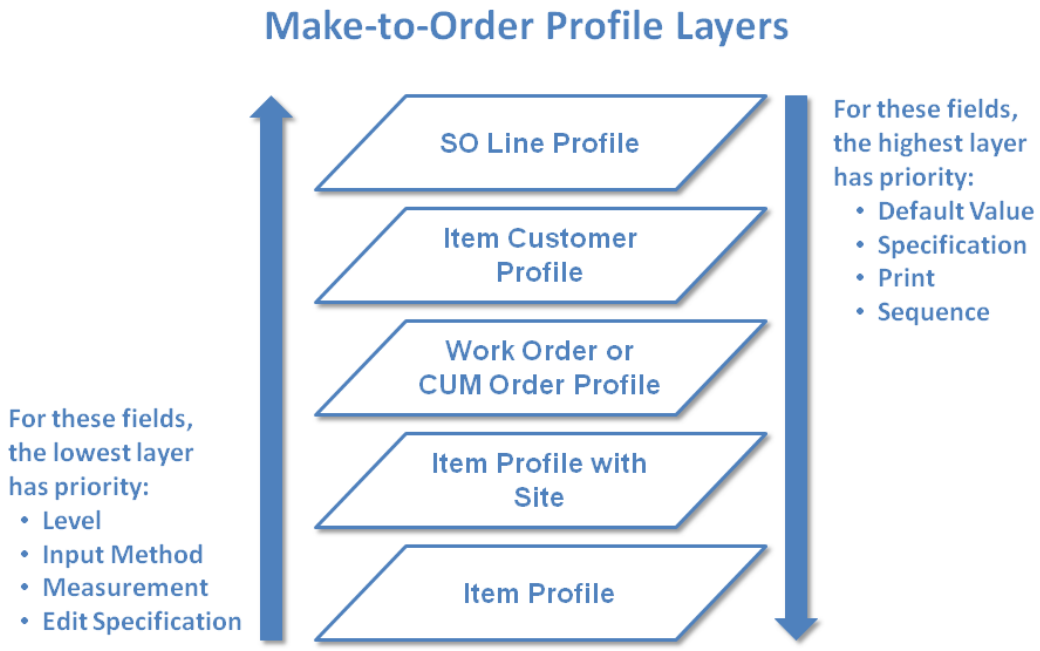
Attribute Layer Priority - Production

When there are multiple work order or CUM order profiles, some profiles will override other profiles. For example:

- What if there are multiple profiles for an item, item and customer, work order, or CUM order?
- What if the same attribute appears with different default values at different levels?
- What if the same attribute appears with different specifications at different levels?

Each profile uses a different set of layers and priorities, which control how profile attributes override one another. The following graphic outlines the attribute layer priority for production profiles:

Fig. 3.34
Attribute Layer Priority - Make-to-Order



The sub-layers determine how different entries within a layer override one another. The sub-layers will not, however, allow a layer to override a higher layer. A make-to-order line incorporates both an SO line and a work order or CUM order. As such, it combines priority layers for both concepts.

The SO line profile and item customer profile have higher priority than the work order or CUM Order profile, as do their sub-layers. Item profile, as always, is the most general concept and has the lowest priority.

- SO Line
- Item Customer Profile
  - Item, Customer, Ship-to, Site
  - Item, Customer, Ship-to
  - Item, Customer, Site
  - Item, Customer
- Work Order or CUM Order Profile
- Item Profile
  - Item and Site
  - Item

Field priority functions in both directions, depending on the field. In the case of Default Value, Specification, Print, and Sequence, the highest layer has priority. The field value of the highest layer cascades down.

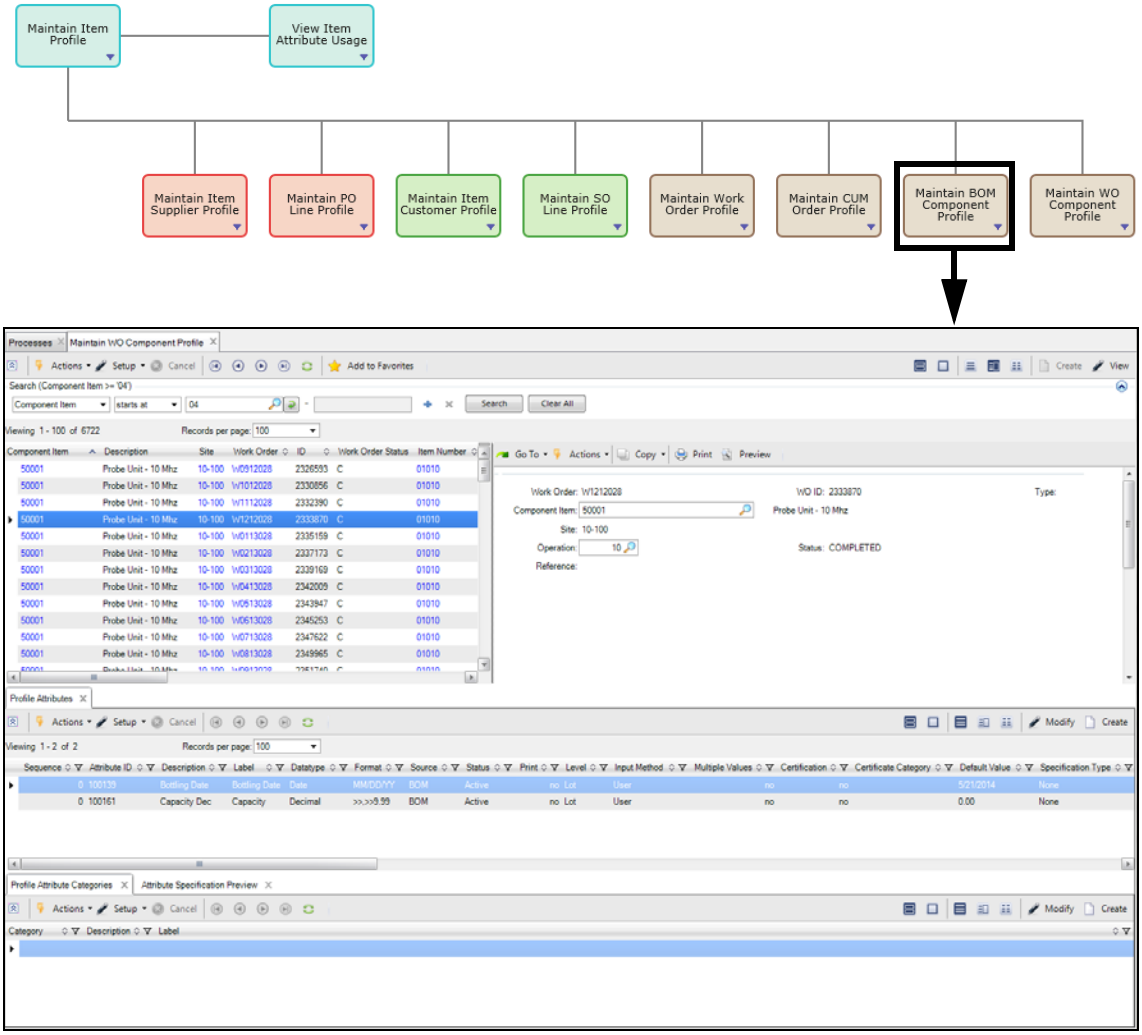
For the Level, Input Method, UM, and Edit Specification fields, the lowest layer has priority. The field value of the lowest layer cascades up.

Maintain BOM Component Profile

In the Maintain BOM Component Profile collection, you can create BOM component profiles that allow you to track different attributes when dealing with a specific BOM component.

To access the BOM component profile collection, select Maintain BOM Component Profile from the Manage Attribute Profile process map.

Fig. 3.35
Maintain BOM Component Profile



The top browse of the Maintain BOM Component Profile collection contains the following fields:

Parent Item. Enter or select the BOM code or the parent item for the BOM component profile. Parent and child BOM components are built in Product Structure Code Maintenance.

Component Item. Enter or select a valid component for the BOM code or parent item established in Product Structure Maintenance.

Reference. Enter or select the reference for the BOM component profile.

Start Effective. Enter or select the starting date for the BOM component profile.

End Effective. Enter or select the end date for the BOM component profile.

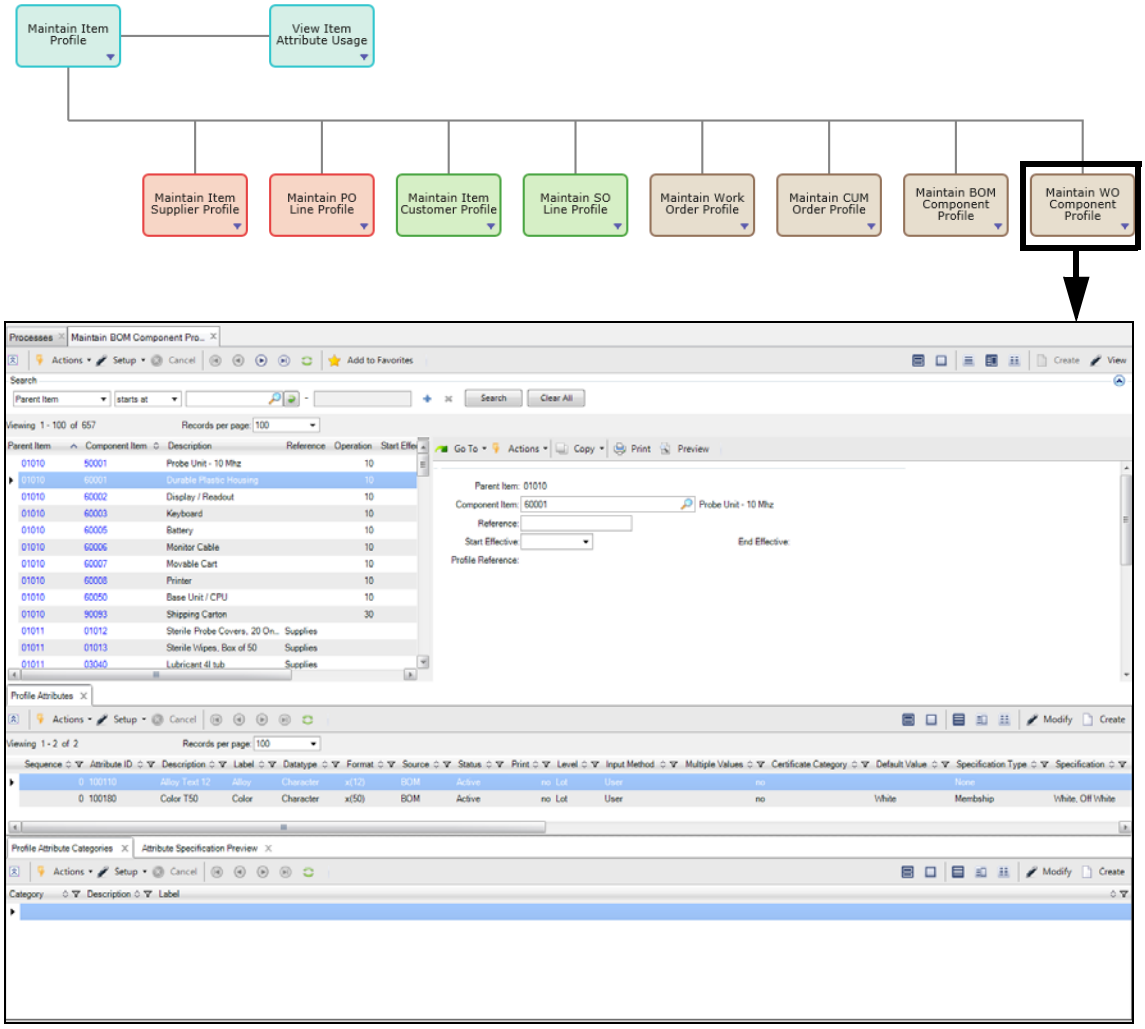
Profile Reference. Enter the name of the profile that you are creating for this BOM component profile.

Maintain WO Component Profile

In the Maintain WO Component Profile collection, you can create WO Component Profiles that allow you to track different attributes when dealing with a specific WO component.

To access the WO component profile collection, select Maintain WO Component Profile from the Manage Attribute Profile process map.

Fig. 3.36
Maintain WO Component Profile



The top browse of the Maintain WO Component Profile collection contains the following fields:

Work Order. Enter or select the WO number associated with the WO component profile.

WO ID. Enter or select the WO ID associated with the WO component profile. The WO number and WO lot ID together identify a unique order.

Type. The WO type. See “Maintain WO Component Profile” on page 70.

Component Item. Enter or select the component item number that is associated with the WO component profile.

Op. Enter or select the operation that is associated with the WO component profile.

Site. This field displays the site that is associated with the WO component profile.

Status. See “Maintain WO Order Profile” on page 63.

Reference. Optionally, enter any reference information.

Creating a Deviation - WO or BOM Component Profile

Follow these steps to create a WO or BOM component profile:

1. Select the Maintain WO Component Profile collection from the Manage Attribute Profile process map. If you are creating a BOM component profile, select Maintain BOM Component Profile.
2. To create a new profile, click Create.
3. In the top browse of the work order profile collection, specify which parent item, component item, work order, and work order ID are associated with the profile by entering the required information. For detailed field definitions, see “Maintain BOM Component Profile” on page 69 and “Maintain CUM Order Profile” on page 65.
4. Apply attributes to the profile by clicking Create in the Profile Attributes tab. For more information, see “Creating an Item Attribute Profile” on page 21.
5. Link attribute categories to the profile. See “Link Attribute Categories to an Item Profile” on page 28.
6. Verify that the item profile is set up properly. See “Verify Item Attribute Setup” on page 29.

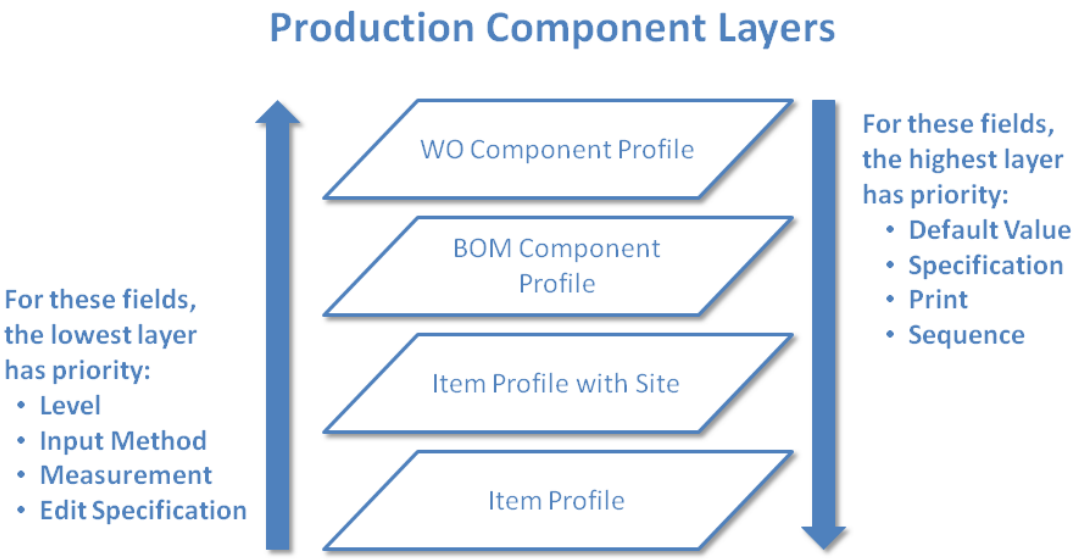
Attribute Layer Priority - Production Components

When there are multiple WO or BOM component profiles, some profiles will override other profiles. For example:

- What if there are multiple profiles for an item, WO component, and BOM component?
- What if the same attribute appears with different default values at different levels?
- What if the same attribute appears with different specifications at different levels?

Each profile uses a different set of layers and priorities, which control how profile attributes override one another. The following graphic outlines the attribute layer priority for production profiles:

Fig. 3.37
Attribute Layer Priority - Production Components



The sub-layers determine how different entries within a layer override one another. The sub-layers will not, however, allow a layer to override a higher layer.

The WO Component Profile layer has the highest priority. The next highest is the BOM Component Profile layer. The lowest priority layer for production components contains the Item Profile sub-layers.

- WO Component Profile
- BOM Component Profile
- Item Profile
  - Item and Site
  - Item

Field priority functions in both directions, depending on the field. In the case of Default Value, Specification, Print, and Sequence, the highest layer has priority. The field value of the highest layer cascades down.

For the Level, Input Method, UM, and Edit Specification fields, the lowest layer has priority. The field value of the lowest layer cascades up.

Viewing Inventory and Lot Attributes

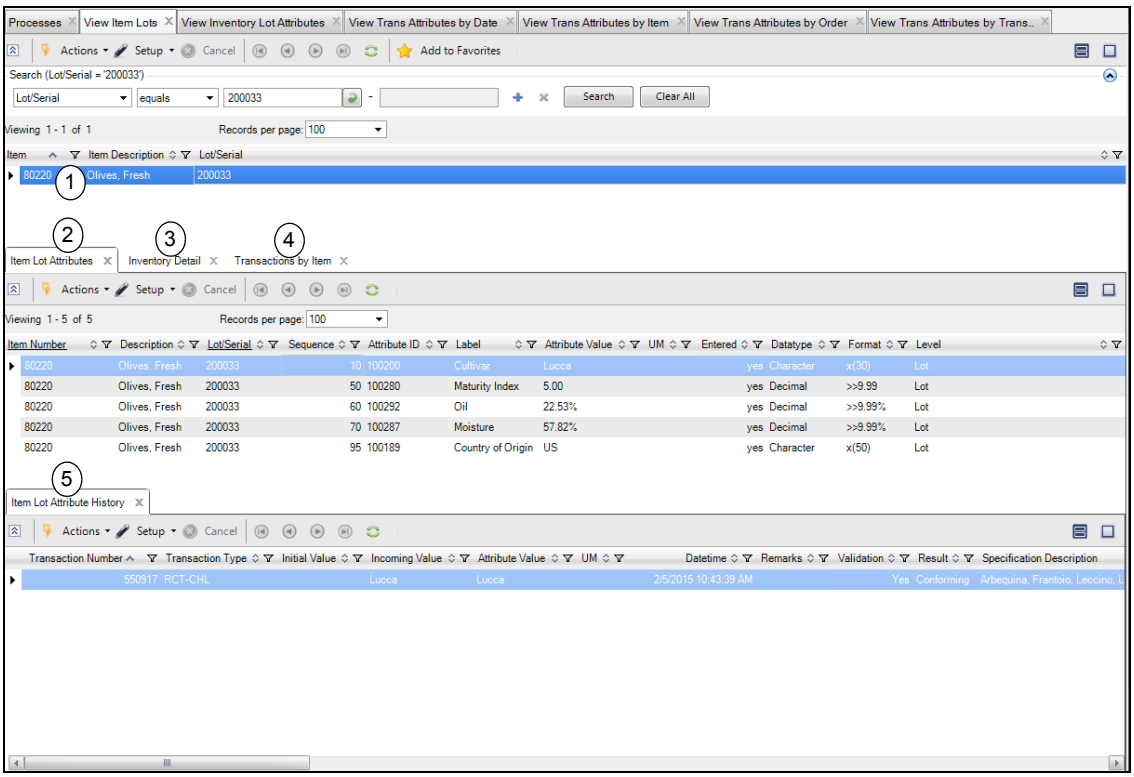
The view collections are read only and designed to allow users who do not have write permission to access and view inventory and lot attribute data.

View Item Lots

Use View Item Lots to view and monitor changes to lot attribute values. Access the View Item Lots collection from the following process maps:

- Manage Inventory with Attributes
- Manage Production with Attributes
- Manage Purchasing with Attributes
- Manage Sales with Attributes
- Manage Test Records and Quality Orders
- Inspect Inventory
- Inspect Production Receipts
- Inspect Purchasing Receipts
- Inspect Inventory for Sales Order

Fig. 3.38
View Item Lots Collection



The View Item Lots collection contains the following browses and tabs:

1 **Item Lots browse.** Displays a list of item lots.

2 **Item Lot Attributes tab.** Displays the attribute data for the selected item lot.

3 **Inventory Detail tab.** Displays the inventory detail for the selected item lot.

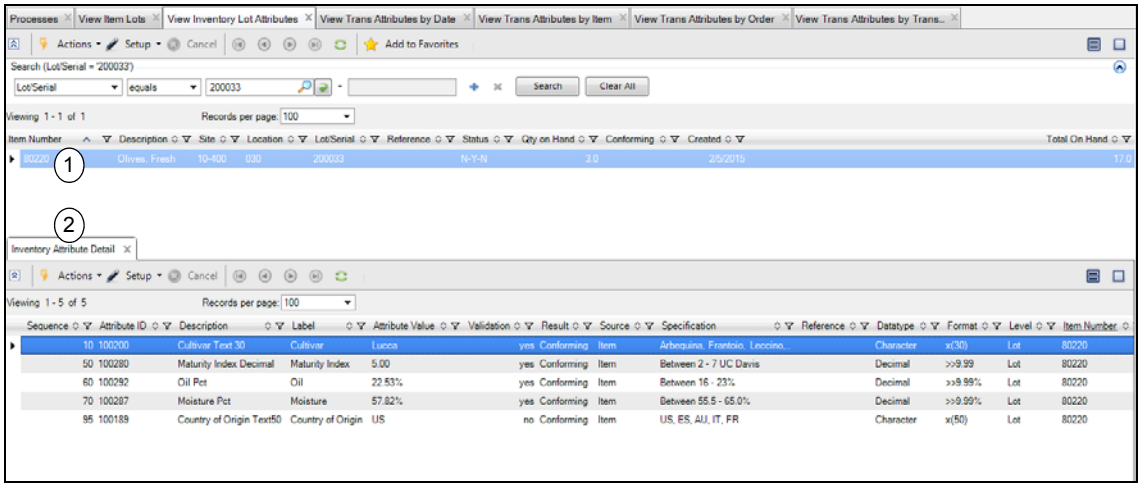
4 **Transaction by Item tab.** Displays transaction history and attribute changes for the selected item lot. This tab displays the same information as the View Transaction Attributes by Item collection.

5 **Item Lot Attribute History tab.** Displays transaction history for the selected lot attribute.

View Inventory Lot Attributes

Use the View Inventory Lot Attributes collection to view inventory data for item lots. The View Inventory Lot Attributes collection can be accessed from the Manage Inventory with Attributes process map.

Fig. 3.39
View Inventory Lot Attributes Collection



The View Inventory Lot Attributes collection contains the following browses and tabs:

1 **Item Lot Inventory browse.** The top-level browse displays inventory data for item lot.

2 **Inventory Attribute Detail tab.** Displays the attributes associated with the selected item lot along with additional inventory data.

View Transaction Attributes

Use the View Transaction Attributes collections to view the inventory transactions associated with specific item lots. Use these collections to search for inventory transactions by date, item, order, or transaction number:

- View Transaction Attributes by Date
- View Transaction Attributes by Item
- View Transaction Attributes by Order
- View Transaction Attributes by Transaction Number

Access the View Transaction Attributes collections from the Manage Inventory with Attributes process map.

View Item Attribute Usage

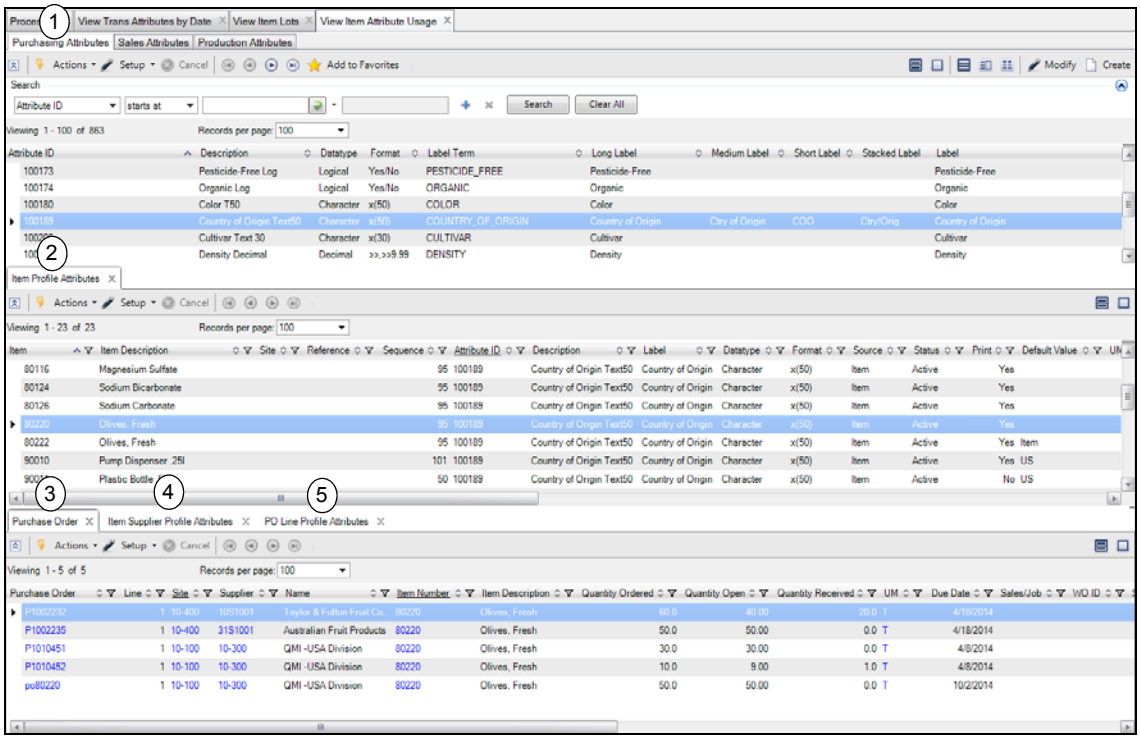
Use the View Item Attribute Usage collection to view attribute usage for purchasing, production, and sales. The top-level browse, which displays item attribute information, is organized by the associated business functions (purchasing, sales, and production). Select the Purchasing, Sales, or Production Attributes tabs to view if specific attributes are associated with specific purchase orders, sales orders, or work orders:

- View Item Attribute Usage - Purchasing Attributes
- View Item Attribute Usage - Sales Attributes
- View Item Attribute Usage - Production Attributes

View Item Attribute Usage - Purchasing Attributes

Select the Purchasing Attributes tab in the View Item Attribute Usage collection to view if specific item attributes are associated with purchase orders.

Fig. 3.40
View Item Attribute Usage Collection



The Purchasing Attributes tab in the View Item Attribute Usage collection contains the following browses and tabs:

1 **Item Attribute browse.** Displays item attribute information, such as attribute ID, description, datatype, format, label term, and so on.

2 **Item Profile Attributes tab.** Displays the item profiles that are linked to the selected item attribute.

3 **Purchase Order tab.** If the selected item is added to any POs, this tab displays the purchase order information.

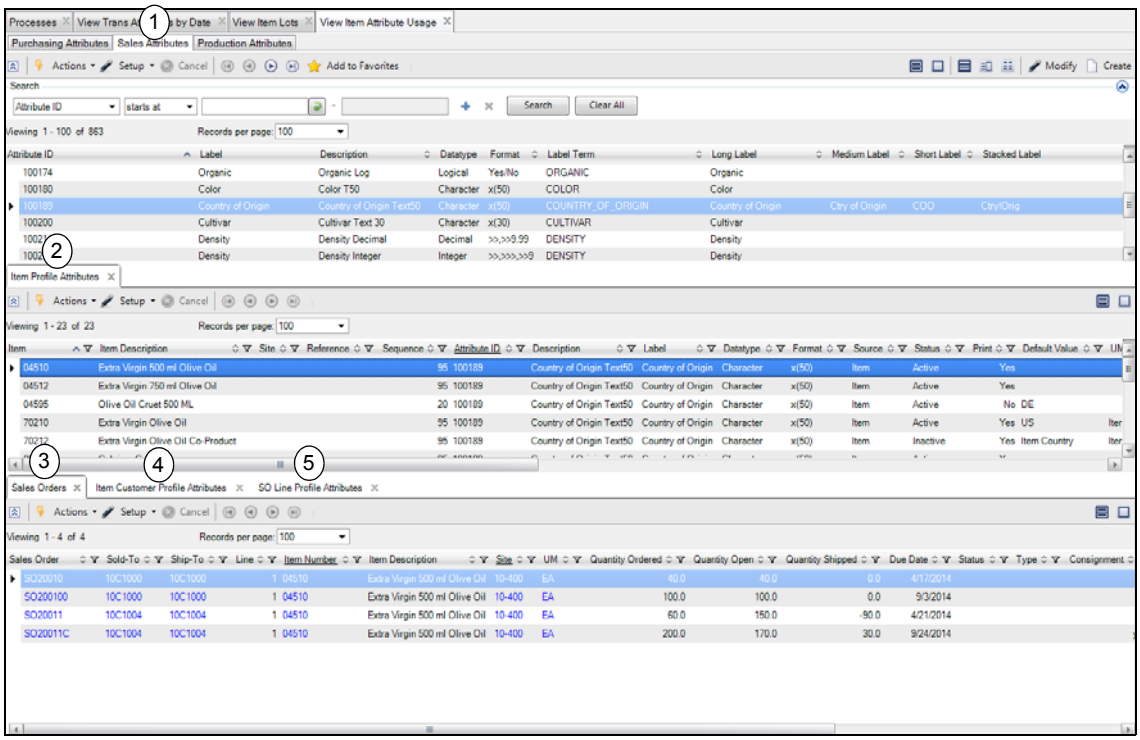
4 **Item Supplier Profile Attributes tab.** If there is an item supplier profile set up for the selected item, this tab displays the item and supplier information. For more information about setting up item supplier profiles, see “Maintain Item Supplier Profile” on page 53.

5 **PO Line Profile Attributes tab.** If there is a PO line profile set up for the selected item, this tab displays the item and PO line information. For more information about setting up PO line profiles, see “Maintain PO Line Profile” on page 55.

View Item Attribute Usage - Sales Attributes

Select the Sales Attributes tab in the View Item Attribute Usage collection to view if specific item attributes are associated with sales orders.

Fig. 3.41
View Item Attribute Usage Collection



The Sales Attributes tab in the View Item Attribute Usage collection contains the following browses and tabs:

1 **Item Attribute browse.** Displays item attribute information, such as attribute ID, description, datatype, format, label term, and so on.

2 **Item Profile Attributes tab.** Displays the item profiles that are linked to the selected item attribute.

3 **Sales Order tab.** If the selected item is added to any sales orders, this tab displays the sales order information.

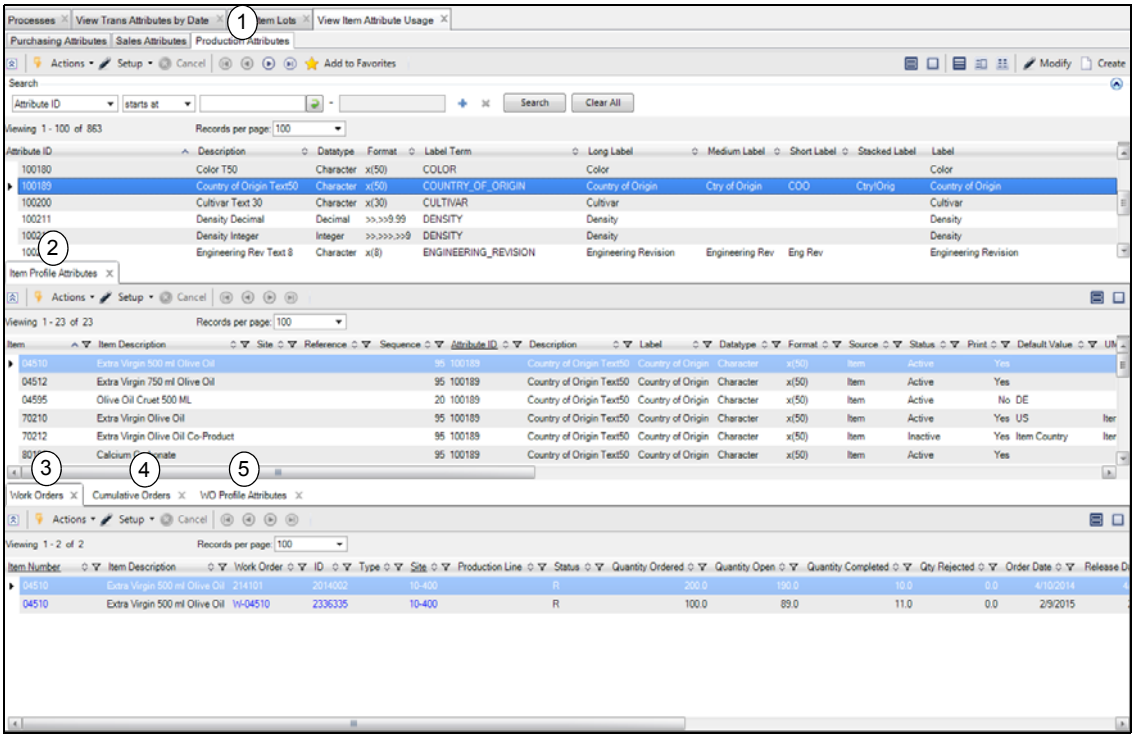
4 **Item Customer Profile Attributes tab.** If there is an item customer profile set up for the selected item, this tab displays the item and supplier information. For more information about setting up item customer profiles, see “Creating a Deviation - Item Customer Profile” on page 59.

5 **SO Line Profile Attributes tab.** If there is an SO line profile set up for the selected item, this tab displays the item and SO line information. For more information about setting up item SO line profiles, see “Creating a Deviation - SO Line Profile” on page 61.

View Item Attribute Usage - Production Attributes

Select the Production Attributes tab in the View Item Attribute Usage collection to view if specific item attributes are associated with work orders.

Fig. 3.42
View Item Attribute Usage Collection



The Production Attributes tab in the View Item Attribute Usage collection contains the following browses and tabs:

1 **Item Attribute browse.** Displays item attribute information, such as attribute ID, description, datatype, format, label term, and so on.

2 **Item Profile Attributes tab.** Displays the item profiles that are linked to the selected item attribute.

3 **Work Orders tab.** If the selected item is added to any work orders, this tab displays the work order information.

4 **Cumulative Orders tab.** If the selected item is added to any CUM orders, this tab displays the CUM order information.

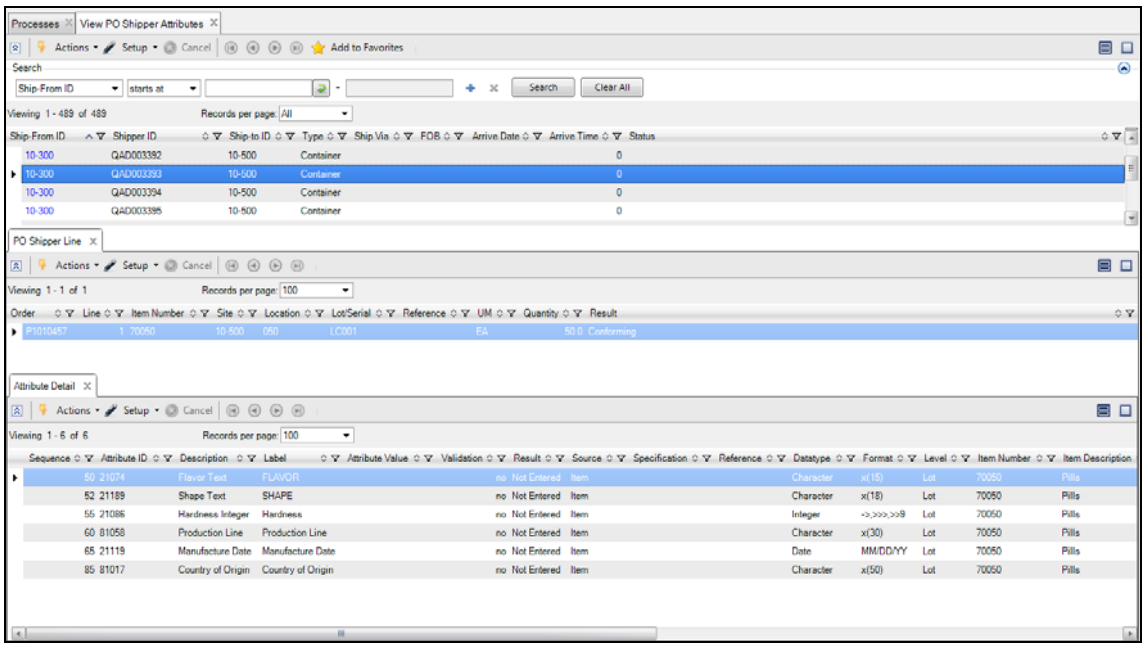
5 **WO Profile Attributes tab.** If there is a WO line profile set up for the selected item, this tab displays the item and work order information. “Creating a Deviation - Work Order and CUM Order Profile” on page 67.

View PO Shipper Attributes

The View PO Shipper Attributes collection displays the attribute values that are entered using PO Shipper Maintenance. Access this collection from the Manage Purchasing with Attributes process map.

For more information about PO Shipper Maintenance, see *QAD Scheduled Order Management User Guide*.

Fig. 3.43
View PO Shipper Attributes Collection



Materials Management with Lot Attributes

Monitor Materials for Production

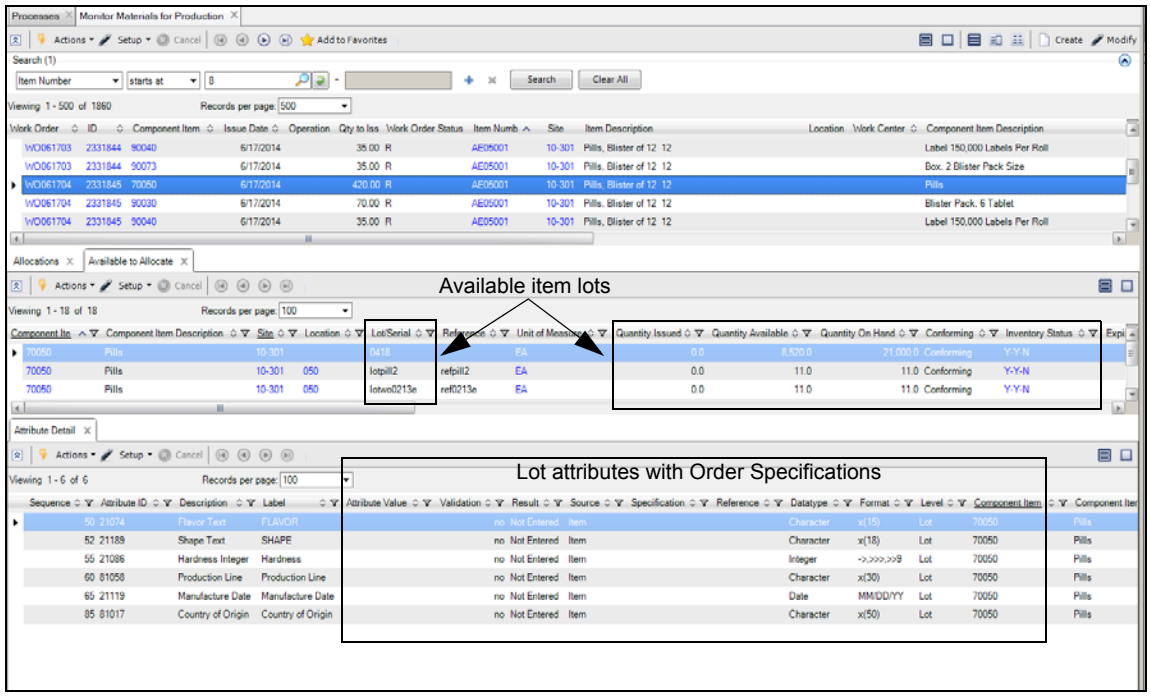
The Monitor Materials for Production collection provides a thorough view of materials for work orders. Use this collection to:

- Monitor if available and allocated inventory conforms to specifications.
- Drill down and determine why a lot is non-conforming.
- Plan material allocations for production.

When you select an item in the top-level browse, the Allocation, Available to Allocate, and Attribute Details tabs display the following information:

- **Allocations tab.** Displays the current allocations for the item on the selected work order.
- **Available to Allocate tab.** Displays if there are any available item lots to allocate for the item on the selected work order.
- **Attribute Detail tab.** Displays the attributes associated with the selected item.

Fig. 3.44
Monitor Materials for Production



Production Order

When editing or creating production orders, if attributes, attribute values, and attribute specifications were set up for the item or work order component, the system displays the Edit Specification field in Production Order Maintenance. You can create a new attribute specification for the production order.

Production Allocations or Transfers

When you select and allocate an inventory quantity for the order, the system validates the allocation quantity using the attribute values and the attribute specifications for the item. Then, the system creates the allocations for qualified inventory quantities. You can create and print picklists with attributes and specifications.

Likewise, when transferring materials for Advanced Repetitive production, the system determines the item attribute specifications that are specific to a component item on a production order. Then, the system qualifies inventory quantities to allocate with the attribute specifications for the item and creates allocations for qualified inventory quantities.

Issue Inventory for a Production Order

When you select inventory quantities to issue for the component item, the system validates the quantity using the attribute values and the attribute specifications for the item.

When issuing inventory, the system issues default inventory quantities using quantities that have been allocated or picked. It considers the attribute specifications for each item, and the attribute values for the inventory quantities to issue, based on your setup.

The system lets you view the inventory quantities that are selected to issue to an order and provides the option to view the attribute values and specifications for quantities to issue. You can also view inventory quantities that:

- Are available to issue and conform to the attribute specifications for the item
- Are not allocated and do not conform to the attribute specifications for the item

Production Receipt

For a production receipt, the system presents default data values for attributes, and lets you view attribute specifications. When required, the system accepts, validates, and processes user input for attribute values. It validates attribute values from the processing of the transaction on a lot attribute order or quality order for the production receipt.

The system records attribute values for production receipts, creating a quality or lot attribute order with attribute values and specifications.

Finally, the system updates inventory, item lot, and transaction audit data records with attribute specifications and values.

Monitor Materials for Sales

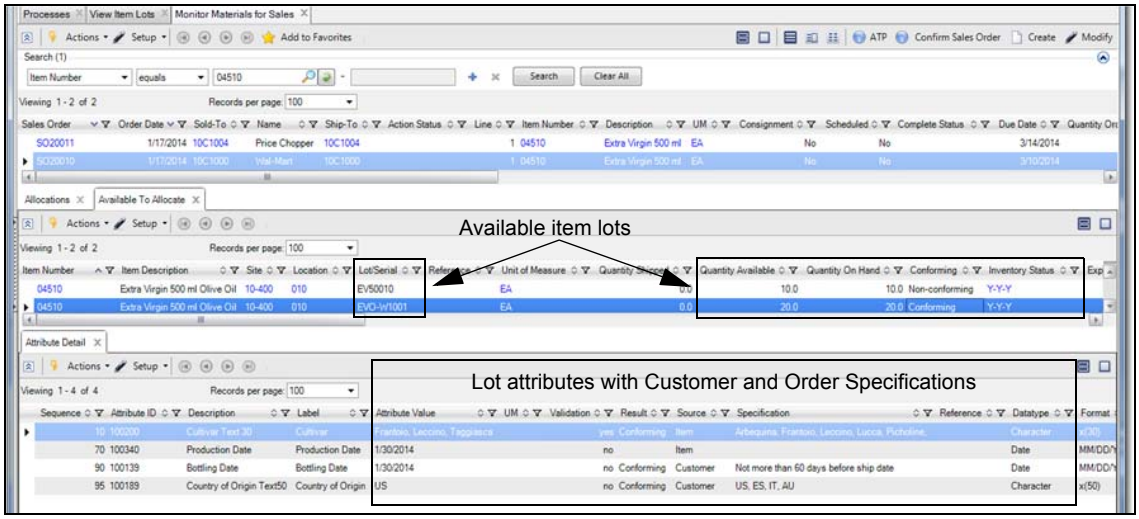
The Monitor Materials for Sales collection provides a thorough view of materials for orders. Use this collection to:

- Monitor if available and allocated inventory conforms to customer specifications.
- Drill down and determine why a lot is non-conforming.
- Plan shipping allocations.

When you select a sales order line in the top-level browse, the Allocation, Available to Allocate, and Attribute Details tabs display the following information:

- **Allocations tab.** Displays the current allocations for the item on the selected SO line.
- **Available to Allocate tab.** Displays if any there are any available item lots to allocate for the item on the selected SO line.
- **Attribute Detail tab.** Displays the attributes associated with the selected item.

Fig. 3.45
Monitor Materials for Sales



The system presents attributes for a customer order line item.

You determine the attributes, specifications, and parameters for a customer order line item.

Sales Order Manual Allocations

For manually allocating (pick) quantities for a customer order or shipper, the system determines the attribute specification using the following sequence:

1 From the order specification for the attribute if it exists

2 From the item, customer, and site specification for the attribute if it exists

3 From the item and site specification for the attribute

The system displays the attribute values for item lots that conform and do not conform to the order line specifications.

Pre-Shippers/Shippers

When confirming the pre-shipper or shipper, the system validates the current inventory quantity with the pre-shipper or shipper quantities, then creates transaction history and certification records for attributes.

When creating the shippers, you select and allocate an inventory quantity for the order line. The system validates the allocation quantity using the attribute values and the attribute specifications for the item and order line. It then creates pre-shipper or shipper records for qualified inventory quantities.

Shipping

The system qualifies and determines the default inventory quantities to issue using quantities that have been detail allocated or picked, the attribute specifications for each item, and the attribute values for the inventory quantities to ship.

When considering the attribute specification from the order specification for attributes, the system first considers the customer order line specification for the attribute if it exists, then the item and customer specification for the attribute if it exists, then the item specification for the attribute.

The system processes shipments and returns of quantities to customers, capturing and validating attribute values with specifications for the order line and/or item. During shipping processing, the system lets you view the inventory quantities that are selected to ship for an order line, and the attribute values and specifications for quantities to ship.

Chapter 4

Quality Control

This chapter discusses the following topics:

Introduction

The QAD Quality Control module provides functions to manage quality specifications and quality records for both inventory and work-in-process (WIP) materials. It integrates the quality control specifications defined on test specifications together with other non-test specifications defined using attribute profiles. The disposition of completion of quality control records is integrated with inventory (lot and sublot attribute) records.

You can conduct tests and record test results for material received from suppliers, received from production material, for on-hand inventory, and for quantities for a production order operation. For those tests, you can record either simple pass/fail data or you can record attributes values, to determine whether values are conforming or not conforming to their specifications.

Quality control functions work with item attributes to support the flow of information from test records, through quality order records, to item lot and sublot records. This integration provides visibility of quality data and ensures the compliance of materials to specifications when managing materials.

Test Specifications

A test specification is a set of one or more attributes that are measured by a process, such as the set of attributes for physical dimensions, physical properties, chemical composition, electrical properties, or biological analysis. The collective set of attribute specifications on a test specification and revision represent what should be true for conforming material.

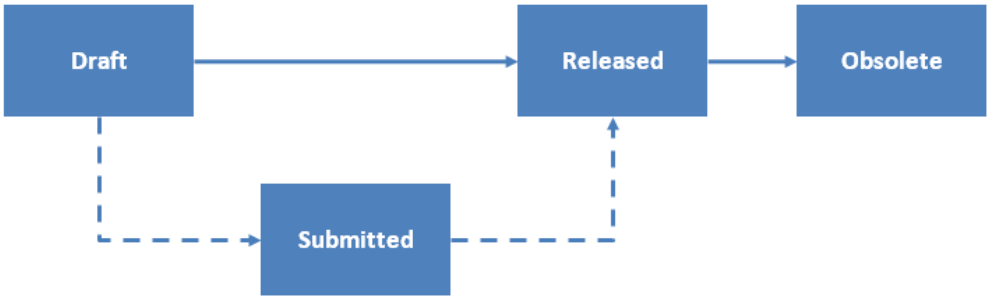
A test specification and its attributes are managed very much like an attribute profile and its attributes. Both are essentially collections of item attributes — one for a test specification identified for a test specification ID and revision, and the other for an item. A test specification and an attribute profile can have attribute specifications that determine whether attribute values are conforming or non-conforming. Like an attribute profile, you can copy attributes and specifications from another test specification or another profile.

A test specification is different than an item profile because a test specification is a revision-controlled document. A test specification:

- Is identified by a test ID and revision level
- Can have multiple revisions
- Can be linked to one or more items
- Can be linked to an item, routing, and operation (for work-in-process materials)

A test specification and revision may have a status of Draft, Submitted (for approval), Released, or Obsolete. A test specification and revision is only editable when its status is Draft. When its status is Released, it is an active document used to capture test records for quality orders and production operations. The following diagram shows the typical life cycle of a test specification.

Fig. 4.1
Life Cycle of a Test Specification

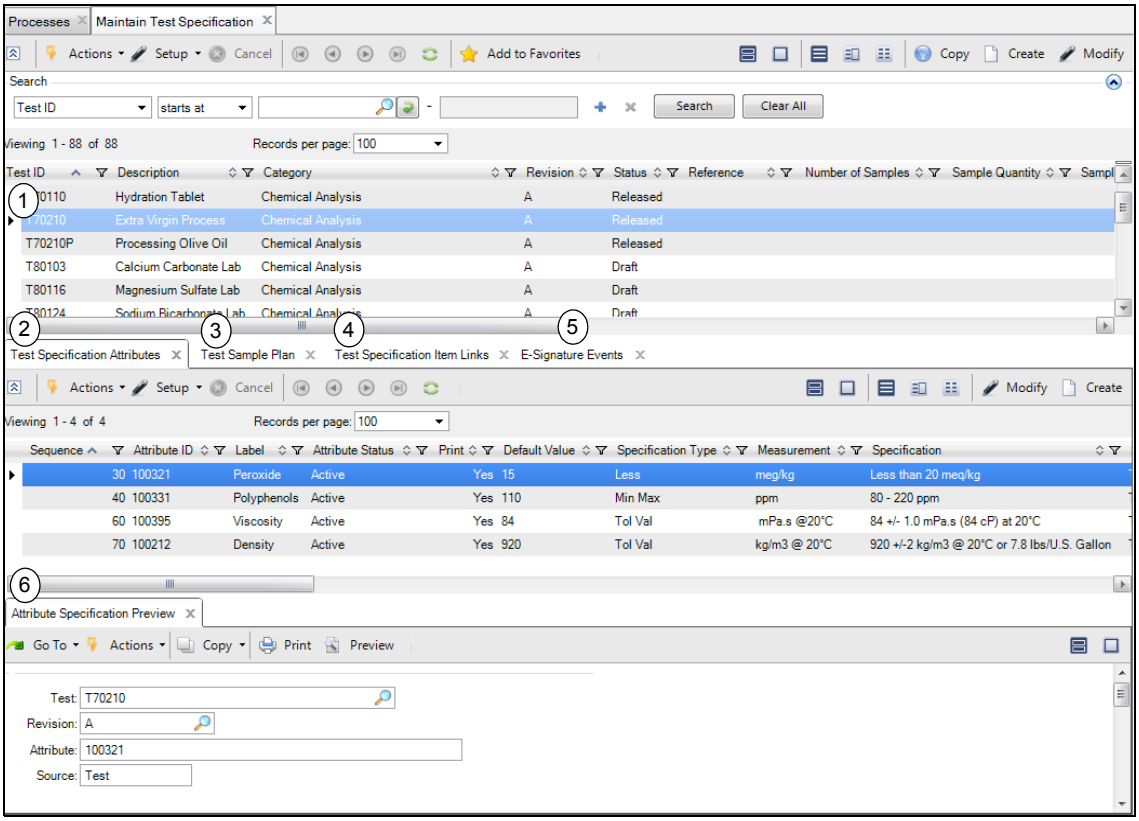


Maintain Test Specification Collection

The Maintain Test Specification collection provides supporting data for all your test specifications as well as maintenance functions, so that you can browse for data required for you to set up without running other programs.

The following graphic shows you the Maintain Test Specification browse collection, including the supporting browse collection frames and buttons.

Fig. 4.2
Maintain Test Specification Collection



The Maintain Test Specification collection consists of the following browses and tabs:

1. **Test Specification browse.** Displays a list of all test specifications. Double-click the test specification to view detailed information, such as test ID, revision, status, and release date. In the browse, you can view, copy, or add new test specifications. To add a test specification, see “Creating a Test Specification” on page 86.
2. **Test Specification Attributes tab.** Displays the attributes associated with the test specification. In this tab, you can view, modify, or add new attributes to the test specification. To add attributes to a test specification, see “Adding Attributes to an Item Profile” on page 23.
3. **Test Sample Plan tab.** Displays the test sample plan, which is a set of parameters that describe how the sample lot is tested, associated with the test specification. In this tab, you can view, modify, or create test sample plans. See “Creating a Test Sample Plan” on page 90.
4. **Test Specification Item Links tab.** Displays the items that are associated with this test specification. In this tab, you can modify the test specification and item link or link more items to the test specification. See “Maintaining Test Specification and Item Links” on page 91.
5. **E-Signature Events tab**. Displays the e-signature records created for the selected test specification. If e-signature functionality is enabled, when you change the status of a test record to Released or Obsolete, the system prompts for an e-signature. The system processes data to record the event and displays the information on the E-Signature Events tab. Double-click the record to view e-signature event details.

   For information about setting up e-signature functionality, see *QAD Security and Controls User Guide*.
6. **Attribute Specification Preview tab.** Allows you to verify that the test specification has been set up correctly. This tab functions the same as the Attribute Specification Preview tab on an item profile. For more information, see “Verify Item Attribute Setup” on page 29.

Creating a Test Specification

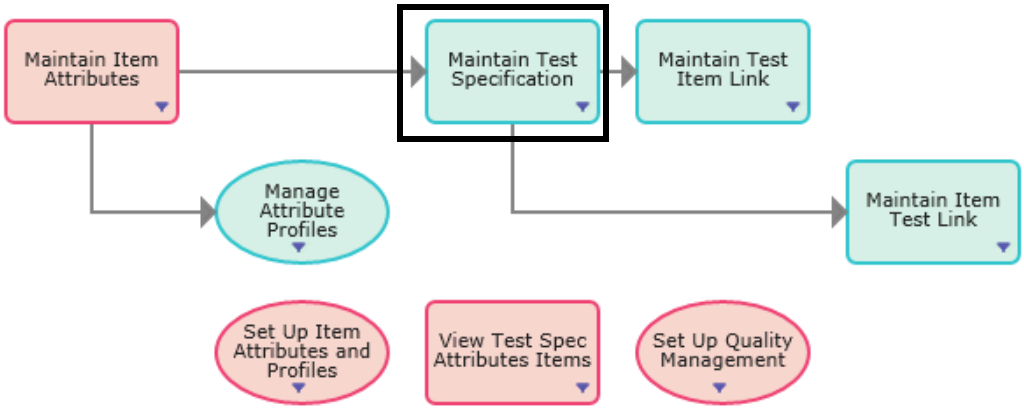
Use this function to create and maintain a specification for a test ID and revision, with one or more attribute specifications. A test specification is uniquely identified by its test ID and revision. The status for a test specification determines whether it is used to create test records for a quality order.

A test specification can apply to one or more items. You can do this by creating a link between the test specification and its items. Similarly, you can create links between an item and the test specifications that apply to it.

Follow these steps to create a test specification:

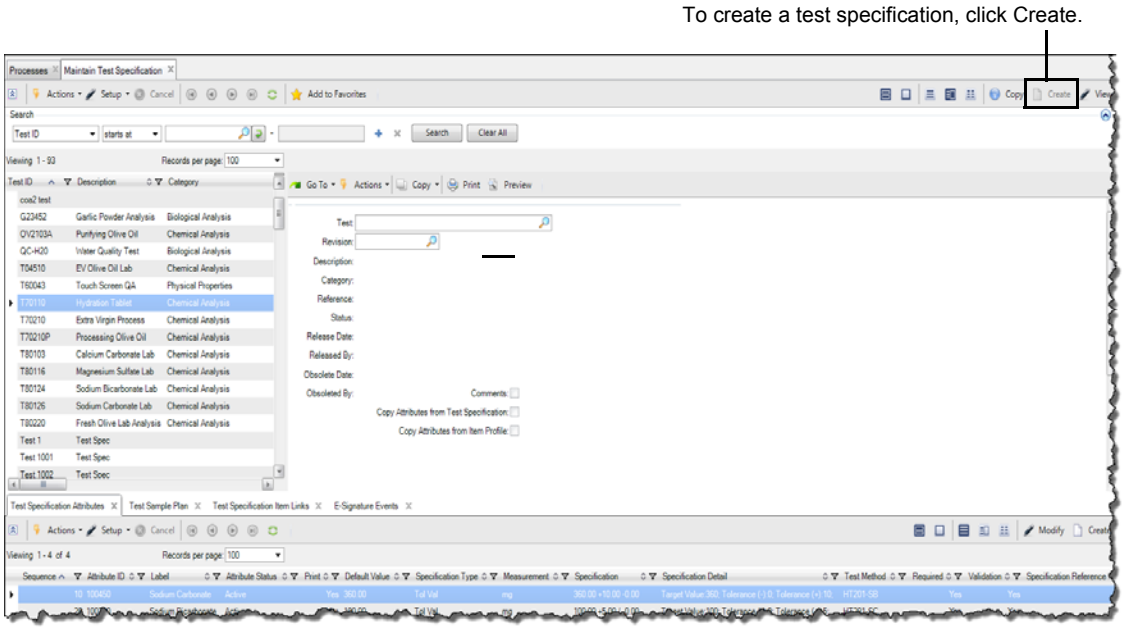
1 Select Maintain Test Specification from the Manage Test Specifications process map.

Fig. 4.3
Maintain Test Specification, Create Frame



2 To create a test specification, click Create in the top frame. A blank record opens.

Fig. 4.4
Creating a Test Specification



3 Enter the required information in the following fields:

Test. Enter a unique identifier for the test specification.

Revision. Enter the revision of the test specification. The test ID and the revision for a test specification uniquely identify the attributes and specifications for a test specification.

Description. Optionally, enter a description of the test ID. The description applies to a test ID, regardless of its revision.

Category. Optionally, enter a valid category defined in Category Maintenance for the test ID.

Reference. Optionally, enter data that identifies a test, lab, or reference document for the test specification.

Status. Enter the status for the test specification to identify its state within its document life cycle. The status for a test specification can be any one of the following:

- **Draft.** The test specification can be edited, but it cannot be referenced by test records.
- **Submitted.** The content of the test specification cannot be edited, and it cannot be referenced by test records.
- **Released.** The content of the test specification cannot be edited, and it is referenced by test records for quality orders and for work order and CUM order operations. Only one test specification revision for a test ID can have a Released status at the same time. When a new revision for a test ID is released, the status for the existing test specification for the test ID is automatically changed to Obsolete.
- **Obsolete.** The content of the test specification cannot be edited. It is not referenced when the system creates test records for quality orders and test records. You can manually create a test record for a test specification when its status is Obsolete.

Release Date. This field displays the release date of the test specification.

Released By. This field displays the ID of the user who released the test specification.

Obsolete Date. This field displays the date the test specification was obsoleted.

Obsoleted By. This field displays the ID of the user who obsoleted the test specification.

Comments. Select this check box to enter comments for a test specification.

Copy Attributes from Test Profile. Select this check box to copy the attribute specifications from a different test ID and revision to this test specification.

Copy Attributes from Item Profile. Select this check box to copy the attribute specifications from an item profile to this test specification.

Test ID. Select or enter the test ID to copy the attributes from.

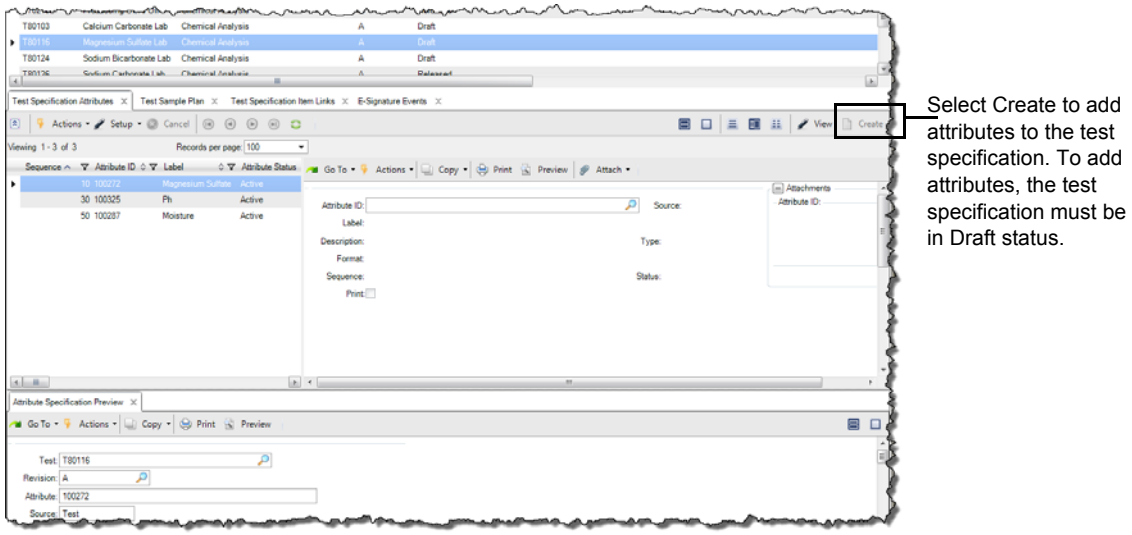
Revision. Select or enter the revision of the test ID to copy the attributes from.

Item. Select or enter the item number to copy the attributes from.

Site. This field displays the site for the item profile that is selected in the Item field. Typically, the value for Site is left blank.

4 Add item attributes to the profile by clicking Create in the Test Specification Attributes tab. See “Adding Attributes to an Item Profile” on page 23.

Fig. 4.5
Adding Attributes to a Test Specification



5 Create a test sample plan for the test specification. See “Creating a Test Sample Plan” on page 90.

6 Associate items to the test specification. For more information, see “Maintaining Test Specification and Item Links” on page 91.

7 Verify that the test specification is set up properly. See “Verify Item Attribute Setup” on page 29.

Copying a Test Specification

An alternate method for creating a test specification is to copy the attributes from another test specification or revision.

Note Copying a test specification is the preferred method for creating a new revision of an existing test specification with the same test ID.

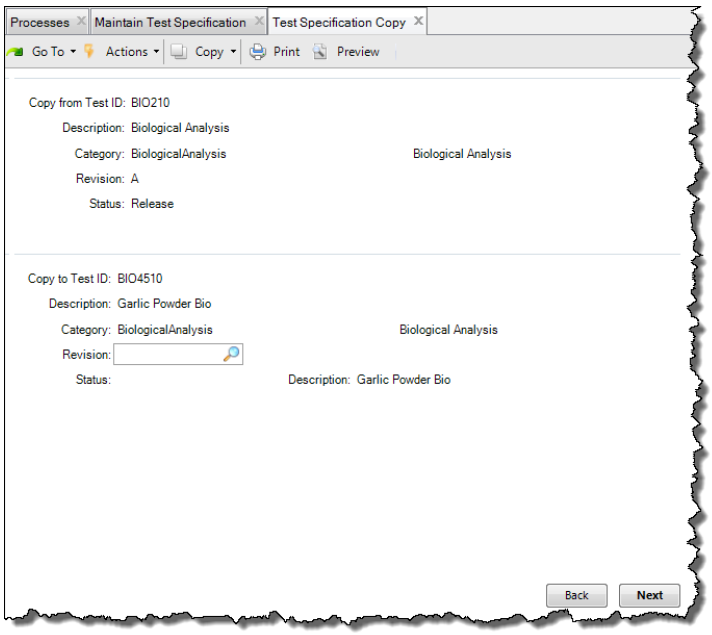
Follow these steps to create a test specification using the Copy button:

1 Select Maintain Test Specification from the Manage Test Specifications process map.

2 Click the Copy button in the upper frame.

3 Enter the relevant information in the fields:

Fig. 4.6
Test Specification Attributes Tab



Copy to Test ID. Enter a unique identifier for the test specification.

Description. Optionally, enter a description of the test ID. The description applies to a test ID, regardless of its revision.

Category. Optionally, enter a valid category defined in Category Maintenance for the test ID.

Revision. Enter the revision or the test specification. The test ID and the revision for a test specification uniquely identify the attributes and specifications for a test specification.

Status. See “Status” on page 88.

4 Click Next. The system displays all attributes that can be copied. Click Yes to copy the attributes and to create the test specification.

5 Once the test specification has been created, you can add item attributes to the profile if necessary. See “Adding Attributes to an Item Profile” on page 23.

6 Optionally, add a test sample plan. See “Creating a Test Sample Plan” on page 90.

Note If you create a test specification by using the copy option, the test plan data is not copied and must be added manually.

7 Associate items to the test specification. For more information, see “Maintaining Test Specification and Item Links” on page 91.

8 Verify that the test specification is set up properly. See “Verify Item Attribute Setup” on page 29.

Creating a Test Sample Plan

Use this function to maintain parameters that people can reference to determine how to sample a lot. There are fields to maintain information for:

- Number of Samples
- Sample Quantity
- Sample Measurement
- Sample Percent
- Sampling Pattern
- Reference
- Comments

Note The Test Sample Plan function is for reference only. There is no business logic associated with this data.

Follow these steps to create a test sample plan:

1. Select Maintain Test Specification from the Manage Test Specifications process map.
2. Highlight the test specification record in the top frame and select the Test Sample Plan tab.
3. Enter the relevant information in the following fields:

   Number of Samples. Enter the number of samples that must be taken from the lot to conduct the test.

   Sample Quantity. Enter the sample quantity or size that must be taken to conduct the test.

   Sample Measurement. Enter the description of how you would measure the sample quantity.

   Sample Percent. Enter the sample size (in percentage) that must be taken to conduct the test.

   Sampling Pattern. Enter the sampling pattern that must be followed to conduct the test. For example, you can enter that the sampling pattern is random or that the first, middle, and last items in the lot must be sampled.

   Reference. Optionally, enter any reference information associated with the test.

   Comments. Optionally, enter any comments regarding the test.

   Test Spec Item Link Maintenance. Use this function to associate a test ID to one or more items.

Maintaining Test Specification and Item Links

Overview

Because a test specification is defined and exists independently from items, you must define specific links between test specifications and items. IAQ allows you to define links between an item and one or more test specification test IDs or between a test specification test ID with one or more items.

The link between a test specification and an item includes parameters that determine whether the test specification applies to the testing of an inventory lot or to a work-in-process operation. When a test specification applies to an inventory lot, you must specify an item or item and site. When it applies to a work-in-process operation, you must specify an item, routing, and operation, or an item, site, routing, and operation.

Note You can view existing linked information through the Item Test Specification Report.

Linking a Test Specification to an Item

IAQ gives you the following options for viewing and maintaining the test specification and item links:

- **Test Specification Item Links tab**. In this tab, located on the second level of the Maintain Test Specification collection, you can view the items that are linked to the test specification. You can also associate the test specification to items, items/sites, or items/routings/operation records.
- **Maintain Test Item Link.** In this browse collection, you can view and maintain test specification and item links, associate a test specification with items, items/sites, or items/routings/operation records, and add attributes to the test specification.
- **Maintain Item Test Link.** In this browse collection, you can view and maintain item and test specification links, associate items, item/sites, or items/routings/operation records with one or more test specifications, and add attributes to the test specification.
- **Test Specification Item Links tab.** In this tab, you can view the items that are linked to the test specification. You can also associate the test specification to items, items/sites, or items/routings/operation records.

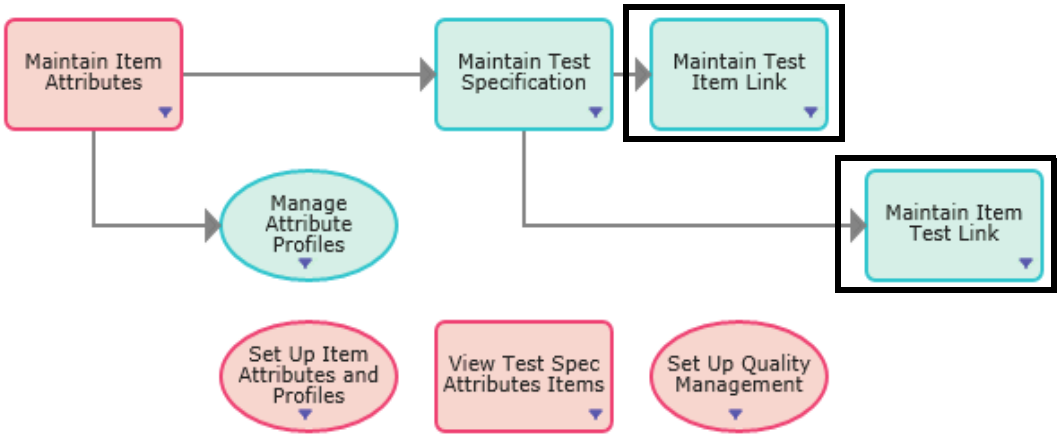
Follow these steps to link a test specification to an item:

Note The following procedure shows how to link a test specification to an item using the Maintain Test Item Link collection.

1 Open Maintain Test Item Link in the Manage Test Specifications process map.

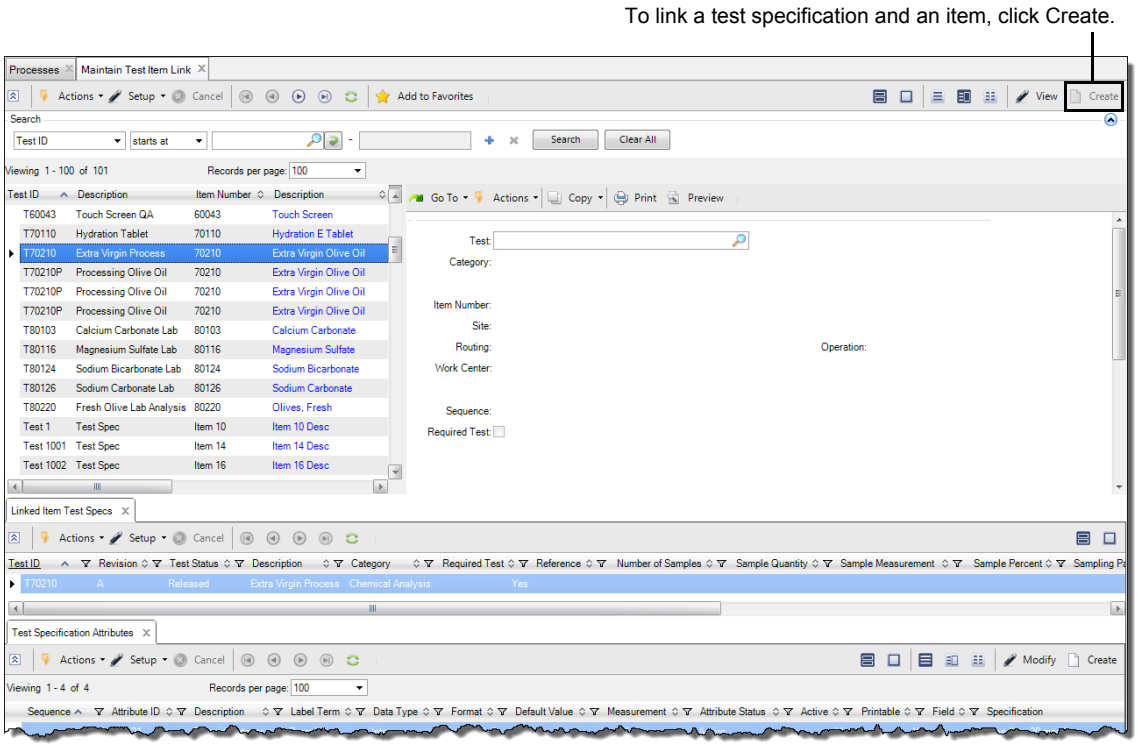
Note To link an item to a test specification, select Maintain Item Test Link.

Fig. 4.7
Manage Test Specification Process Map



2 Highlight the test specification and click Create in the upper browse.

Fig. 4.8
Modify a Test-Item Link



3 Enter the relevant information in the following fields:

Test. This field displays the test ID associated with the test specification. If you are linking an item to a test ID, select or enter the test ID to associate to the item.

Category. This field displays the category for the selected test ID.

Item Number. Select or enter the item number to associate with the test ID. If you are linking an item to a test ID, this field displays the item number.

Site. Optionally, select or enter a site. If you specify a site, then only items at the chosen site link to the test specification.

Routing. For WIP, enter a valid routing or process code. If you enter a routing code, the test specification triggers only when item uses that code.

Operation. Enter a number identifying a step within a specific routing code. Operations are uniquely numbered and sequenced steps within a routing. Each step is assigned an operation sequence number. Routing operations always print in ascending sequence. For example, operation 20 follows operation 10.

Work Center. Displays the work center code and the machine code, which together identify a work center for a valid routing and operation.

Sequence. Enter a sequence number for the test specification for the item. The sequence determines the order in which test specifications print on reports.

Required Test. Select this check box if the test is required for the item, item/site, or item, routing, and operation combination. When a test specification is required, then an automatically created test record for that test specification must be either completed and closed or canceled. It cannot be deleted. The default is No.

4 Optionally, modify or add attributes to the test specification. See “Adding Attributes to an Item Profile” on page 23.

Note The test specification must have a Draft status to add attributes.

Deleting a Test Specification

In IAQ, you can only delete a test specification when:

- There are no test records for the test specification.
- There are no items linked to the test specification.
- The test specification has a Draft status.

To delete a test specification, open the Maintain Test Specification browse collection. Open the test specification header and select Delete from the Actions menu. The system prompts you to confirm that you want to delete the record. Click Yes to delete.

Note If you try to delete any test specifications that have linked records or that are not in Draft status, the system issues a warning message.

Quality Control for Inventory

Quality orders direct the completion of testing and inspection of an item lot. Quality orders can be used to test, retest, inspect, re-inspect, or audit an item lot to confirm its conformance to one or more test specifications.

The system automatically creates quality orders for inventory received from suppliers, from work order production, and from advanced repetitive production. Quality orders can also be created manually for an existing material lot to capture test result records and to determine whether a material lot conforms to its requirements.

If there are customer-specific requirements for a customer, a sales order, or a customer scheduled order line, a quality order can be created for the order line before shipment to determine whether an inventory lot conforms to both the customer specifications and internal specifications. When a quality order is created for an inventory lot and a customer order line before shipment, the values for attribute specifications defined for a customer, for a sales order, or for a scheduled order are captured together with test result records.

Similarities and Differences Between Quality and Lot Attribute Orders

Quality orders and lot attribute orders are similar in the following ways:

- Both can be created automatically by receipt transactions or they can be created manually.
- Both contain lot and sublot attribute values.
- Both update the lot master with values for lot and sublot level attributes.
- Both provide the basis for printing certificates of analysis.

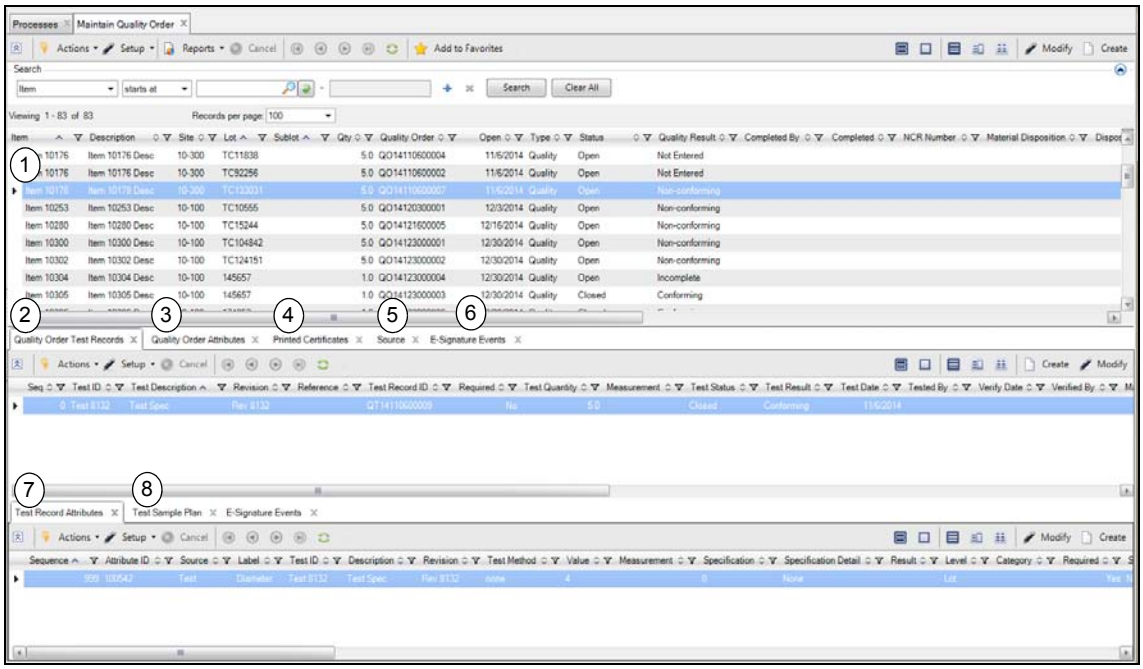
A primary difference between quality and lot attribute orders is that quality orders contain test records with test record attributes for test specifications. Quality orders can contain attributes for both test attributes and non-test attributes from profiles.

Maintain Quality Order Collection

In IAQ, there are quality order maintenance collections for inventory, sales, production, and purchasing.

- **Maintain Quality Order.** For inventory, access this collection from the Inspect Inventory process map.
- **Maintain Quality Order for SO Line.** For sales, access this collection from the Inspect Inventory for Sales Order process map.
- **Maintain Quality Order for Production.** For production, access this collection from the Inspect Production Receipts process map.
- **Maintain Quality Order for Purchasing.** For purchasing, access this collection from the Inspect Purchasing Receipts process map.

Fig. 4.9
Maintain Quality Order Collection



9 The Certificate Attributes tab is not shown and is only displayed when the Printed Certificates tab is selected.

The Maintain Quality Order collection consists of the following browses and tabs:

1. **Quality Order browse.** Displays a list of all quality orders. Double-click the order to view detailed information about the quality order, such as order, item, and lot number, order status, quality result, and so on.
2. **Quality Order Test Records tab.** Displays the test records associated with the quality order. The test records are the individual quality tests that must be performed on the item lot. Double-click the test record to view detailed information about the record, such as test record ID, test result, test date, verify by, and so on. In this tab, you can view, modify, or add new test records to the quality order. To add a test record to a quality order, see “Adding Test Records to Quality Orders” on page 103.
3. **Quality Order Attributes tab.** Displays the lot and sublot level attributes associated with the quality order, including attributes from test records and non-test attributes from profiles that do not require a quality test to be performed, such as harvest date, country of origin, or supplier lot number. In this tab, you can view, modify, or add new attributes to the quality order.
4. **Printed Certificates tab.** Displays the certificates of analysis that have been printed for a quality order with a Closed status.
5. **Source tab.** Displays the transaction information about how the quality order was created. For example, if the quality order was created from a PO, this tab displays the PO number, supplier, receipt information, transaction dates, and so on. Use this information to verify that you are accessing the correct quality order.
6. **E-Signature Events tab**. Displays the e-signature records created for the selected quality order. If e-signature functionality is enabled, when you change the status of a quality order to Approve Pending, Closed, or Canceled, the system prompts for an e-signature. The system processes data to record the event and displays the information on the E-Signature Events tab. Double-click the record to view e-signature event details.

   For information about setting up e-signature functionality, see *QAD Security and Controls User Guide*.
7. **Test Record Attributes tab.** Displays the attributes associated with the test record selected in the Quality Order Test Records tab. In this tab, you can view, add attributes to the test record, and enter the test results.
8. **Test Sample Plan tab.** Displays the test sample plan associated with the test specification. See “Creating a Test Sample Plan” on page 90.
9. **Certificate Attributes tab.** Displays the attribute specifications and results for a printed certificate of analysis.

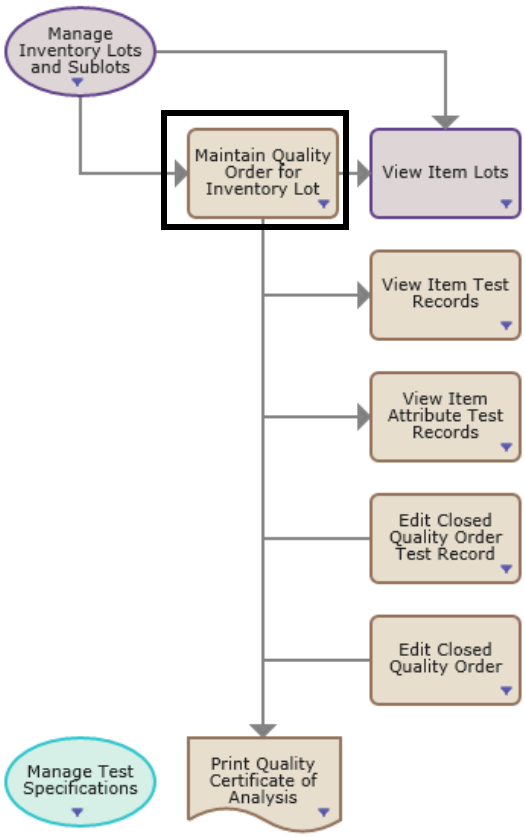
Navigating to Quality Order Collections

In IAQ, you can create quality orders for inventory, purchasing, production, and sales. Depending on the type of order, navigate to the correct quality order collection when entering attribute values.

Inventory - Maintain Quality Order for Inventory Lot Collection

For inventory orders, select Maintain Quality Order for Inventory Lot from the Inspect Inventory process map.

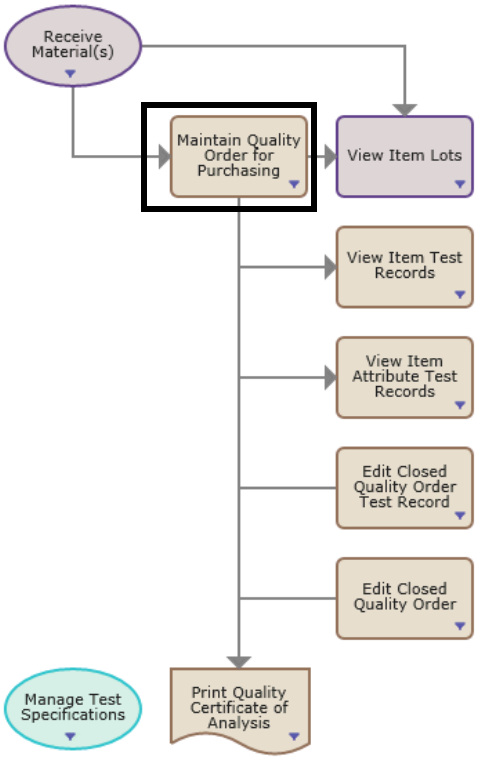
Fig. 4.10
Process Map - Inspect Inventory



Purchasing - Maintain Quality Order for Purchasing

For purchase orders, select Maintain Quality Order for Purchasing from the Inspect Purchasing Receipts process map for orders created by purchase receipts.

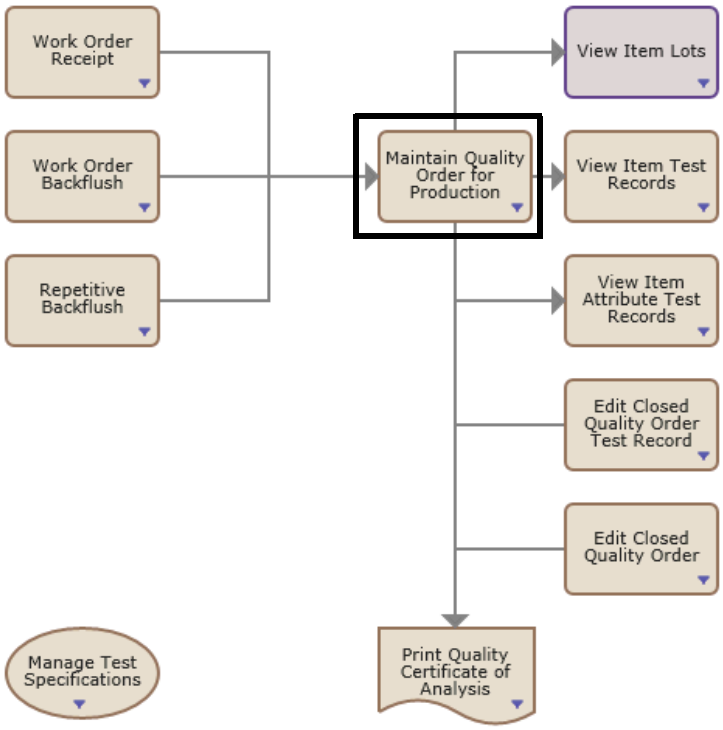
Fig. 4.11
Process Map - Inspect Purchasing Receipts Purchasing



Production - Maintain Quality Order for Production

For production orders, select Maintain Quality Order for Production from the Inspect Production Receipts process map for orders created by work order and CUM order receipts.

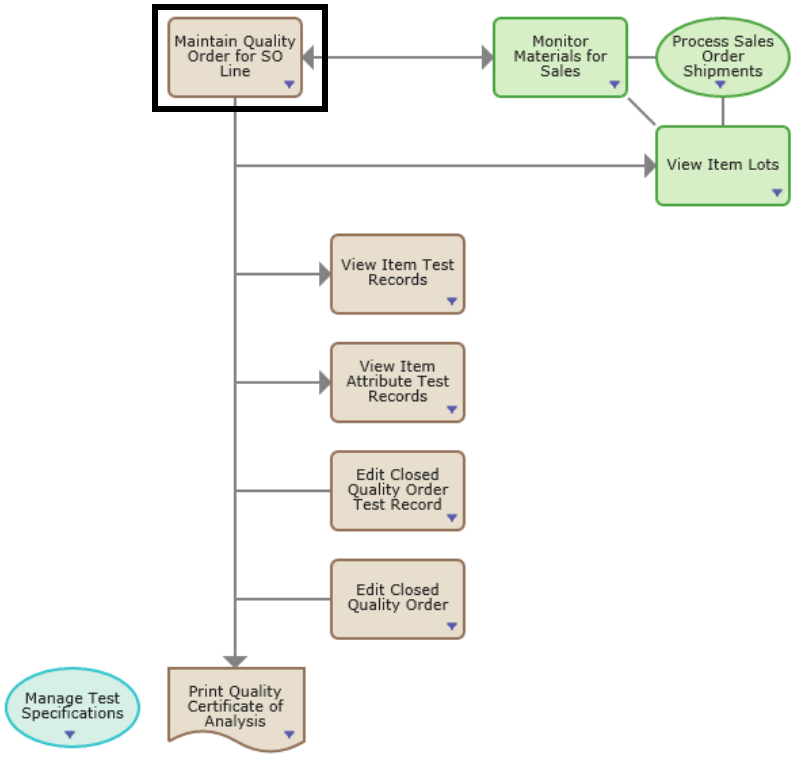
Fig. 4.12
Process Map - Inspect Production Receipts



Sales - Maintain Quality Order for SO Line

For sales orders, select Maintain Quality Order for SO Line from the Inspect Inventory for Sales process map for orders created for an item lot and sales order line.

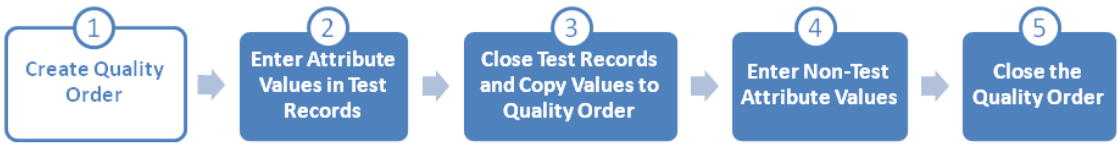
Fig. 4.13
Process Map - Inspect Inventory for Sales



Quality Order Workflow

The following graphic depicts the workflow of a quality order, from the first step when it is created to the last step when it is closed.

Fig. 4.14
Quality Order Workflow



1. Creating Quality Orders
2. Entering Attribute Values in Test Records
3. Completing a Test Record
4. Entering Non-Test Record Attributes
5. Closing a Quality Order

Creating Quality Orders

In IAQ, a quality order can be created automatically or manually. Quality orders are automatically created when you receive items from a supplier and perform the receipt transaction or when you receive a production order linked to a customer order. See “Creating a Quality Order from a Receipt Transaction” on page 101.

You can manually create a quality order for an item lot in inventory or for an item lot in inventory that is associated with a sales order. See “Manually Creating a Quality Order” on page 102.

Creating a Quality Order from a Receipt Transaction

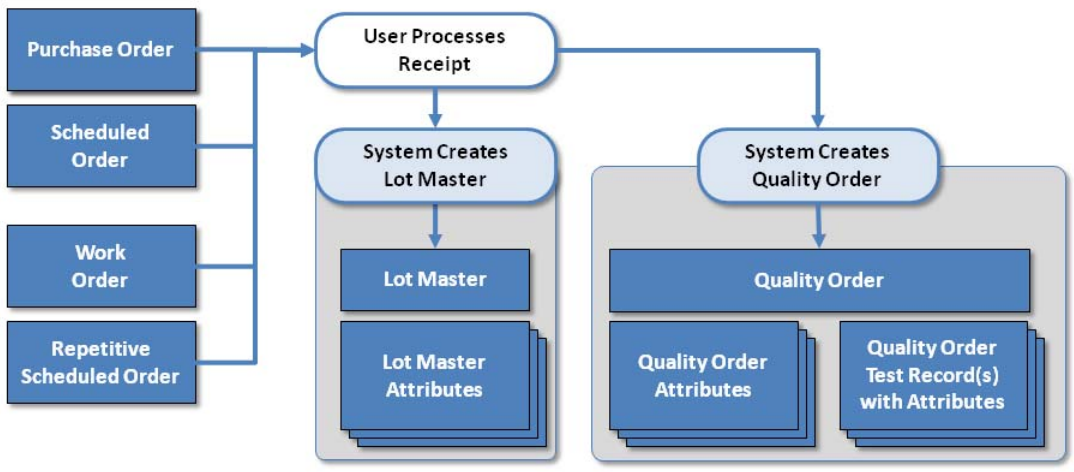
Quality orders are created automatically by supplier or production receipt transactions for item lots that are linked to at least one released test specification. For the quality order to be created, the test specification must have at least one attribute. Optionally, it may have additional lot or sublot level profile attributes.

A quality order contains test records for linked test specifications with a Released status. A quality order also contains a complete list of the attribute specifications, values, and results that apply to the order:

- Test attribute specifications, values, and results
- Any non-test attribute specifications, values, and results for attributes defined on attribute profiles for characteristics such as supplier lot number, harvest date, and country of origin

Figure 4.15 shows how the system processes lots and quality orders following a purchase order. After the receipt of the purchase order, the system creates a lot master, generic to that item type, with associated lot attributes. It also creates a quality order with attributes specific to a test specification.

Fig. 4.15
Quality Order Attributes



To create a quality order from a receipt transaction, see “Creating Orders From Receipt Transactions” on page 33.

Manually Creating a Quality Order

IAQ allows you to manually create quality orders for the following business cases:

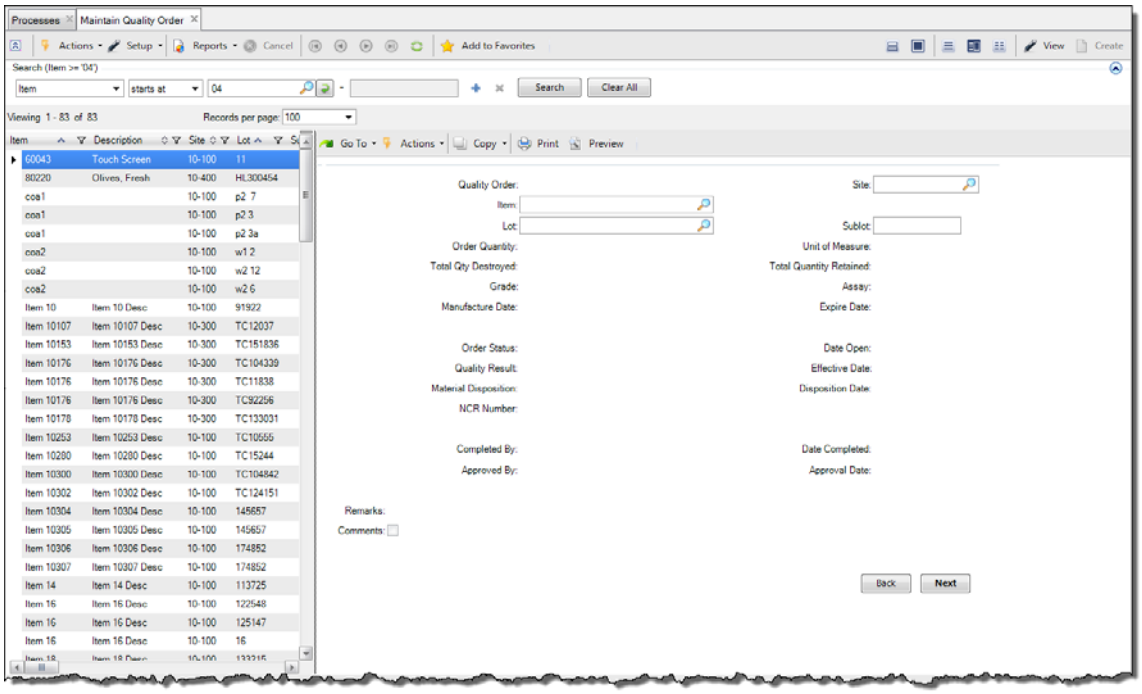
- Repeating any tests for an item lot in inventory.
- Verifying the conformance for an item lot, prior to shipment for a sales order or customer scheduled order line.

Follow these steps to manually create a quality order:

1 Navigate to the correct quality order collection (inventory or sales). See “Navigating to Quality Order Collections” on page 96.

2 Click the Create button in the top-level browse. A blank quality order opens.

Fig. 4.16
Manually Creating a Quality Order



3 Add the item lot to the order by entering the relevant information in the Item, Site, Lot, and Sublot fields. For detailed field definitions, see “Entering Values in Lot Attribute Orders” on page 37.

Note To add an item to an order, the item lot must be in inventory

4 When the item is added to the order, the associated test records and attributes are added to the order.

5 If necessary, add additional test records to the quality order. See “Adding Test Records to Quality Orders” on page 103.

Adding Test Records to Quality Orders

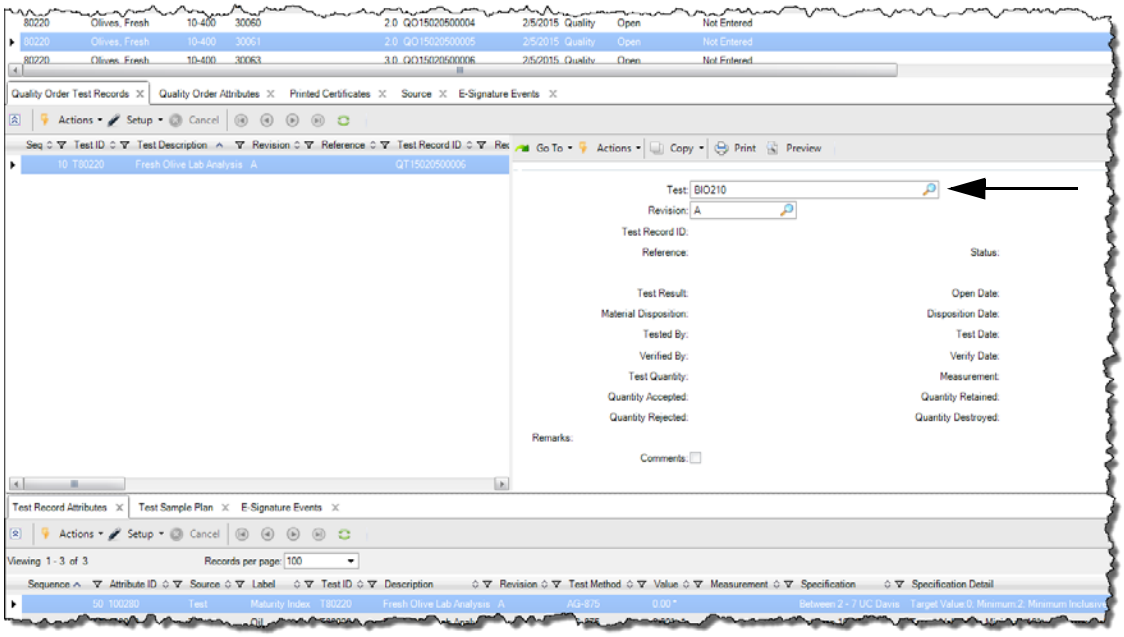
Follow these steps to add a test record to a quality order:

1 Navigate to the correct quality order collection (inventory, purchasing, sales, or production). See “Navigating to Quality Order Collections” on page 96.

2 In the top-level browse, select the quality order.

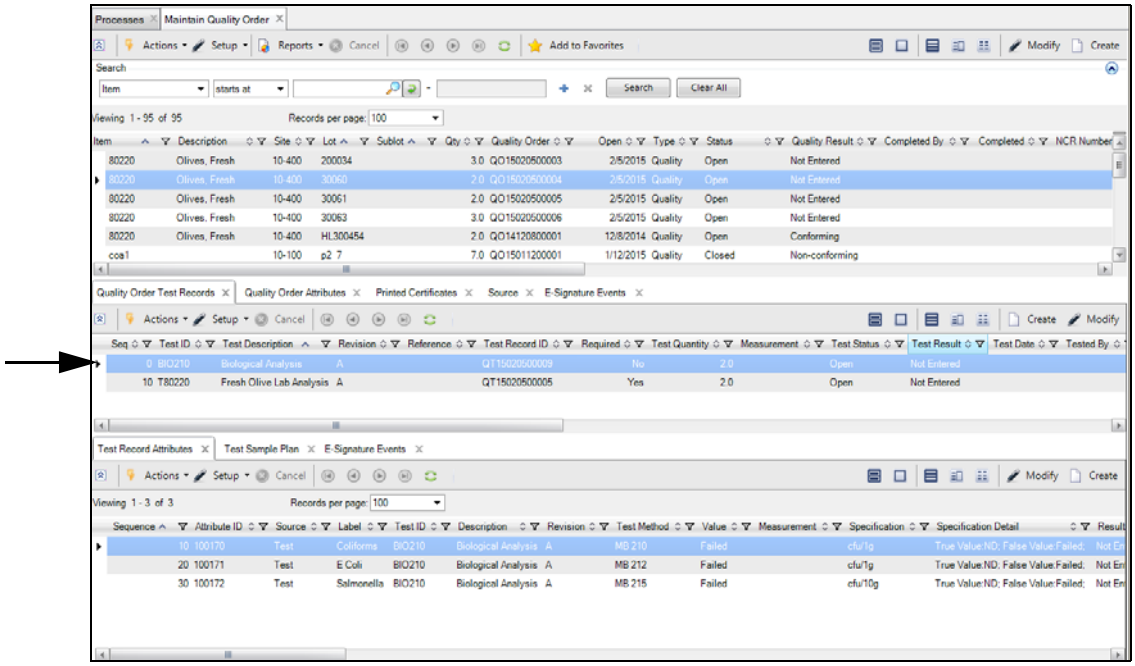
3 To add a test record, click Create on the Quality Order Test Records tab. Enter the test record in the Test field.

Fig. 4.17
Adding a Test Record to a Quality Order



4 Click Next to save. The test record is added to the order.

Fig. 4.18
Adding a Test Record to a Quality Order



Maintaining Quality Orders

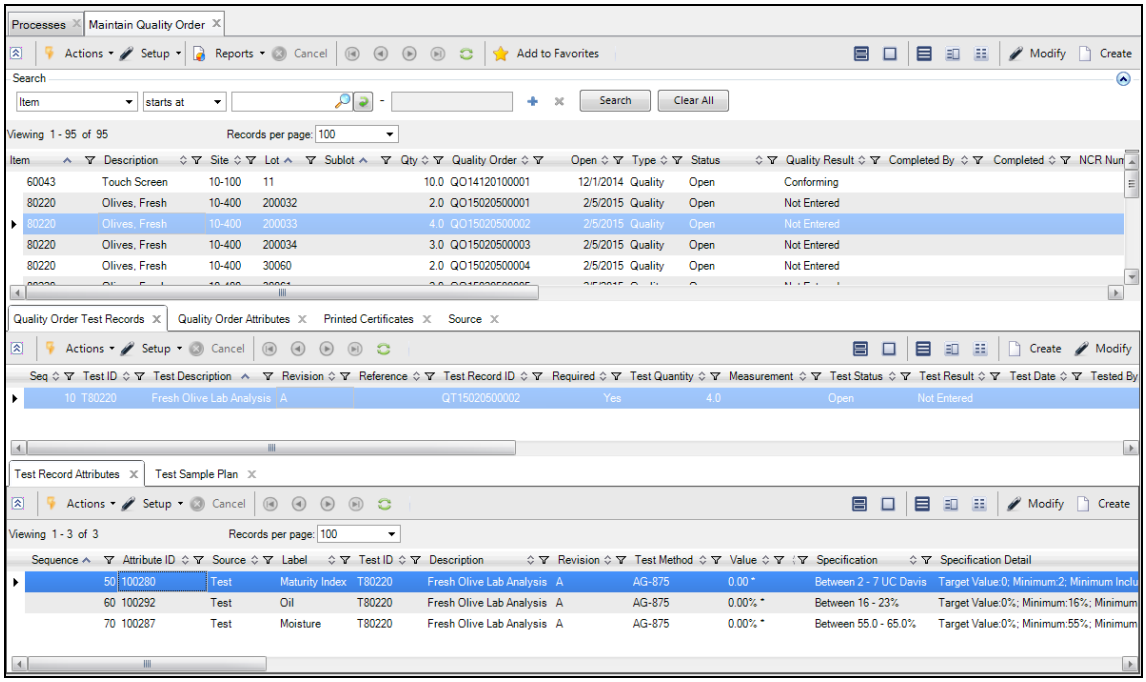
Entering Attribute Values in Test Records

Follow these steps to enter attribute values in test records for open quality orders:

1 Navigate to the correct quality order collection (inventory, purchasing, sales, or production). See “Navigating to Quality Order Collections” on page 96.

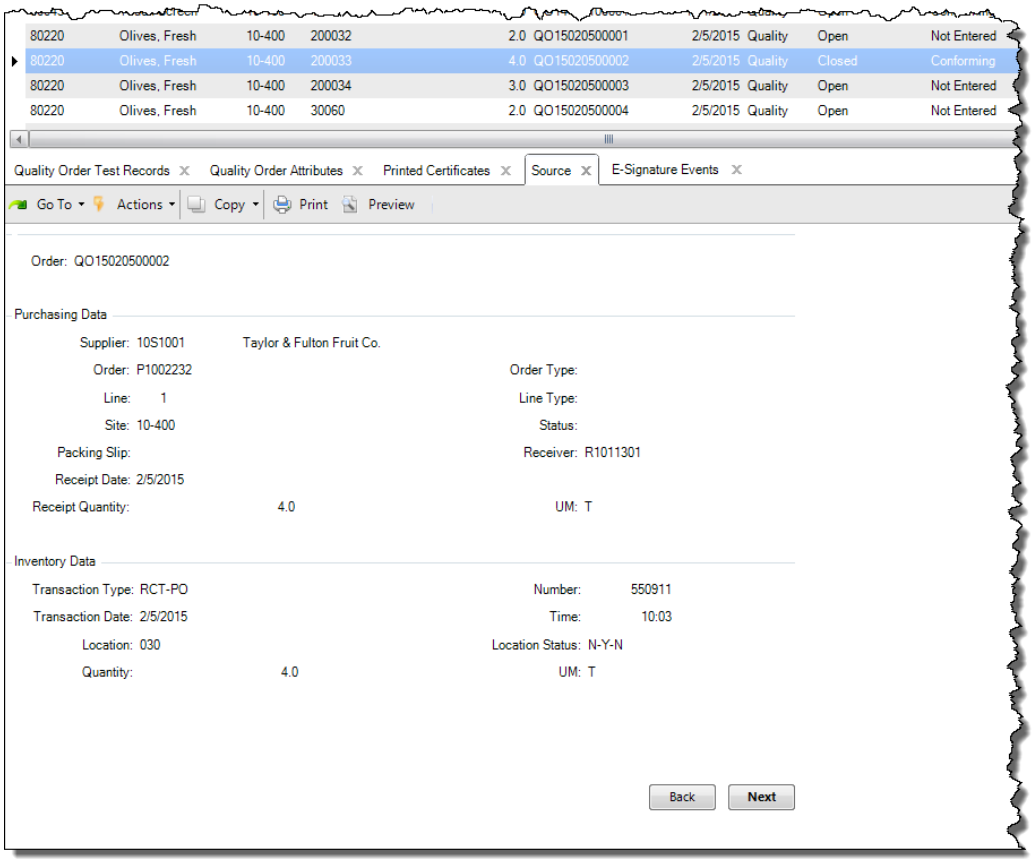
2 In the top level browse, select the quality order.

Fig. 4.19
Maintain Quality Order Collection



3 Optionally, select the Source tab in the second-level browse and verify that the correct quality order is selected. The Source tab displays the associated purchasing, production, and inventory data, such as sales, work order, and transaction numbers and dates.

Fig. 4.20
Quality Order Source Tab

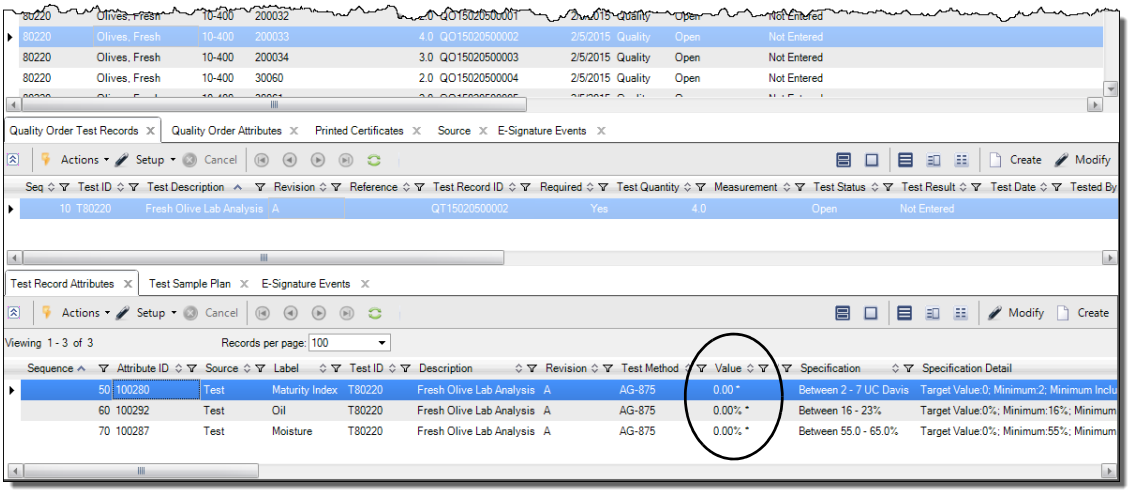


4 Select a test record in the Quality Order Test Records tab.

Note A test record is the collection of attributes associated with a certain test specification. The attributes associated with the selected test record are displayed in the Test Record Attributes tab.

5 The Value field displays the default value for the attribute. If a value has not been entered or accepted for the attribute and if the attribute is required and must be validated (Required = Yes and Validation = Yes), an asterisk is displayed with the value.

Fig. 4.21
Test Record Attributes Tab - Value Field



6 Double-click and open the test record attribute. The following fields are displayed:

Sequence. The sequence number for the attribute on this profile. The sequence determines the order in which attributes print on reports.

Source. Displays the source profile for the attribute.

Attribute ID. This field displays the attribute ID associated with the test record.

Label. Displays the label for the selected attribute.

Specification. Displays the specifications for the attribute.

Note The specification is only displayed if the specification setting in Quality Control File is enabled (Display Specification for Results Entry = Yes). See “Set Up Quality Control” on page 15.

Test ID. Displays the test ID associated with the attribute.

Test Method. Displays the test method associated with the attribute.

Value. Enter the attribute value in this field.

Level. Displays the attribute level.

Result. Displays the result of the attribute value:

- **Not Entered.** The initial result for a lot attribute order or test record, when values have not been entered for any of the attributes.
- **Conforming.** The result when all of the attribute specifications (Validation = Yes) have conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Non-Conforming.** The result when any of the attribute specifications (Validation = Yes) have non-conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Incomplete.** The result when some of the attribute values have been entered, and at least one attribute value (Required = Yes) has not been entered.

- **Inconclusive.** The result for a test record when the result for any one of its attributes has been manually set to Inconclusive.
- **No Data.** The result for a test record when the result for any one of its attributes has been manually set to No Data.
- **Blank.** The result when all of the attributes (Required = Yes) have been entered and there are no attributes with the Validation setting enabled.

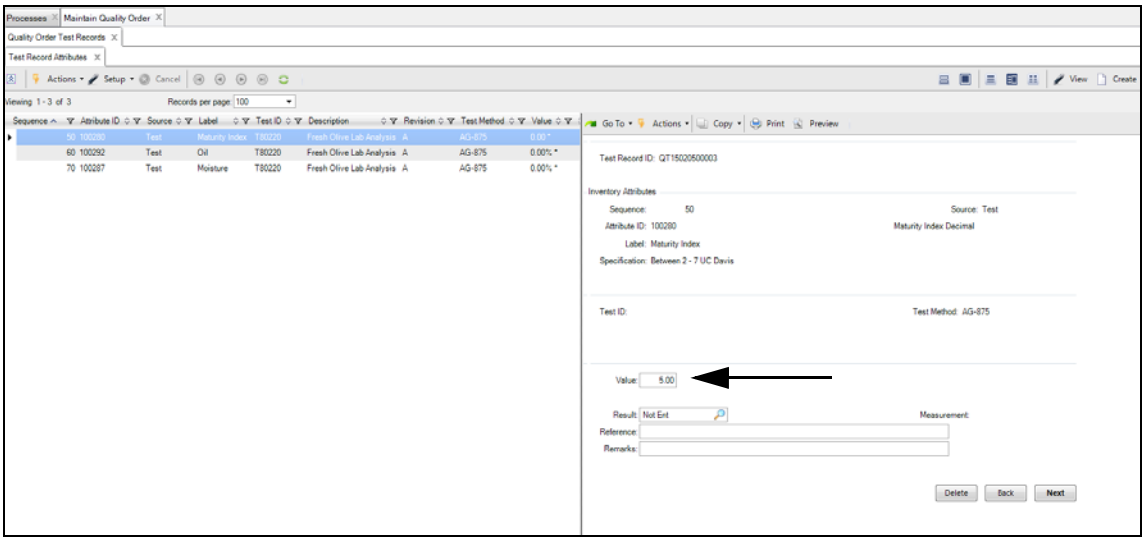
Measurement. This field displays how the attribute is measured or determined. For example, a measurement for flow rate might be expressed as “psi" or “liters/min.”

Reference. Optionally, enter any reference information in this field.

Remarks. Optionally, enter any remarks in this field.

7 Enter the attribute value in the Value field.

Fig. 4.22
Entering the Attribute Value in the Quality Order



8 Repeat these steps and enter the values for the remaining attributes.

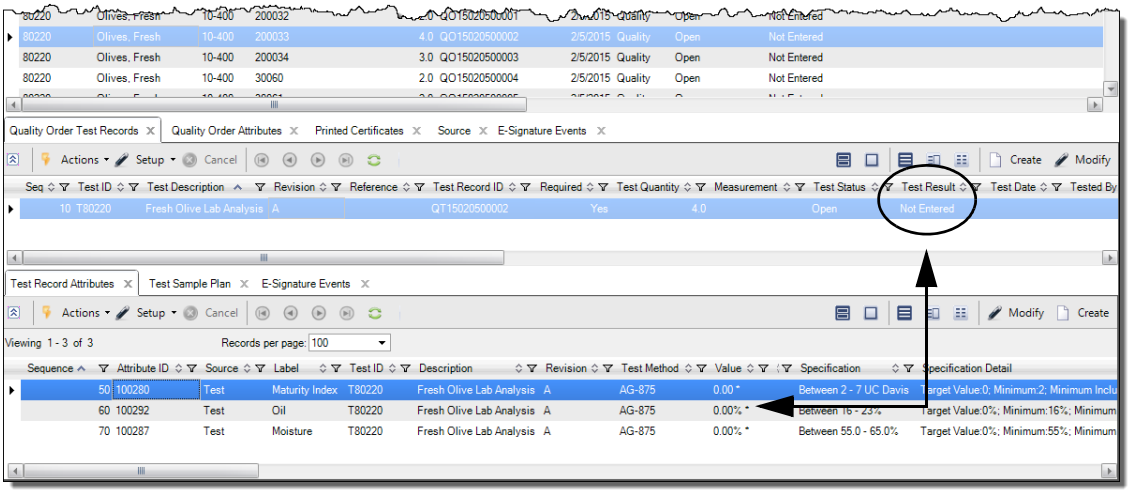
Verify Test Record Values Are Entered

Before completing a test record, verify that all the test record values have been entered. Follow these steps to verify that the test record values have been entered:

1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

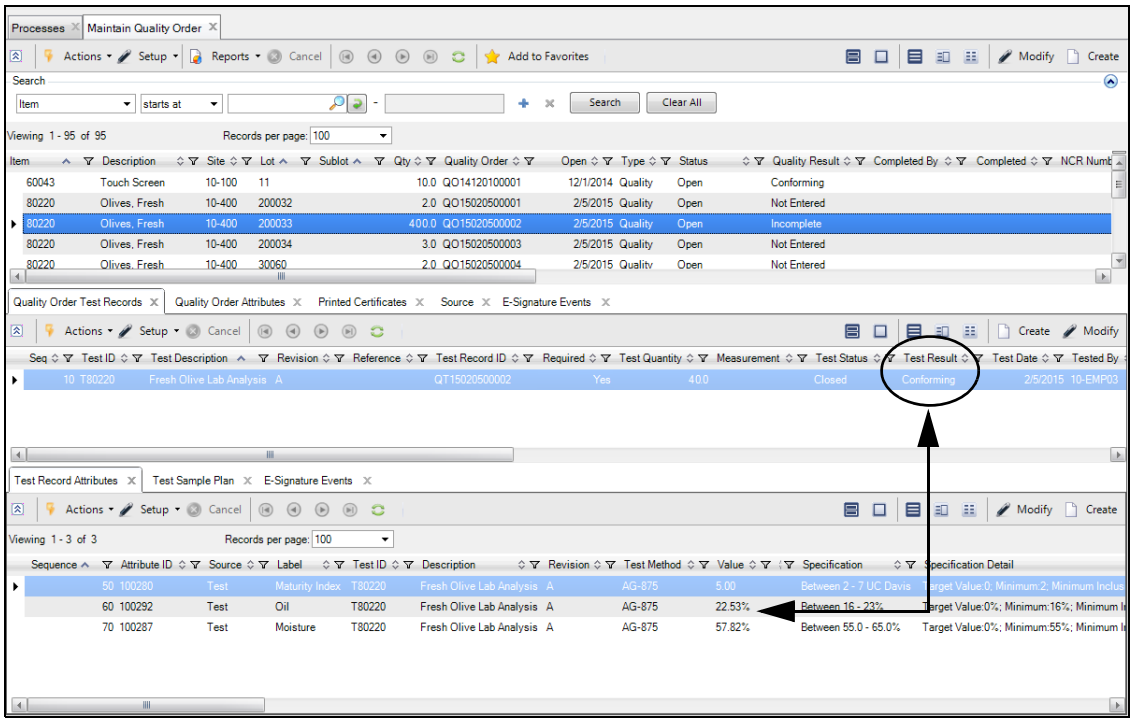
2 The Value field on the Quality Order Test Records tab displays the default value for the test record attributes. If a value has not been entered or accepted for the attribute and if the attribute is required and must be validated (Required = Yes and Validation = Yes), an asterisk is displayed with the value.

Fig. 4.23
Verify Test Record Attributes - Not Entered



3 When test record attributes have been entered, the Test Result field displays the result (Conforming, Non-Conforming, and so on).

Fig. 4.24
Verify Test Record Attributes - Entered and Conforming



Completing a Test Record

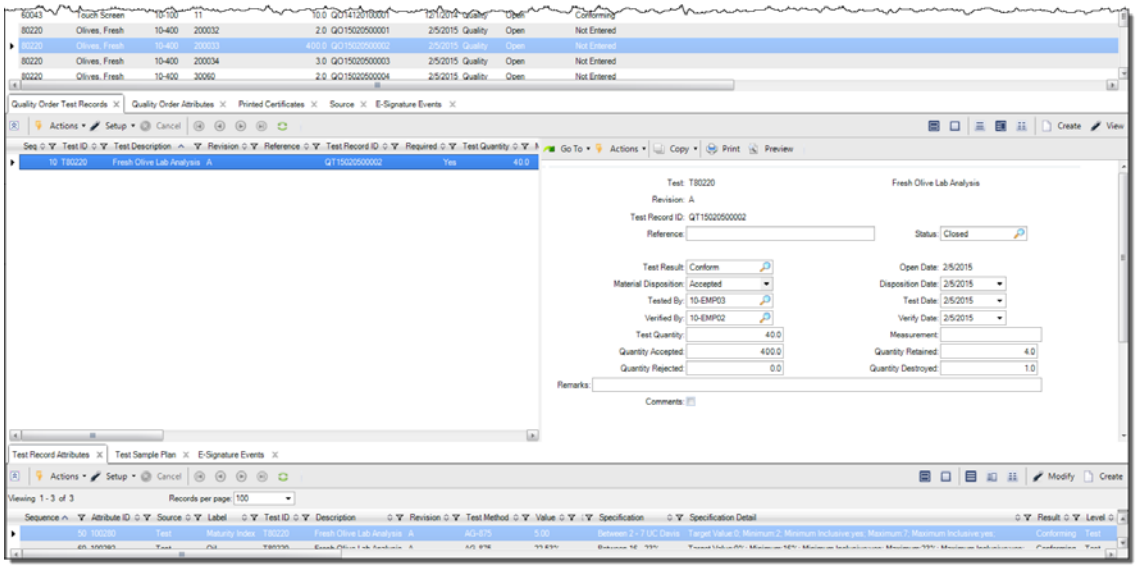
Follow these steps to complete a quality order test record:

1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Select the order in the top-level browse.

3 Double-click and open the test record. Enter the information about the lot that was inspected, such as quantity retained, destroyed, or rejected, disposition date, tested by, and so on.

Fig. 4.25
Quality Order Test Record Fields



A quality order test record contains the following fields:

Test. The test specification ID associated with the test record. If you are adding a test to the quality order, select or enter the test ID for which you want to maintain results.

Revision. This field displays the revision number for the test specification.

Note When you enter the test ID, the system retrieves the active revision for the Test ID. If necessary, you can enter a different revision number as long as that revision is an existing revision for that test and has a Released or Obsolete status.

Test Record ID. This field displays the test record ID, a unique identifier that is automatically generated by the system.

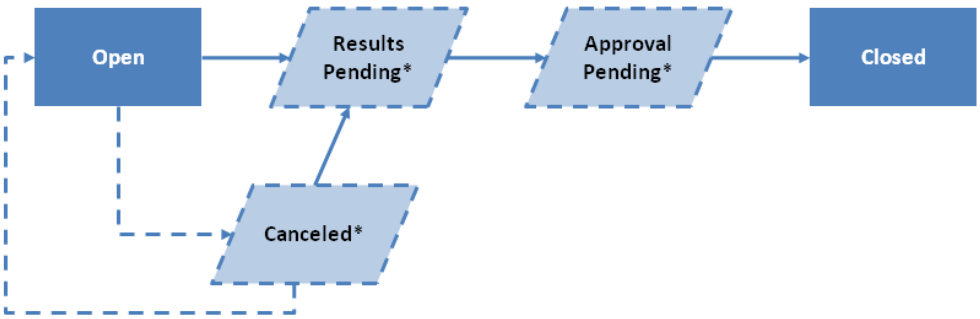
Reference. Optionally, enter any reference information.

Status. Select or enter the status of the test record:

- **Open.** The initial status for a test record. The status should be Open if the values for test record attributes have not been entered or have not been fully completed. When the status is Open, you can make any modifications to test record data.

- **Approval Pending.** The Approval Pending status indicates that the attribute values for the test record have been completed, but that the final approval for the test record is still outstanding. When the status is Approval Pending, you can make some modifications to the test record, such as changing the status to Open, but you cannot modify the test record attributes.
- **Results Pending.** This status indicates that the results have not been fully completed for all the attributes. All other modifications are permitted, including changing the test record status to Open.
- **Closed.** Set the test record status to Closed after all of the information for the test record and its attributes have been approved. Change the status to Closed to update the quality order attributes to those recorded on the test. When the status is Closed, there can be no further modifications to the test, including its status. To change the status to Closed, values must have been entered for all test record attributes that have the Required setting enabled.
- **Closed Edit Pending.** This status is applied if a closed test record is being modified for corrections using Edit Closed Test Record. If a test record is closed, it can only be maintained using Edit Closed Test Record. The status of a test record with the Closed Edit Pending status can only be changed to Closed. A certificate of analysis cannot be printed for a test record while it is being modified for corrections.
- **Canceled.** Set the status to Canceled if no activity is required or performed for the test record. When the test record is for a quality order and the status of a test record is Canceled, it can be changed to either Open or Results Pending, if the status of its quality order is either Open or Results Pending.

Fig. 4.26
Test Record Status Lifecyle



* Optional order status. This status may or may not be applied to an test record during its lifecycle.

Test Result. This field displays the result of the lot attribute or quality order. The result for the order is automatically updated as values for its attributes are entered. If necessary, you can manually override the result for an order.

- **Not Entered.** The initial result for a lot attribute or quality order, when values have not been entered for any of the attributes.
- **Conforming.** The result when all of the attribute specifications (Validation = Yes) have conforming attribute values, and all of the attributes (Required = Yes) have been entered.
- **Non-Conforming.** The result when any of the attribute specifications (Validation = Yes) have non-conforming attribute values, and all of the attributes (Required = Yes) have been entered.

- **Incomplete.** The result when some of the attribute values have been entered, and at least one attribute value (Required = Yes) has not been entered.
- **Inconclusive.** The result for a quality order when the result for any one of its attributes has been manually set to Inconclusive.
- **No Data.** The result for a quality order when the result for any one of its attributes has been manually set to No Data.
- **Blank.** The result when all of the attributes (Required = Yes) have been entered and there are no attributes with the Validation setting enabled.

Open Date. The date the test record was created.

Material Disposition. Enter or select the generalized code value that best describes the material disposition of the item lot. Generalized code values are set up using Generalized Codes Maintenance (36.2.13) for field name ql_mtl_disposition.

Disposition Date. Enter the disposition date.

Tested By. Enter a valid employee for the person who executed the test.

Test Date. Enter the date the test executed.

Verified By. Enter a valid employee for the person who verified the test results.

Verify Date. Enter the date the test results were verified.

Test Quantity. Enter the total quantity for the test.

Measurement. Enter a description that explains how data was measured in the test.

Quantity Accepted. Enter the sample quantity that was accepted in the test.

Quantity Retained. Enter the inventory quantity that is retained for possible retesting.

Quantity Rejected. Enter the sample quantity that was rejected in the test.

Quantity Destroyed. Enter the inventory quantity that was destroyed to perform the test. Quantities are typically destroyed for destructive testing, such as determining the tensile strength of wire.

Remarks. Optionally, enter any remarks related to the test record.

Comments. Select this check box to show comments when the system displays quality order data.

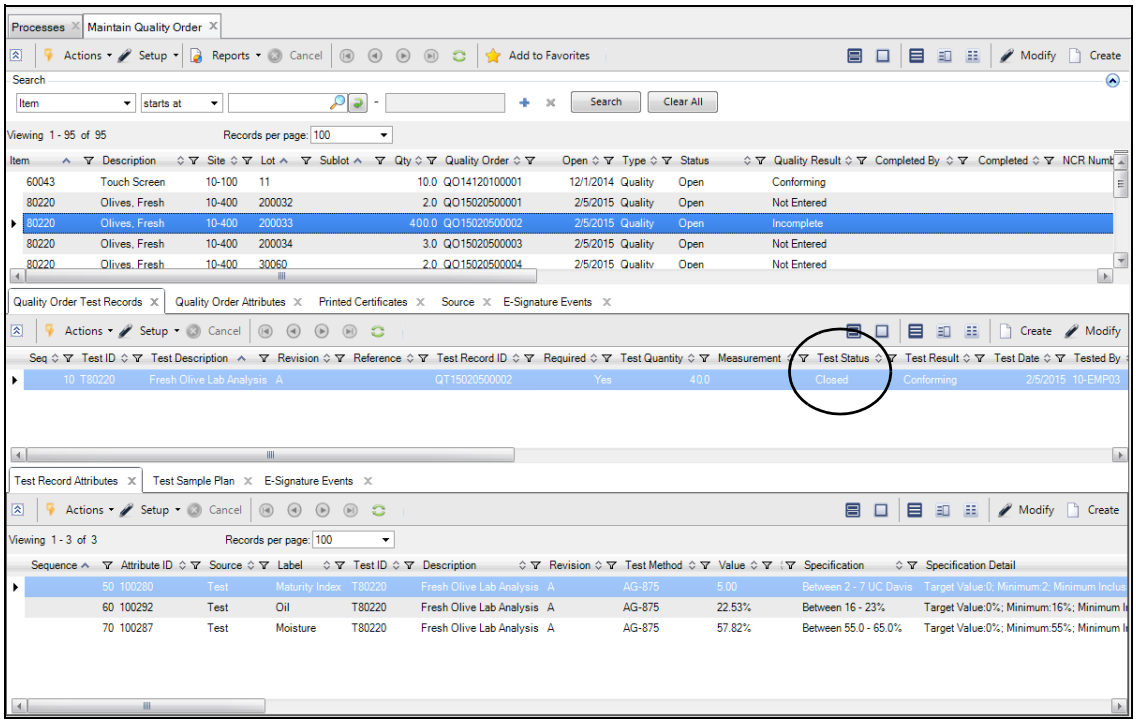
4 To close the test record, change the status to Closed. Click Next.

5 The system prompts you to copy the test record attribute values to the quality order. Click Yes to copy the test record values to the order.

Note When you copy the test record attribute values to the quality order, the values are copied over to the Quality Order Attributes tab.

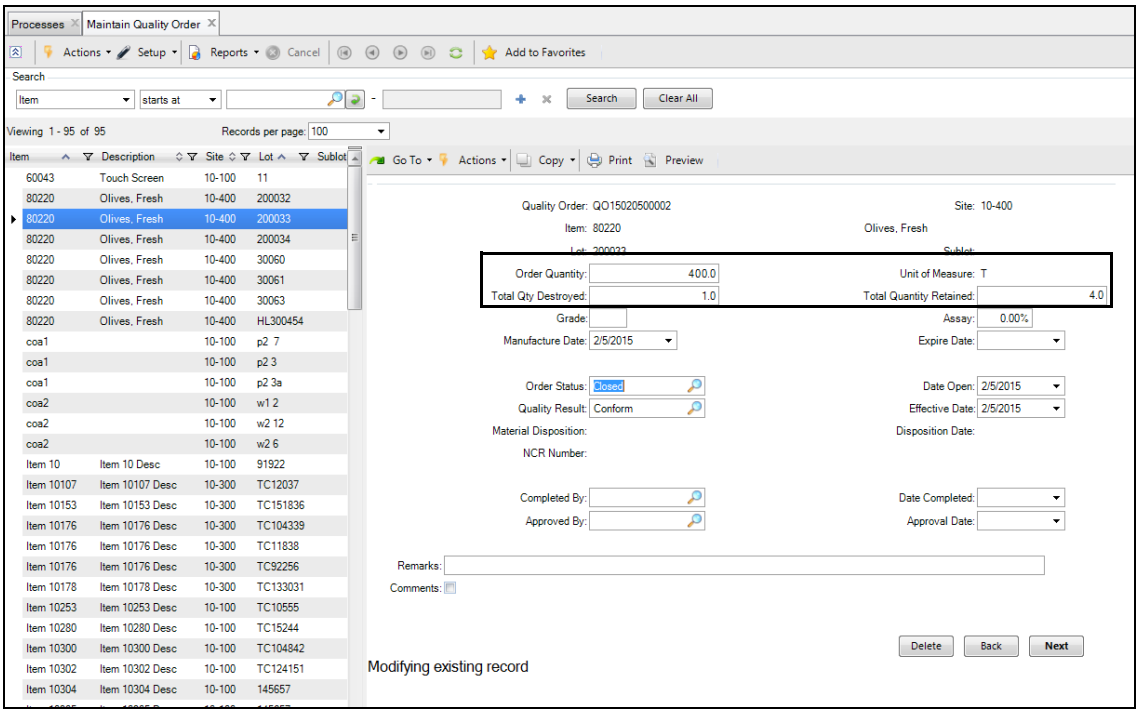
6 The test record is complete.

Fig. 4.27
Closing the Test Record



7 When test records are completed, the total quantity retained and destroyed are updated on the quality order.

Fig. 4.28
Closing the Test Record



Canceling a Test Record

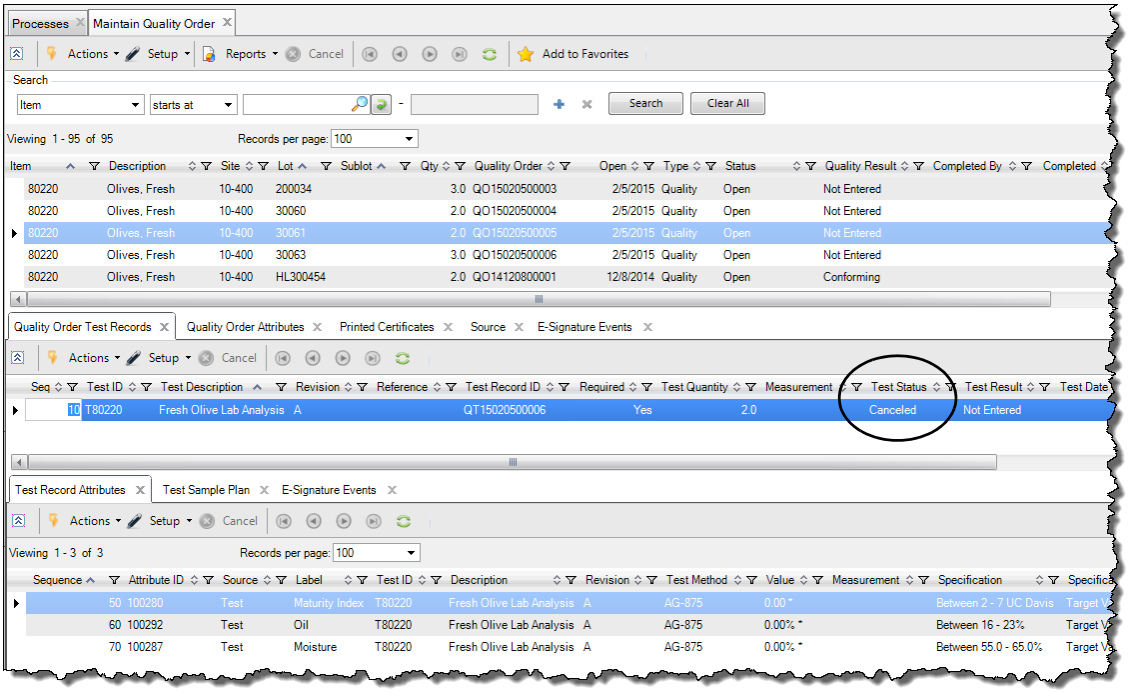
A test that is normally required but not performed can be canceled. Follow these steps to cancel a test record:

1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Double-click and open the test record.

3 Change Order Status to Canceled. The quality order is canceled.

Fig. 4.29
Canceling a Test Record



Deleting a Test Record

You can delete a test record from a quality order if the test record is not required for the item (Required = No) and the order status is Open or Results Pending. You cannot delete a test record if any of the attributes that are associated with the test record are required, unless the test record was manually added to the quality order.

Note When a test record is deleted, the matching quality order attribute can also be deleted provided that the attributes source is a test, and no other test remaining on the quality order tests the same attribute. If the attribute remains on the quality order, and the attribute belongs to a different test, then make sure the specification is valid for the remaining test.

Follow these steps to delete a test record:

1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Double-click and open the test record.

3 To delete the test record, select Delete from the Actions menu. Then click Yes to confirm. The test record is deleted.

Editing a Closed Test Record

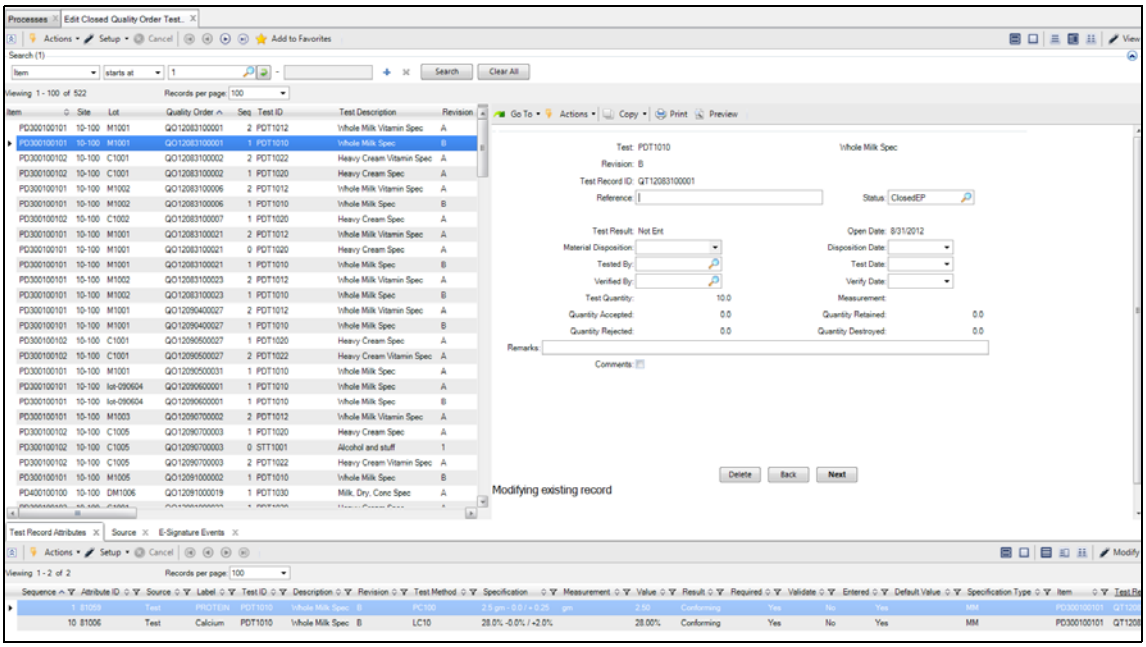
In IAQ, you can edit a limited number of fields on a closed test record by using the Edit Closed Quality Order Test Record program. Follow these steps to edit a closed test record:

1 For the type of order (inventory, purchasing, production, or sales), open the Inspect Inventory, Inspect Production Receipts, Inspect Purchasing Receipts, or Inspect Inventory for Sales Order process map.

2 Select Edit Closed Quality Order Test Record.

3 Select the test record in the top-level browse and click Modify. While you modify the closed test record for corrections, the system temporarily changes the status to Closed Edit Pending, allowing you to update fields for Reference, Status, Material Disposition, Disposition Date, Tested By, Test Date, Verified Date, Verify Date, Remarks, and Comments. For detailed field definitions, see “Completing a Test Record” on page 110.

Fig. 4.30
Editing a Closed Quality Order Test Record



4 After you have completed the necessary changes, set Order Status to Closed.

Entering Non-Test Record Attributes

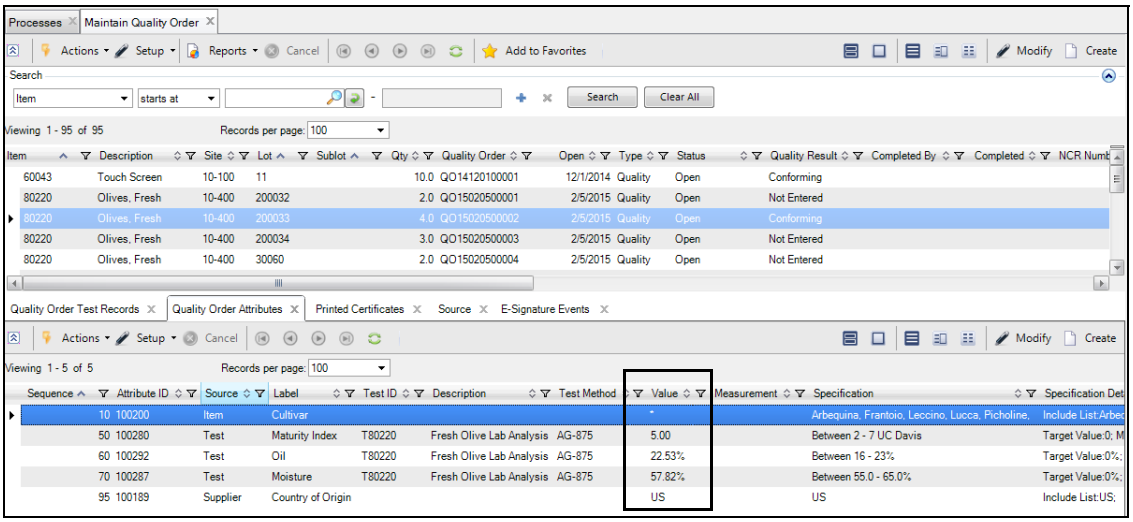
Quality orders can have test and non-test record attributes. Follow these steps to enter any non-test attributes:

1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Select the order in the top-level browse.

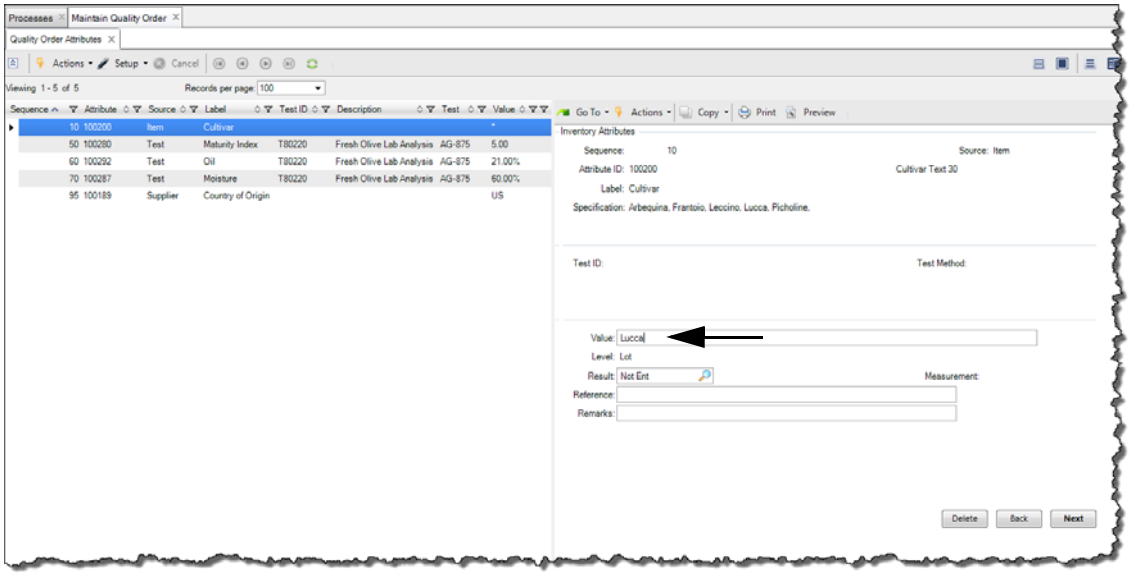
3 Select the Quality Order Attributes tab, which displays any non-test attributes associated with this quality order.

Fig. 4.31
Entering Non-Test Attributes



4 Double-click and open the non-test attribute. Enter the attribute value in the Value field.

Fig. 4.32
Entering Non-Test Attributes



5 Repeat these steps for any remaining attributes.

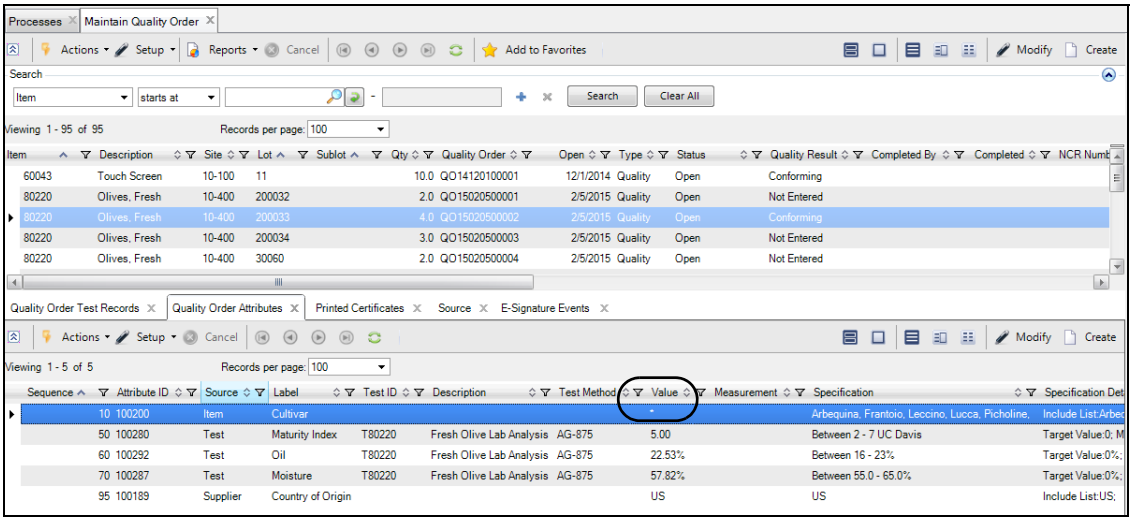
Verify that Non-Test Attribute Values Are Entered

Because a quality order can have test and non-test attributes, you must verify that all the attribute values have been entered before completing a quality order.

To determine which values have not been entered, open the appropriate quality order collection and select the Quality Order Test Attributes tab. See “Navigating to Quality Order Collections” on page 96.

The Quality Order Test Attributes tab displays the test and non-test attributes associated with the quality order. The Value field displays the default value, the default value with an asterisk, or an entered value. If a value has not been entered or accepted for the attribute and if the attribute is required and must be validated (Required = Yes and Validation = Yes), an asterisk is displayed with the value.

Fig. 4.33
Verify Non-Test Attributes Are Entered



Completing Quality Orders

The three most common ways to complete an open quality order are to close it, cancel it, or delete it. Each has a specific purpose within most workflows.

Note You can only delete quality orders that are created manually.

Closing a Quality Order

The most common scenario when completing a quality order is to record the results of the order and close it. Follow these steps to close a quality order:

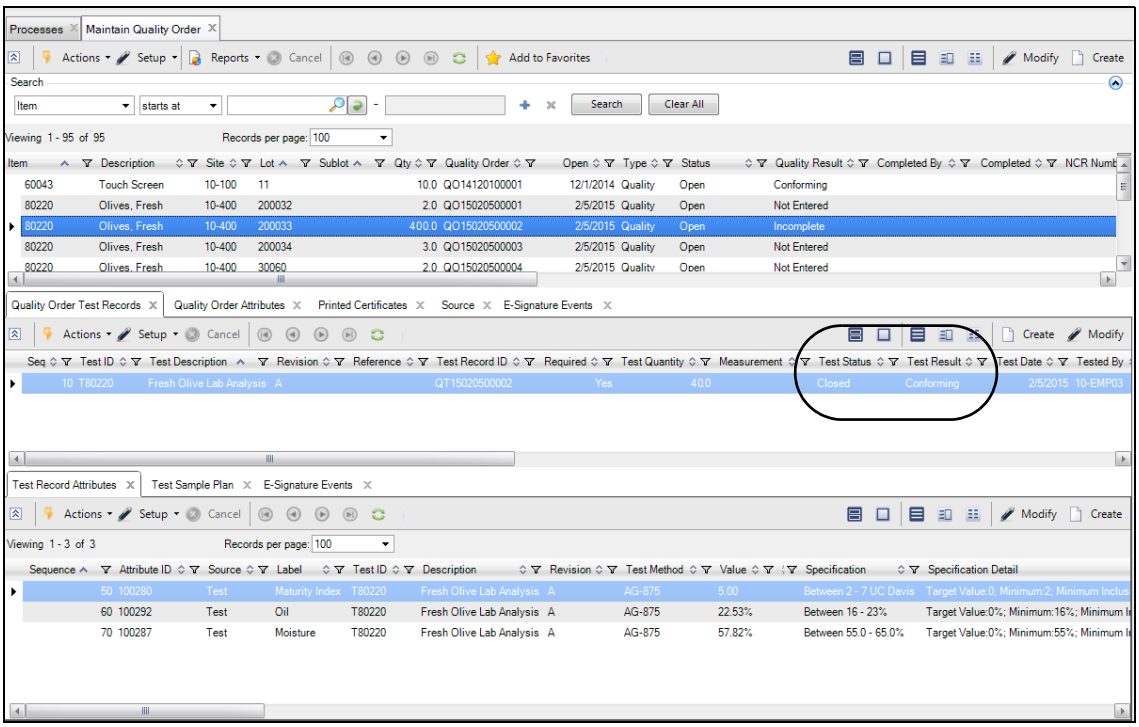
1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Review and verify that all the test record attributes and non-test attributes have been entered. See “Verify Test Record Values Are Entered” on page 108 and “Verify that Non-Test Attribute Values Are Entered” on page 117.

3 Verify that the test records have been closed.

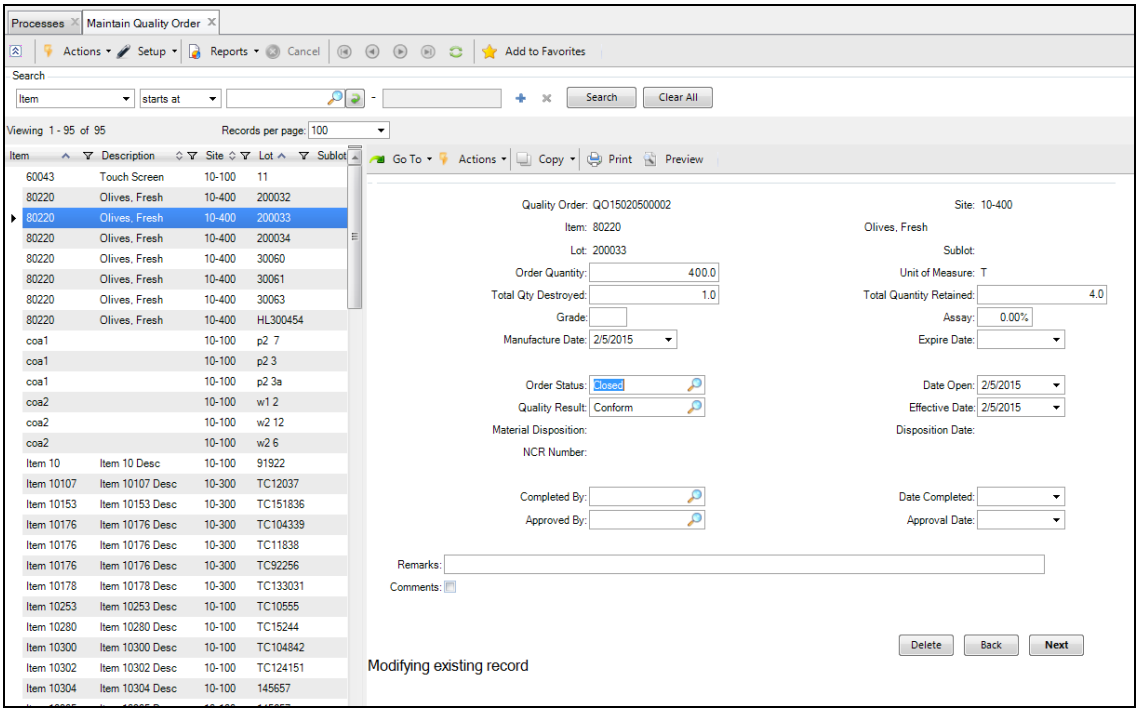
Note To close a quality order, all associated test records must be closed as well.

Fig. 4.34
Checking Results of a Test Record



4 Double-click and open the quality order.

Fig. 4.35
Closing the Test Record



5 Review the quantities destroyed and retained, which are updated when the associated test records are closed.

6 Optionally, enter the inventory detail attributes for the item, site, lot, and quantity.

7 Confirm or update the quality order result and material disposition for the quality order. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.

8 If all the required information has been entered, change the Order Status to Closed and click Next.

9 When closing a lot, you have the option to transfer material quantities and update the inventory status for the quantity remaining after inspection. When processing the transfer of inventory, select the source and destination locations for the transfer transaction.

If there were any items destroyed during the quality testing, the system prompts you to perform a scrap transaction.

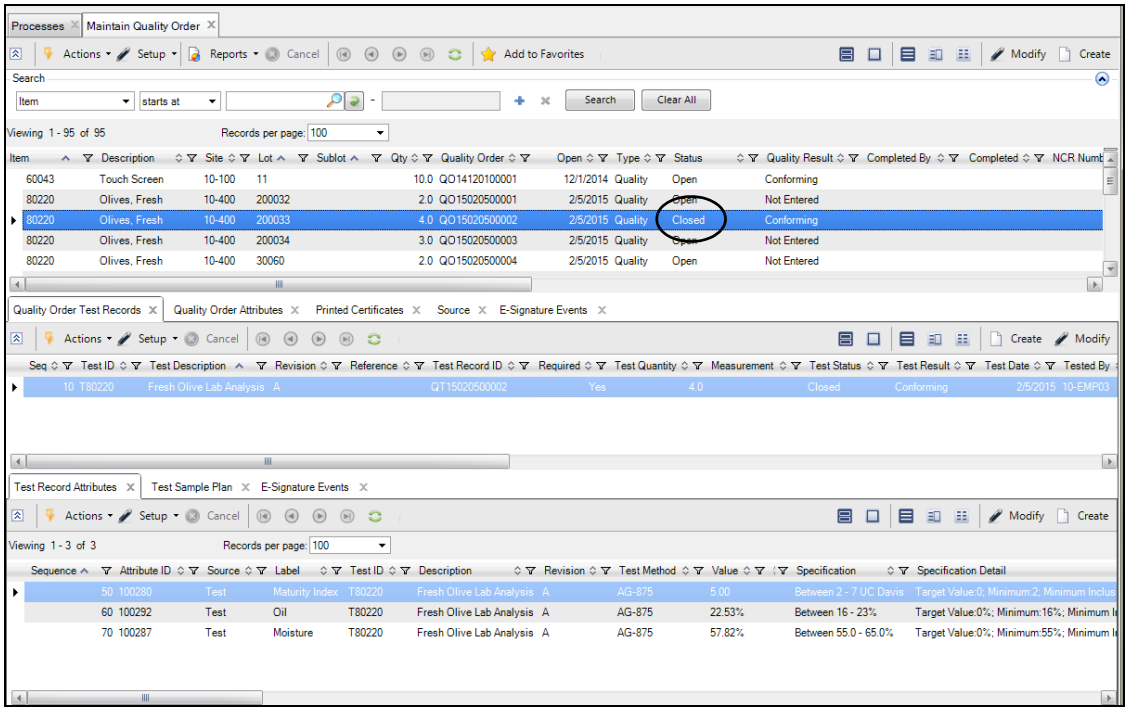
If there were any items retained, the system prompts you to transfer those items to a specific location.

For the remaining items, the system prompts you to transfer those items to the appropriate inventory location.

For more information about performing inventory transactions, see *QAD Master Data User Guide*.

10 After the items have been transfered, the quality order is closed.

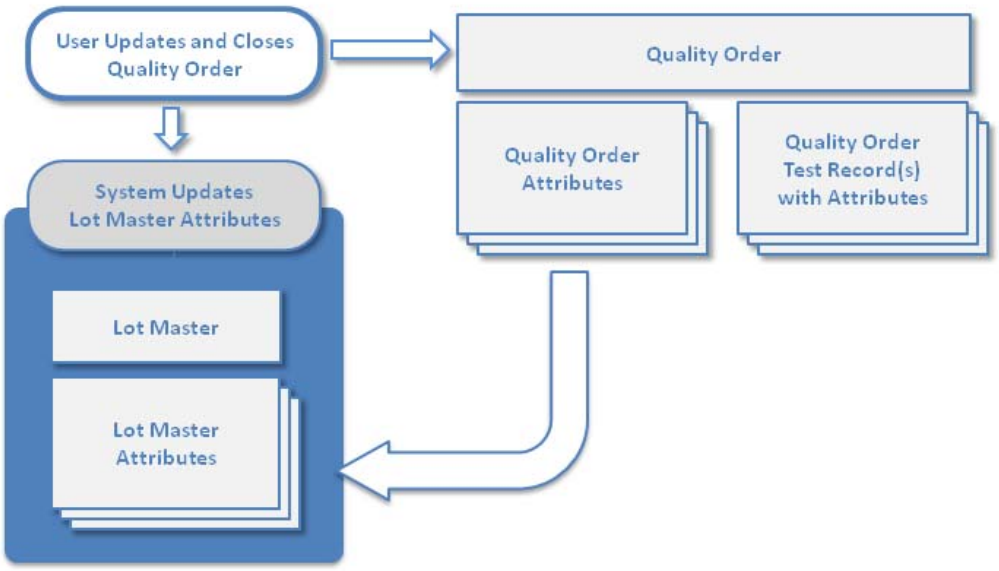
Fig. 4.36
Closing a Quality Order



11 After closing a quality order, if the test's results are Conforming or Non-Conforming, you can update the lot master attributes with the values of the quality order attributes. Figure 4.37 depicts the process when closing a quality order.

Note If the test's results are Canceled, No Data, or Inconclusive, or if the test record is deleted, the attributes are not updated.

Fig. 4.37
Closing a Quality Order



Canceling a Quality Order

Another scenario when completing a quality order is to cancel the order when it is no longer helpful but is still incomplete. After canceling an order, a record of the canceled order remains in the system.

Follow these steps to cancel a quality order:

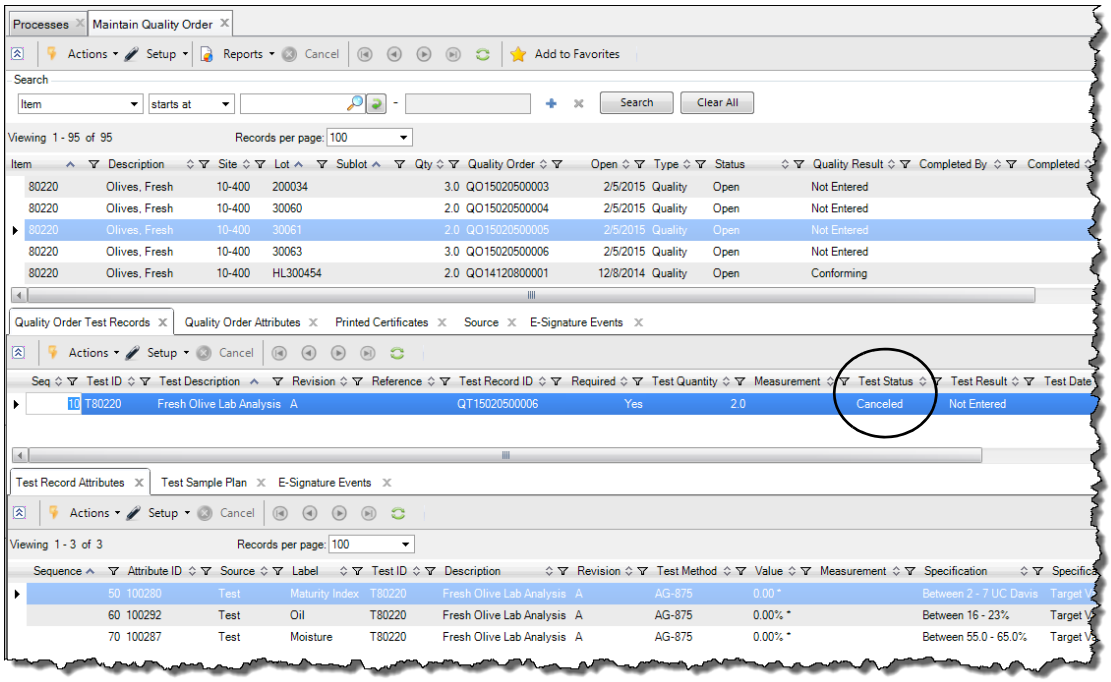
1 For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.

2 Select the order in the top-level browse.

3 In the Quality Order Test Records tab, cancel any test records that are associated with the order by changing the status to Canceled. See “Quality Order Workflow” on page 100.

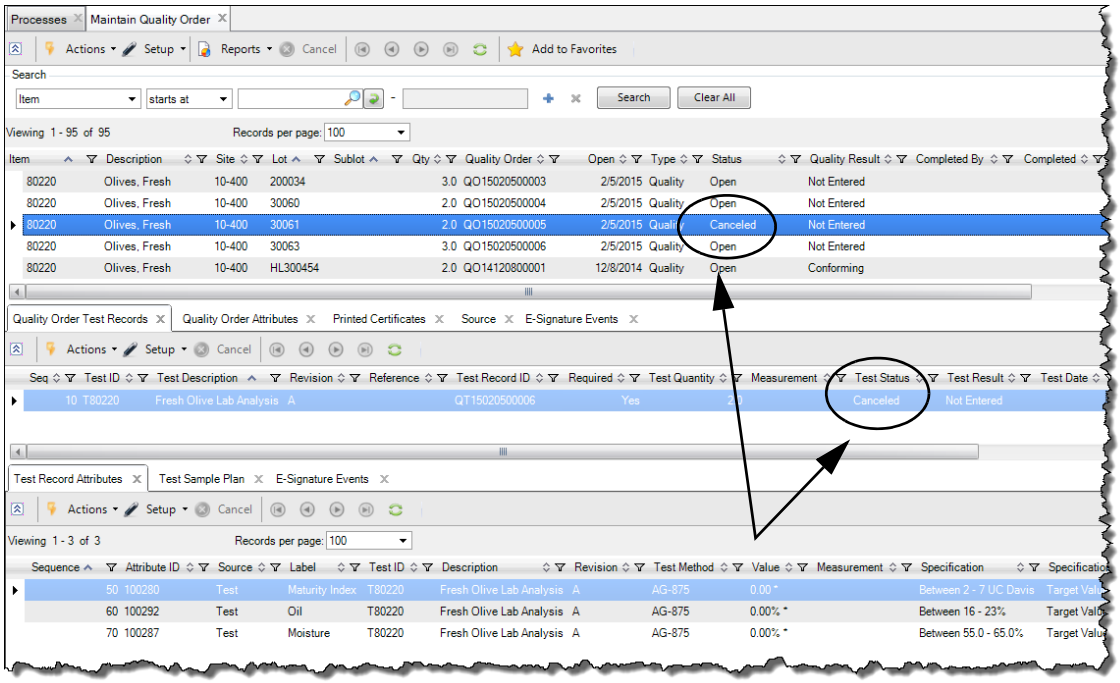
Note To cancel a quality order, any test records that are associated with the order must be canceled first.

Fig. 4.38
Canceling a Quality Order



4 Open the quality order and change the Order Status to Canceled. The quality order is canceled.

Fig. 4.39
Canceling a Quality Order



Deleting a Quality Order

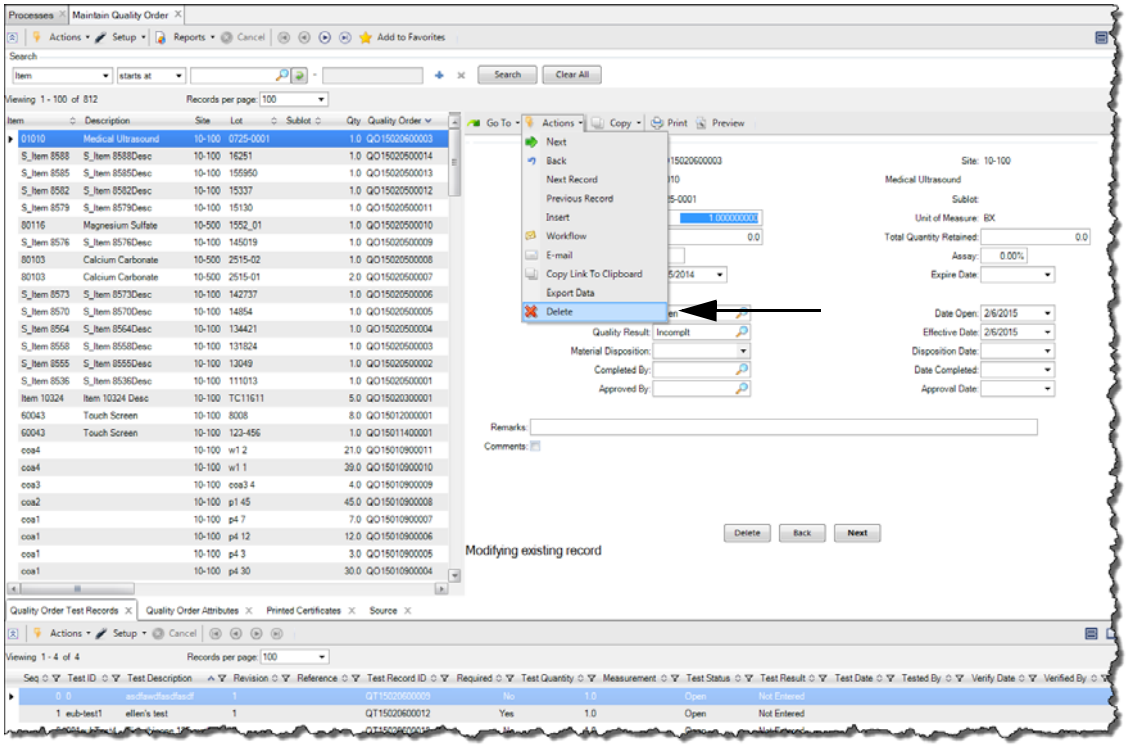
The third most common scenario when completing a quality order is to delete the order if it is redundant or manually created and no longer required. Deleting an order is useful when you need to remove the order from the system and a record of a canceled order would be confusing.

Note You can delete manually created quality orders when the quality order status is set to Open or Results Pending. Quality orders that are system generated automatically from receipt transactions cannot be deleted.

Follow these steps to delete a quality order:

1. For the type of order (inventory, purchasing, production, or sales), open the associated profile collection. See “Navigating to Quality Order Collections” on page 96.
2. Double-click and open the order.
3. To delete the order, select Delete from the Actions menu. Then click Yes to confirm. The order is deleted.

Fig. 4.40
Deleting a Quality Order

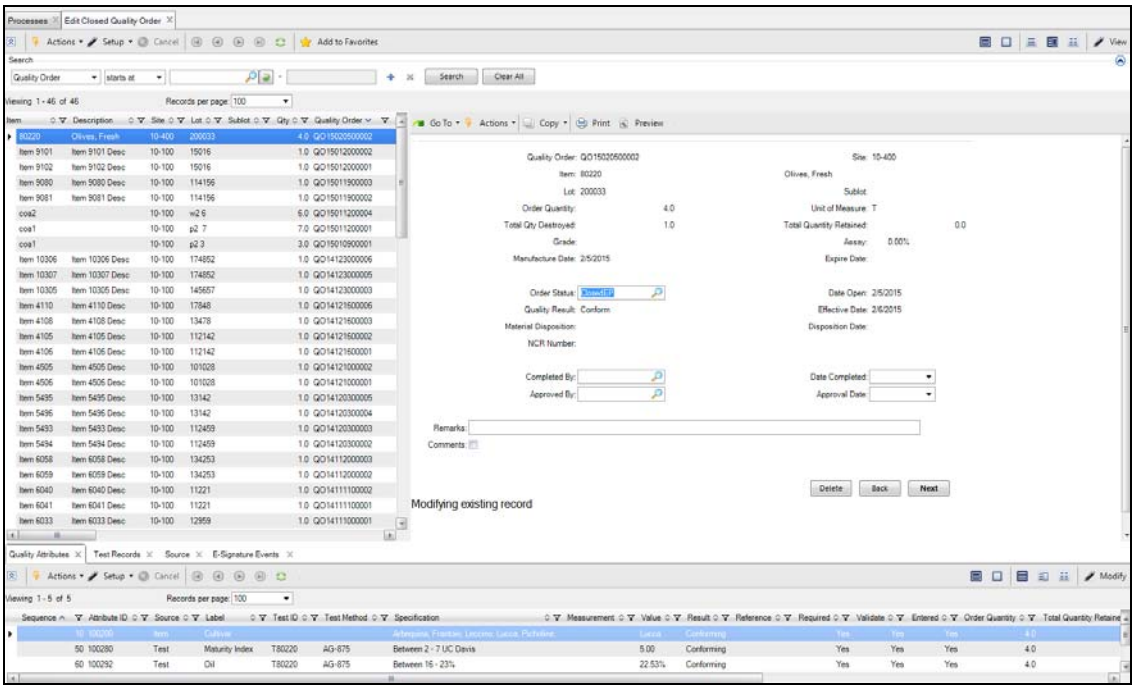


Editing a Closed Quality Order

In IAQ, you can edit a limited number of fields on a closed quality order by using the Edit Closed Quality Order program. Follow these steps to edit a closed quality order:

1. For the type of order (inventory, purchasing, production, or sales), open the Inspect Inventory, Inspect Production Receipts, Inspect Purchasing Receipts, or Inspect Inventory for Sales Order process map.
2. Select Edit Closed Quality Order Test Record.
3. Select the order in the top-level browse and click Modify. While you modify the closed quality order for corrections, the system temporarily changes the status to Closed Edit Pending, allowing you to update fields for Order Status, Completed By, Date Completed, Approved By, Approval Date, Remarks, and Comments. For detailed field definitions, see “Lot Attribute or Quality Orders Field Descriptions” on page 45.

Fig. 4.41
Editing a Closed Quality Order



4 After you have completed the necessary changes, set Order Status to Closed and click Next.

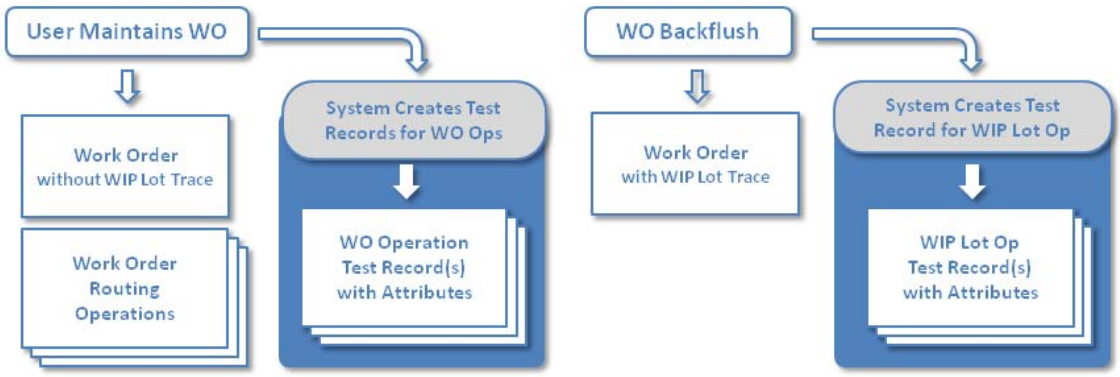
Quality Control for Work-In-Process Production

Quality Records for WIP Operations

In WIP operations, quality is documented using test records that are directly linked to work order and CUM order operations. The creation of records for work-in-process operations triggers at different circumstances, depending on the type of order.

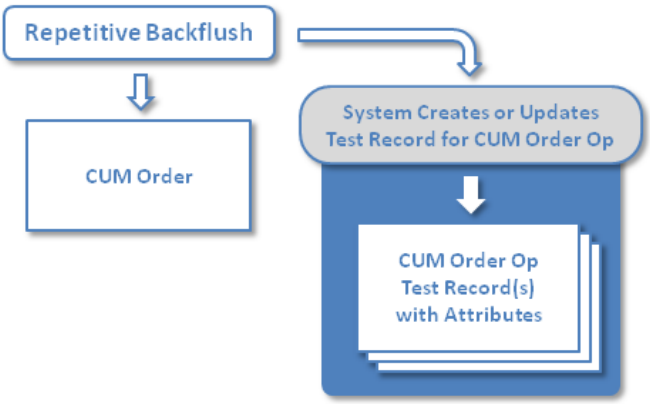
- **Work Orders.** When a work order does not have an attached WIP lot trace, the system creates test records for it automatically. These test records are linked to the item at one of the work order's routing operations. If a WIP lot trace exists, these records instead generate at the point of a work order backflush.

Fig. 4.42
WO Operations and Test Records



- **CUM Orders.** CUM orders create test records at the time of the repetitive backflush.

Fig. 4.43
Process Flow for Repetitive Operations



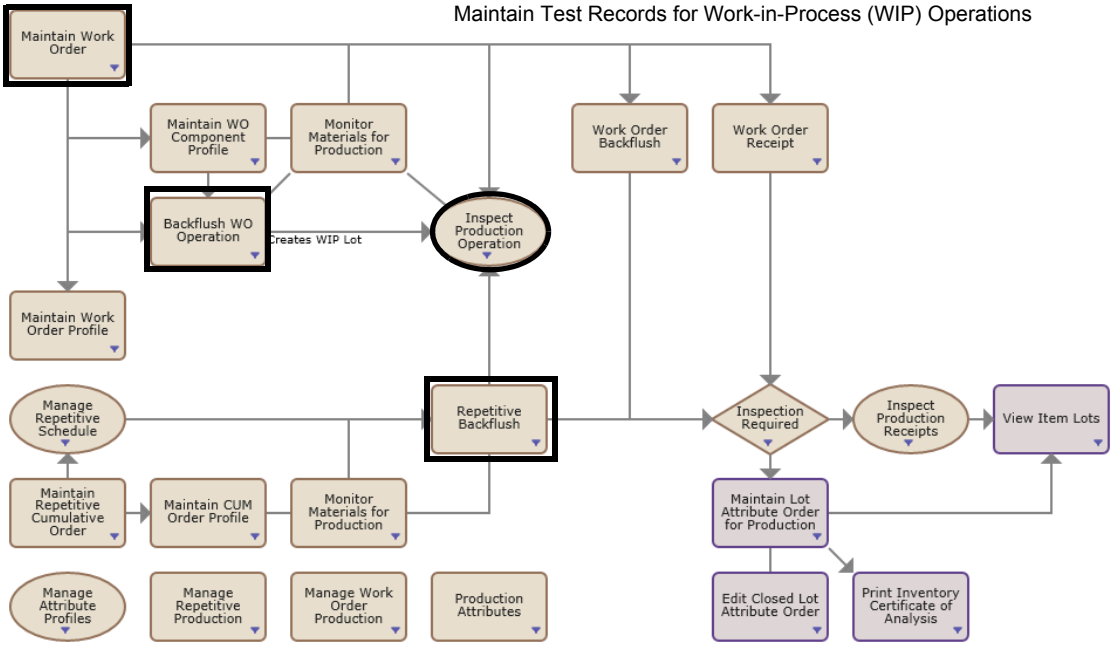
- **Orders Using WIP Lot Trace.** Orders using the WIP Lot Trace function create test records during both work order backflushes and repetitive backflushes.

Process Flow for Discrete Work Order Operations

Work orders, production operations, and backflush operations are used when performing quality control for WIP operations.

The Manage Production with Attributes process map contains the functions that make up the process flow for discrete work order operations. This map is located in Home|Manage Enterprise Item Attributes|Manage Production with Attributes.

Fig. 4.44
Process Map - Manage Production with Attributes



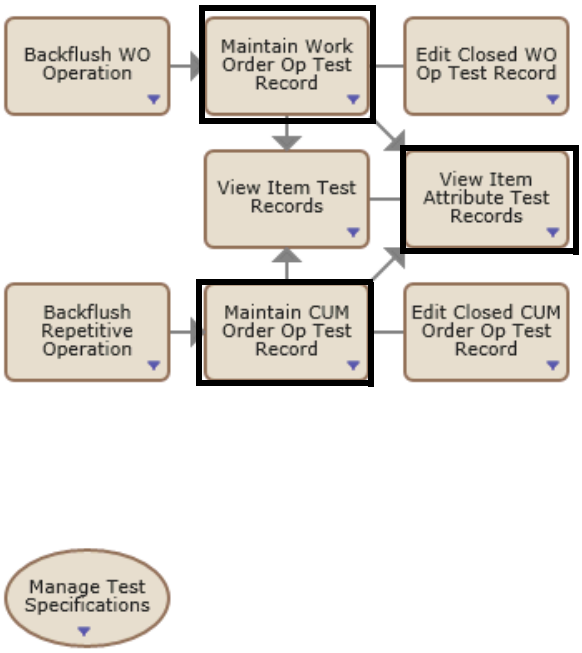
Collections for WIP Test Records

The Inspect Production Operation process map contains functions that deal specifically with the inspection of test records for WIP operations:

- Maintain Work Order Op Test Record Collection
- Maintain CUM Order Op Test Record Collection

Inspection Production Operation is located in Home|Manage Enterprise Item Attributes|Manage Production with Attributes|Inspect Production Operation.

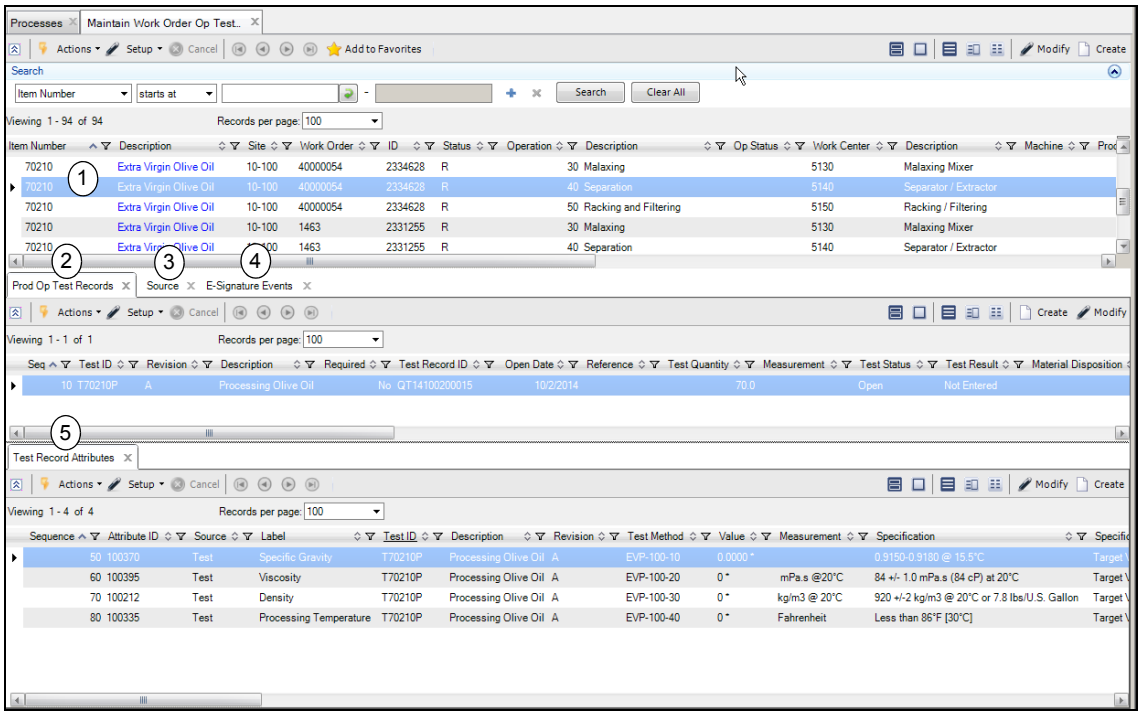
Fig. 4.45
Process Map - Inspect Production Operation



Maintain Work Order Op Test Record Collection

For WIP operations, the Maintain Work Order Op Test Record collection allows you to manage and maintain test records that are directly associated with a work order and operation. This collection also allows you to confirm information for the work order and operation and to browse, select, update, and review test record attribute values and results.

Fig. 4.46
Maintain Work Order Op Test Record Collection



The Maintain Work Order Op Test Record collection consists of the following:

1 **WO Operation Test Record.** Displays the work order operation.

2 **Prod Op Test Records tab.** Displays the test records associated with the selected work order operation.

3 **Source.** Displays additional information for the selected work order operation.

4 **E-Signature Events tab**. Displays the e-signature records created for the selected test record. If e-signature functionality is enabled, when you change the status of a test record to Approve Pending, Closed, or Canceled, the system prompts for an e-signature. The system processes data to record the event and displays the information on the E-Signature Events tab. Double-click the record to view e-signature event details.

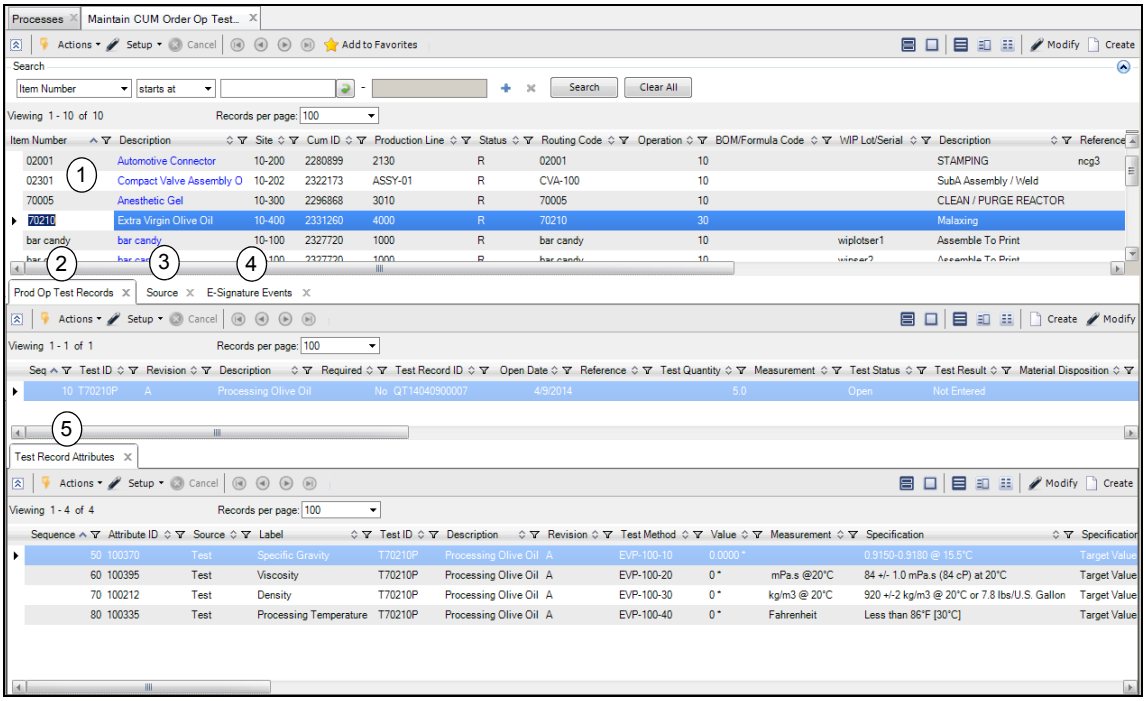
   For information about setting up e-signature functionality, see *QAD Security and Controls User Guide*.

5 **Test Record Attribute tab.** Displays the attributes associated with the selected test record.

Maintain CUM Order Op Test Record Collection

The Maintain CUM Order Op Test Record collection allows you to manage and maintain test records that are directly associated with an Advanced Repetitive CUM order and operation. This collection also allows you to confirm information for the CUM order and operation and to browse, select, update, and review test record attribute values and results.

Fig. 4.47
Maintain CUM Order Op Test Record Collection



The Maintain CUM Order Op Test Record collection consists of the following:

1 **CUM Order Operation Test Record.** Displays the CUM order operation.

2 **Prod Op Test Records tab.** Displays the test records associated with the selected work order operation.

3 **Source.** Displays additional information for the selected work order operation.

4 **E-Signature Events tab**. Displays the e-signature records created for the selected test record. If e-signature functionality is enabled, when you change the status of a test record to Approve Pending, Closed, or Canceled, the system prompts for an e-signature. The system processes data to record the event and displays the information on the E-Signature Events tab. Double-click the record to view e-signature event details.

   For information about setting up e-signature functionality, see *QAD Security and Controls User Guide*.

5 **Test Record Attribute tab.** Displays the attributes associated with the selected test record.

Entering Values on WIP Test Records

To enter values on WIP test records, see “Entering Attribute Values in Test Records” on page 104.

Completing WIP Test Records

To complete WIP test records, see “Completing a Test Record” on page 110.

Repetitive Ops and Test Records

CUM Orders - Creating Test Records from Backflush Transactions

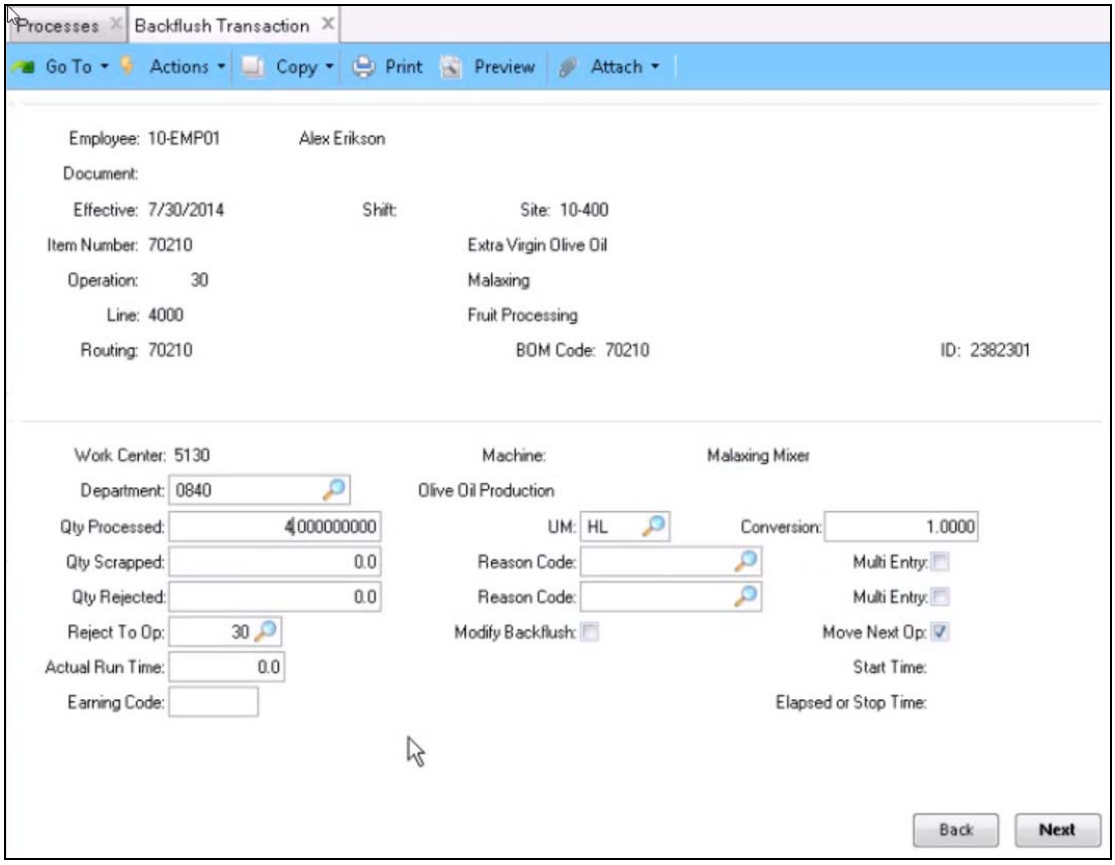
Test records for CUM orders trigger differently than those created for work orders. While work order test records involve distinct work operations, CUM order test records deal with Advanced Repetitive processes. These trigger at each repetitive backflush. As a result, this process repeats with each subsequent backflush. If the order is open, subsequent backflushes update the test record. If the order is closed, a new order is created instead.

The following procedure demonstrates how to process test records for CUM order operations. It shows how to conduct in-process testing after a backflush is performed at an operation and explains how test records attach to CUM orders. By following this procedure, you will be able to test ongoing processes and to attach multiple records to repetitive processes where necessary.

Note In the following procedure, Item 70210, which has five different operations, is used.

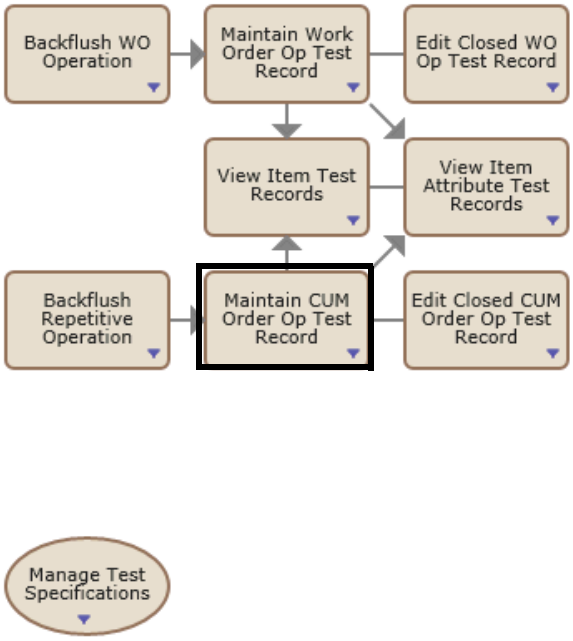
1 Perform a backflush transaction. In the following example, a quantity of 4 is backflushed at operation 30. This backflush creates a test record.

Fig. 4.48
Backflush to Create Test Records



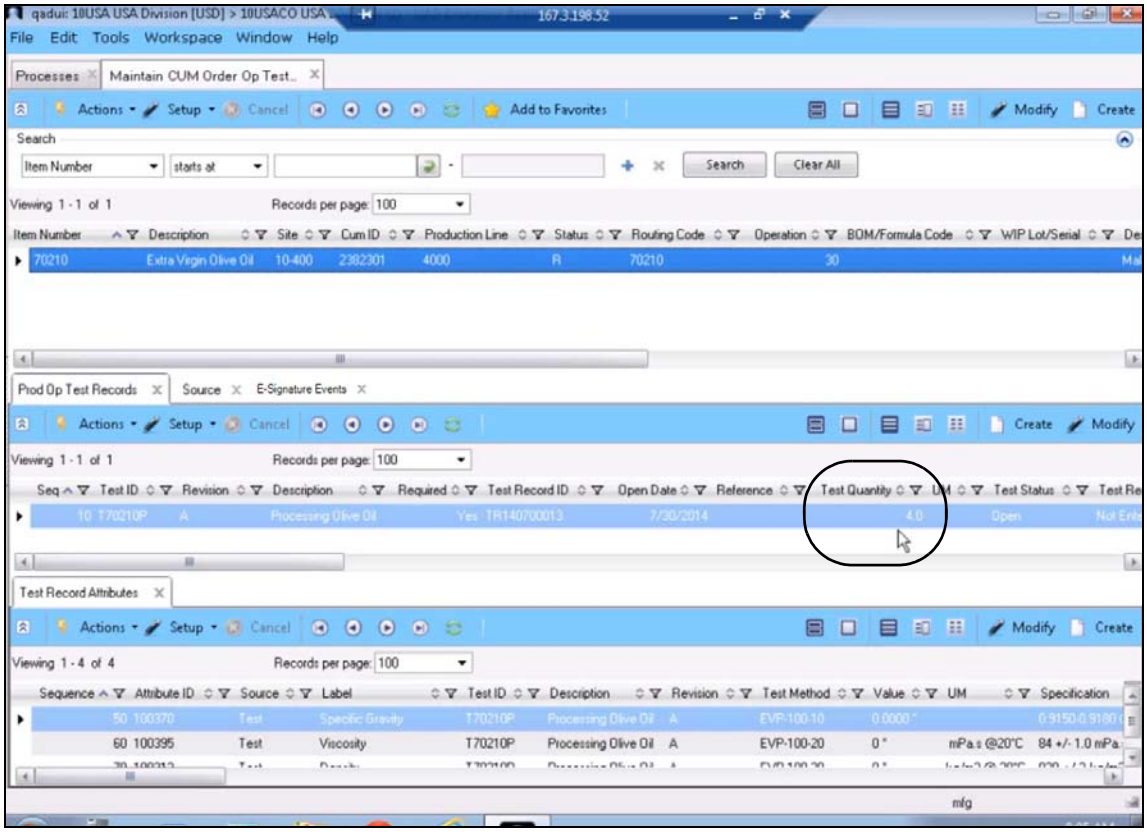
2 Open the Maintain CUM Order Op Test Record collection in the Inspect Production Operation process map.

Fig. 4.49
Process Map - Inspect Production Operation



3 The Maintain CUM Order Op Test Records collection displays the test records created for CUM orders.The test record on the Prod Op Test Records tab displays the quantity that was backflushed in the previous step.

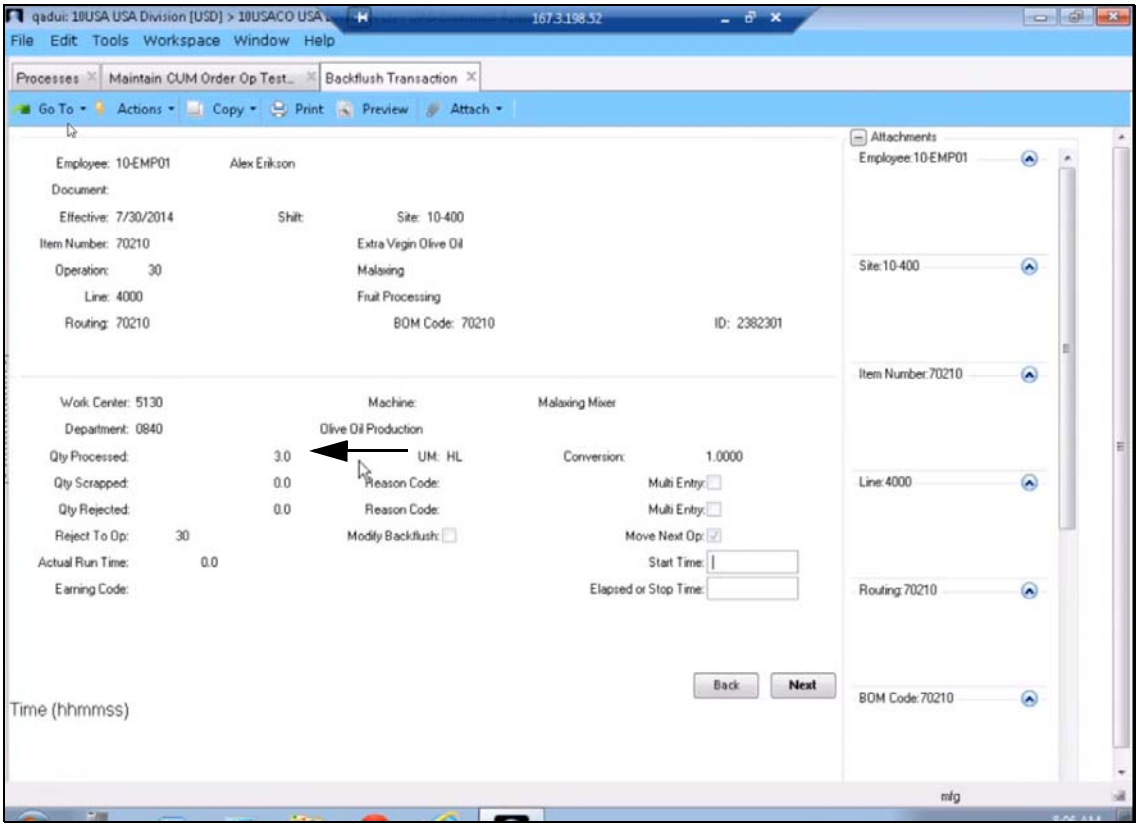
Fig. 4.50
Maintain CUM Order Op Test Records Collection



4 If the test record status remains Open, each time a backflush is performed for this item and operation, those parts will be added to the test record.

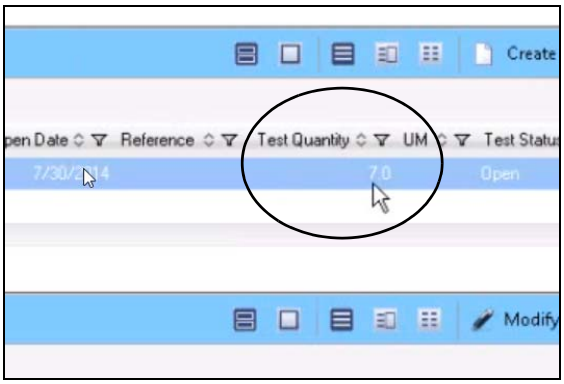
To add additional parts to the test record, backflush another three items.

Fig. 4.51
Backflushing and Adding Items to the Test Record



5 Refresh the Maintain CUM Order Op Test Record collection. The test quantity is increased by 3, making a total test quantity of 7. As quantities continue to be backflushed, this record will continue to increase.

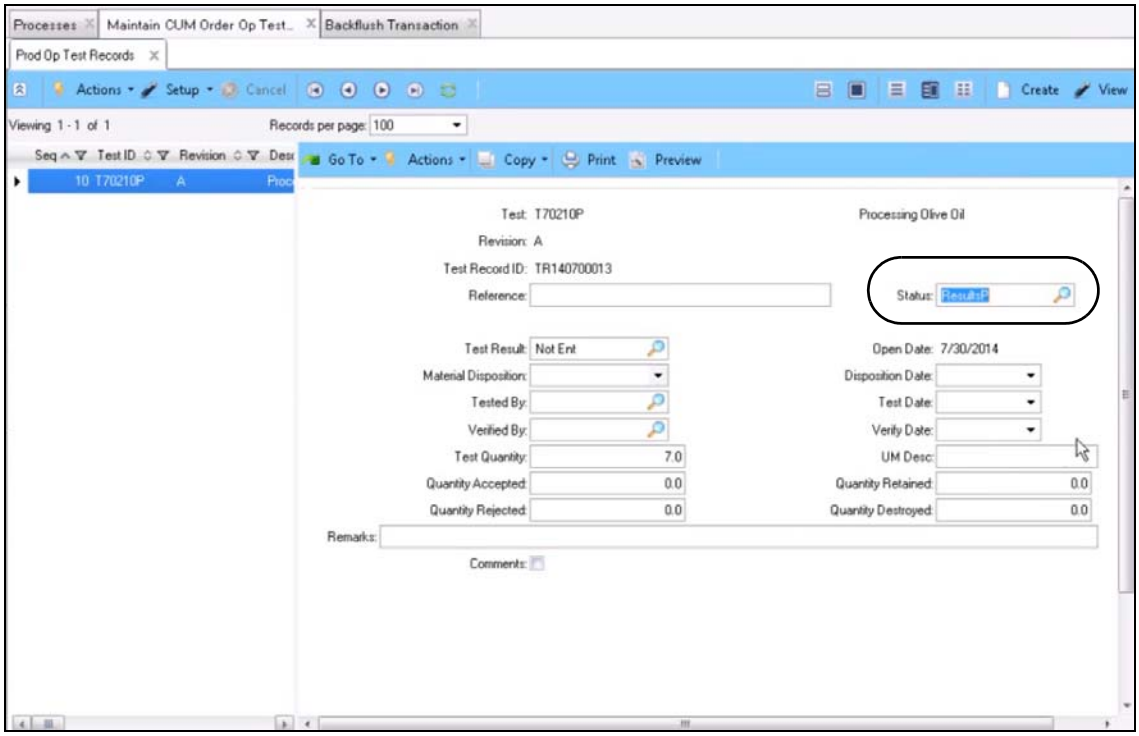
Fig. 4.52
Backflushed Quantities Added to the Test Record



6 To stop collecting quantities for this test record, open the test record and change the status to Results Pending. This freezes the test record and stops the backflush quantities from accumulating.

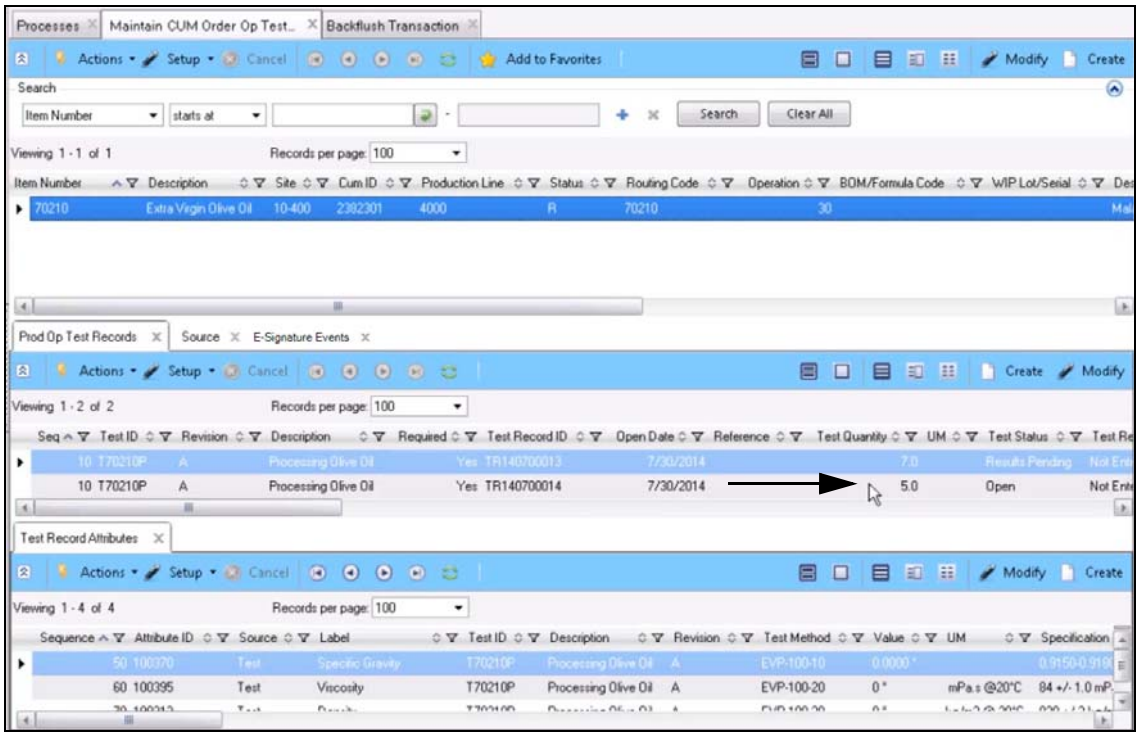
7 If you have additional quantities to backflush, a separate test record will be created.

Fig. 4.53
Changing the Status of the Test Record - Freezing the Record



8 In the following example, an additional 5 items are backflushed at operation 30. Refresh the Maintain CUM Order Op Test Record collection to view the new test record that was created from the previous backflush transaction.

Fig. 4.54
Test Record Created for Newly Backflushed Quantities



9 Next, enter values for the attributes and close the test records. See “Entering Attribute Values in Test Records” on page 104 and “Completing a Test Record” on page 110.

Quality Orders for Make-to-Order Production

For make-to-order (MTO) production methods, IAQ provides functions that enable you to:

- Manage production to support customer MTO requirements.
- Assure quality to MTO requirements.
- Manage materials to MTO requirements.

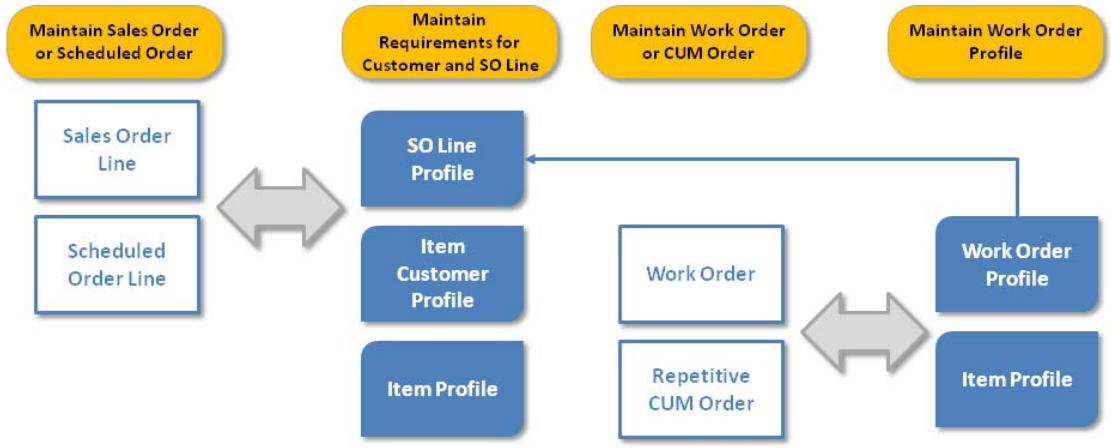
The overall challenges of MTO production environments include the difficulty of meeting the unique specifications of customers. The quality control functionality in IAQ offers options to:

- Capture customer order specifications.
- Communicate customer specifications to production and quality.
- Keep current with changes to customer requirements and specifications.
- Include customer specifications together with production and quality processes.

To manage quality orders and customer requirements in an MTO environment, use the item customer, SO line, and work order (or CUM order) profiles. Three groups of profiles assist you in managing customer requirements:

- **Item Customer Profile.** Manage specifications unique to a customer.
- **SO Line Profile.** Manage specifications unique to a sales transaction.
- **Work Order and CUM Order Profiles.** Manage specifications unique to production orders.

Fig. 4.55
Manage Orders and Customer Requirements



The fundamental tasks for an MTO environment are the following:

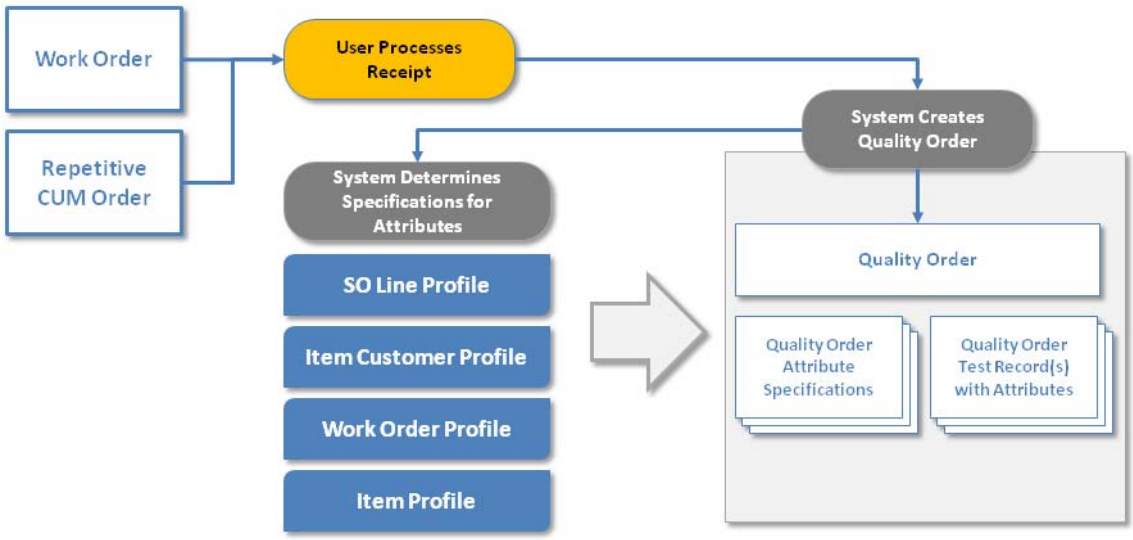
- Capture and document customer requirements for an order line.
- Maintain a production order with requirements for a customer order line.
- Verify quality of production quantities to test specifications and customer specifications.
- Monitor conformance of inspected inventory to customer order line specifications.

Produce and Receive Quantities

Quality orders that are created from work orders gain attributes from SO lines, item customer profiles, and test specifications.

After receiving a lot from production, which triggers a quality order, the quality order gains attributes. These come from the test specification as well as from matching profiles.

Fig. 4.56
Make-to-Order - Producing and Receiving Quantities



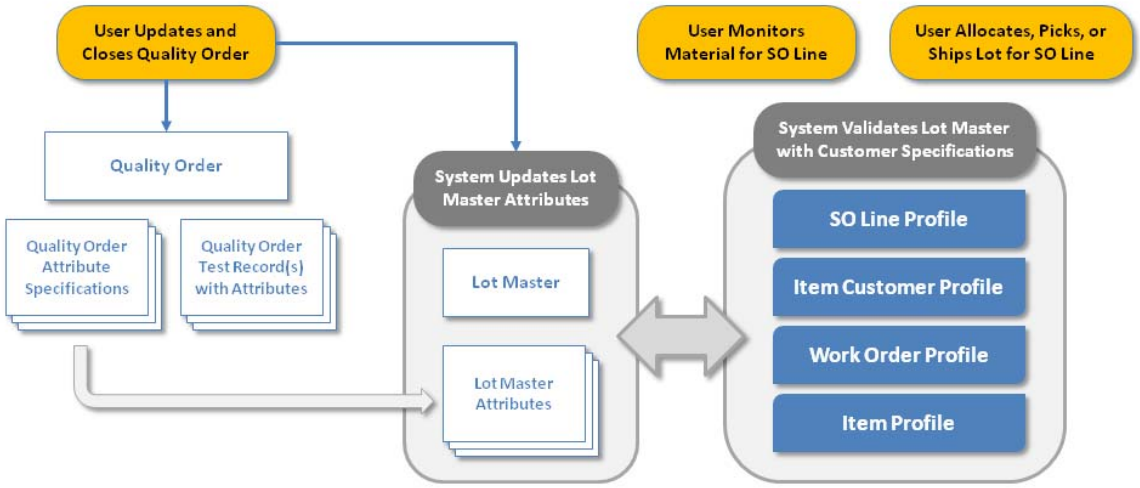
Complete Quality Order and Ship

Quality order and material processes assure lot conformance to customer and sales order specifications.

In addition to the multiple attribute sources that QAD EE supports, it also supports unique customer specifications by providing options for monitoring materials.

After closing a quality order for a sales order, the user must validate that the right materials are available and ship them.

Fig. 4.57
Make-to-Order - Complete Quality Order and Ship



Quality Orders and Customer Specifications

In the following business use cases, a user is shipping inventory to a customer that meets that customer's specifications. In each of these use cases, it is assumed that the following have been created:

- A sales order for the customer and item.
- SO line and/or item customer profiles with attribute specifications that meet customer specifications.

Business Use Case 1: Ship Existing Inventory to Customer

In this business user case, the user is shipping existing inventory, which conforms to customer specifications, to the customer.

Fig. 4.58
Business Use Case 1: Ship Existing Inventory to Customer

1 Open the Monitor For Sales collection and check if there is inventory that conforms to customer specifications. See “Monitor Materials for Sales” on page 80.

You verify that there are item lots in stock that conform to customer specifications and can be shipped immediately.

2 Pick and ship the item lots to the customer using transactions such as, SO picklist, SO pre-shipper, SO Shipper, SO Shipment, and so on.

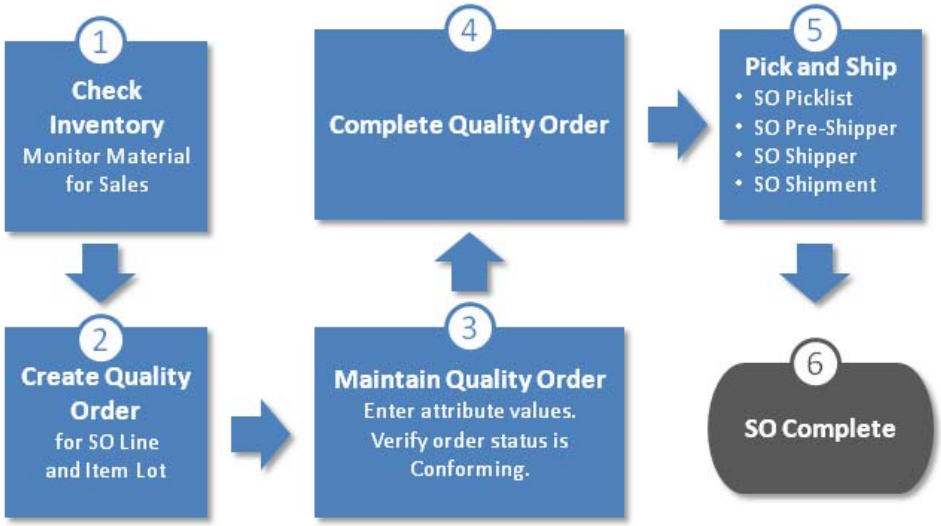
During the picking and shipping transactions, the system verifies that all items conform to customer specifications.

3 Item lots are shipped to the customer and the sales order is complete.

Business Use Case 2: Retest Inventory to Conform to Customer Specifications

In this business user case, there is inventory to ship to customer but it needs to be re-tested to verify that it conforms to customer specifications.

Fig. 4.59
Business Use Case 2: Retest Inventory to Meet Customer Specifications



1 Open the Monitor For Sales collection and check if there is inventory that conforms to customer specifications. See “Monitor Materials for Sales” on page 80.

You verify that there are item lots in stock that need to re-tested before being shipped.

2 Manually create a quality order for the SO line and item lot. The customer specifications (attribute specifications) from the SO line and/or item customer profiles are added to the quality order. See “Manually Creating a Quality Order” on page 102.

3 Retest the item lots and enter the attribute values. Verify the attribute values conform to customer specifications.

4 Complete the quality order. See “Completing Quality Orders” on page 117.

5 Pick and ship the item lots to the customer using transactions such as, SO picklist, SO pre-shipper, SO Shipper, SO Shipment, and so on.

During the picking and shipping transactions, the system verifies that all items conform to customer specifications.

6 Item lots are shipped to the customer and the sales order is complete.

Business Use Case 3: Build Inventory to Meet Customer Specifications

In this business user case, inventory needs to be built, which conforms to customer specifications, to be shipped to the customer.

Fig. 4.60
Business Use Case 3: Build Inventory to Meet Customer Specifications

1 Open the Monitor For Sales collection and check if there is inventory that conforms to customer specifications. See “Monitor Materials for Sales” on page 80.

You verify that there is no inventory in stock and that you need to build items that conform to customer specifications.

2 Create a work order.

3 In Maintain Work Order Profile, link the SO line to the work order. See “Maintain WO Order Profile” on page 63.

4 After the items are built, receive the work order. The system automatically creates a quality order for the SO line and item lot. The customer specifications from the SO line and/or item customer profiles are added to the quality order.

5 Test the item lots and enter the attribute values. Verify the attribute values conform to customer specifications.

6 After the attribute values have been entered and the quality order is Conforming, complete the quality order. See “Completing Quality Orders” on page 117.

7 Pick and ship the item lots to the customer using transactions such as, SO picklist, SO pre-shipper, SO Shipper, SO Shipment, and so on.

During the picking and shipping transactions, the system verifies that all items conform to customer specifications.

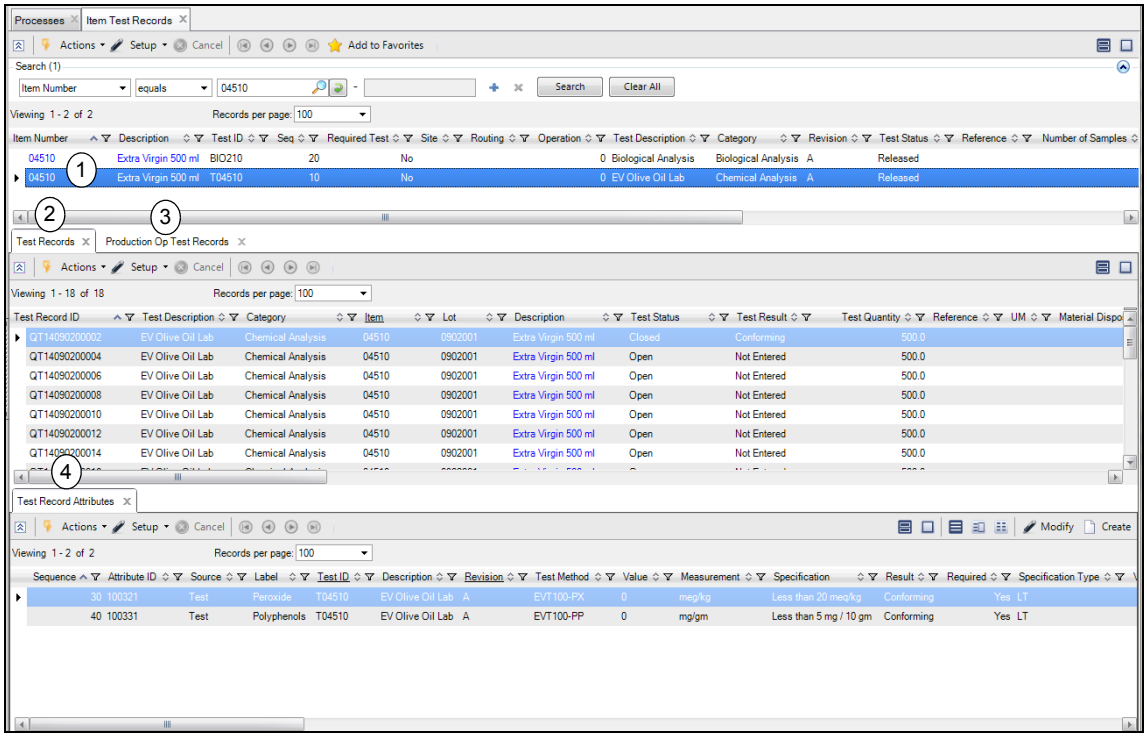
8 Item lots are shipped to the customer and the sales order is complete.

Viewing Test Records

View Item Test Records

The View Item Test Records collection displays test record history for items and their associated test specifications.

Fig. 4.61
View Item Test Records Collection



The Item Test Records collection contains the following browses and tabs:

1 **Item Test Specification browse.** Displays a list of items and the linked test specification.

2 **Test Records tab.** Displays a test record history for quality orders for the selected item and associated test record.

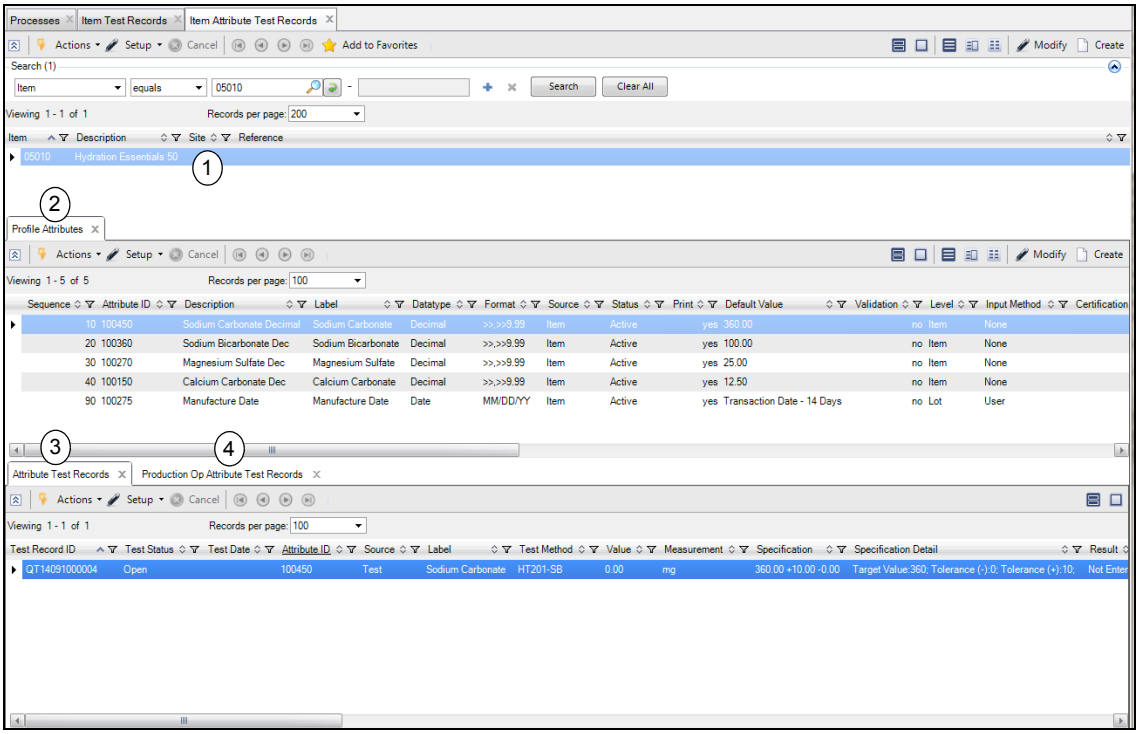
3 **Production Op Test Records tab.** Displays a test record history for work order or CUM order operations for the selected item and associated test record.

4 **Test Record Attributes tab.** Displays the attributes associated with the selected item, test record, and quality order.

View Item Attribute Test Records

The View Item Attribute Test Records collection displays test record history for item profile attributes.

Fig. 4.62
View Item Attribute Test Records Collection



The Item Test Records collection contains the following browses and tabs:

1 **Item Test Attribute Test Records browse.** Displays a list of items.

2 **Profile Attributes tab.** Displays a list of attributes associated with the selected item.

3 **Attribute Test Records tab.** Displays a test record history for quality orders for the selected item and associated test record.

4 **Production Op Attribute Test Records tab.** Displays a test record history for work order or CUM order operations for the selected item and associated test record.

Certificate of Analysis

A certificate of analysis (COA) is evidence of quality control and compliance for material. It serves as the documentation of the test results for material characteristics, specifications, and acceptance criteria and for a lot's attributes and information on how they were obtained. The COA is the published product of the quality control process.

Setup - Certificate of Analysis

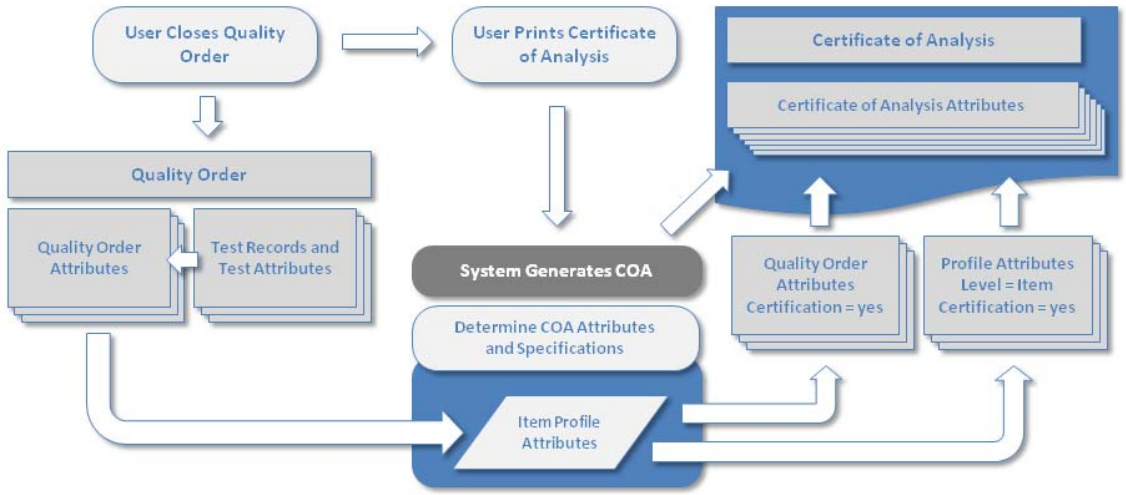
For information about setting the parameters of the certificate of analysis, which determines the documents content for lot attribute orders or quality orders, see "Certification of Analysis Control" on page 16.

Creating and Printing the Certificate of Analysis

Certificates of analysis can be printed for a closed lot attribute order (or quality order), provided that the attributes have been properly setup using attribute profiles.

Both lot attribute orders and quality orders can be used when printing certificates of analysis. There can be multiple test results for a quality order. The system captures and records test results with the attribute values. The captured test results are supporting documentation for item and supplier certifications.

Fig. 4.63
Printing a Certificate of Analysis Flowchart



In IAQ, you can print a certificate of analysis, without regard to a specific customer order, for an item lot or for a sales order line item or for an item lot. The first involves printing common certificates for a lot, not specific to a certain order. The second involves a certificate made for a specific sales order. Both print based on closed quality orders.

You can print or reprint certificates of analysis from the Reports option on the toolbar, provided that setup has been completed for the item and the attributes that should appear on a certificate of analysis, when using any of the following collections:

- Maintain Quality Order

- Maintain Quality Order for SO Line
- Maintain Lot Attribute Order
- Maintain Lot Attribute Order for SO Line

To print a simulation, set Update to No. When Update is set to Yes, the system records the certificate of analysis.

You can print a certificate of analysis for the first time by using Certificate of Analysis Print Viewer; see Figure 3.25.

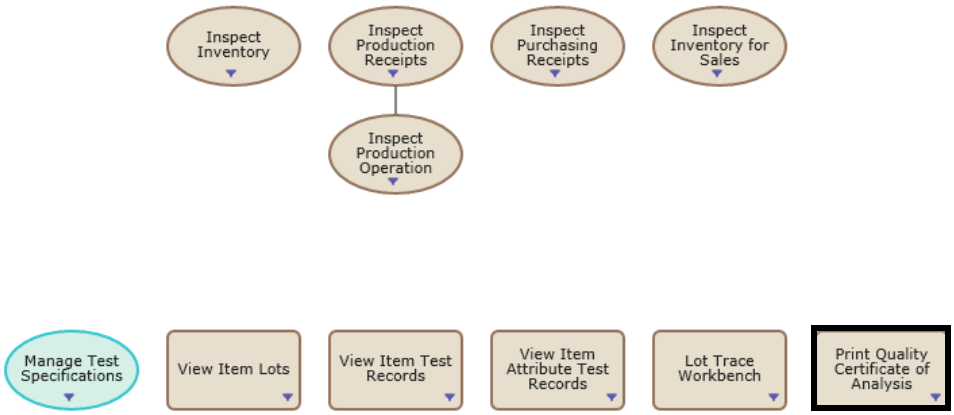
Note The certificate record is necessary to reprint a certificate of analysis at a later date or time, with the same attribute values and attribute specifications, even if the lot attribute values have changed since the time it was first printed.

Before printing the certificate of analysis, you must have a closed quality order or a closed lot attribute order. You can print through the Certificate of Analysis Print Viewer.

Follow these steps to create a certificate of analysis:

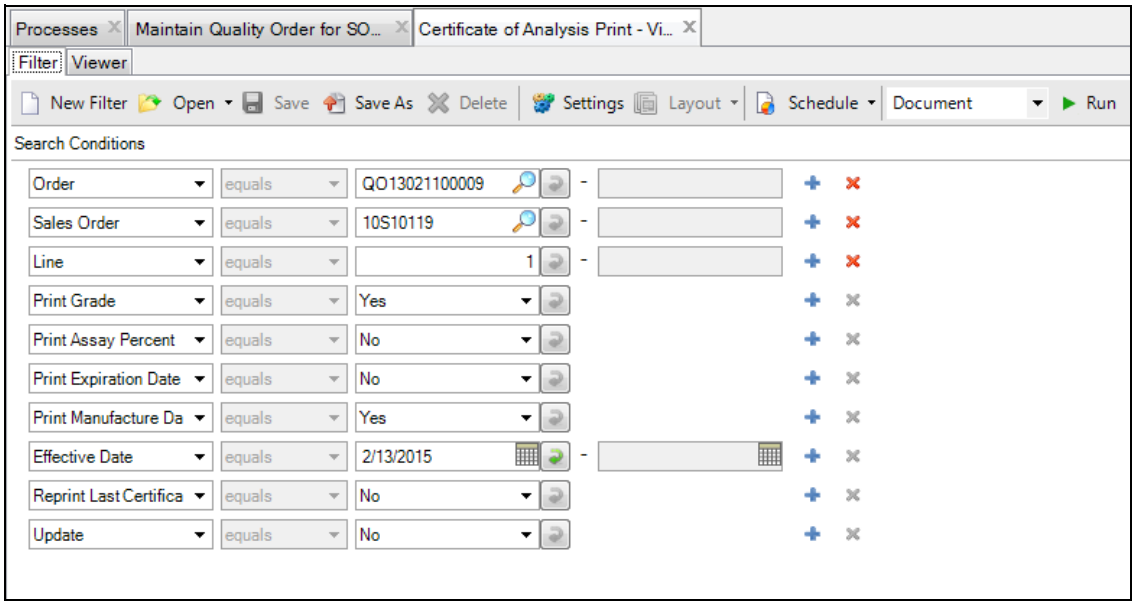
1 Select Print Quality Certificate of Analysis from the Manage Test Records and Quality Orders process map.

Fig. 4.64
Manage Test Records and Quality Orders Process Map



2 The Certificate of Analysis Print Viewer opens. The COA print view allows you to set the print controls for the printed document.

Fig. 4.65
Certificate of Analysis Print Viewer



The Certificate of Analysis Print Viewer contains the following print controls:

Order. Enter or select either a quality order or lot attribute order.

Sales Order. Optionally, enter a sales order.

Line. Optionally, enter a sales order line.

Print Grade. Enter Yes to print the value for grade from the quality or lot attribute order on the certificate of analysis.

Print Assay Percent. Enter Yes to print the value for assay from the quality or lot attribute order on the certificate of analysis

Print Expiration Date. Enter Yes to print the value for expiration date from the quality or lot attribute order on the certificate of analysis

Print Manufacture Date. Enter Yes to print the value for manufacture date from the quality or lot attribute order on the certificate of analysis

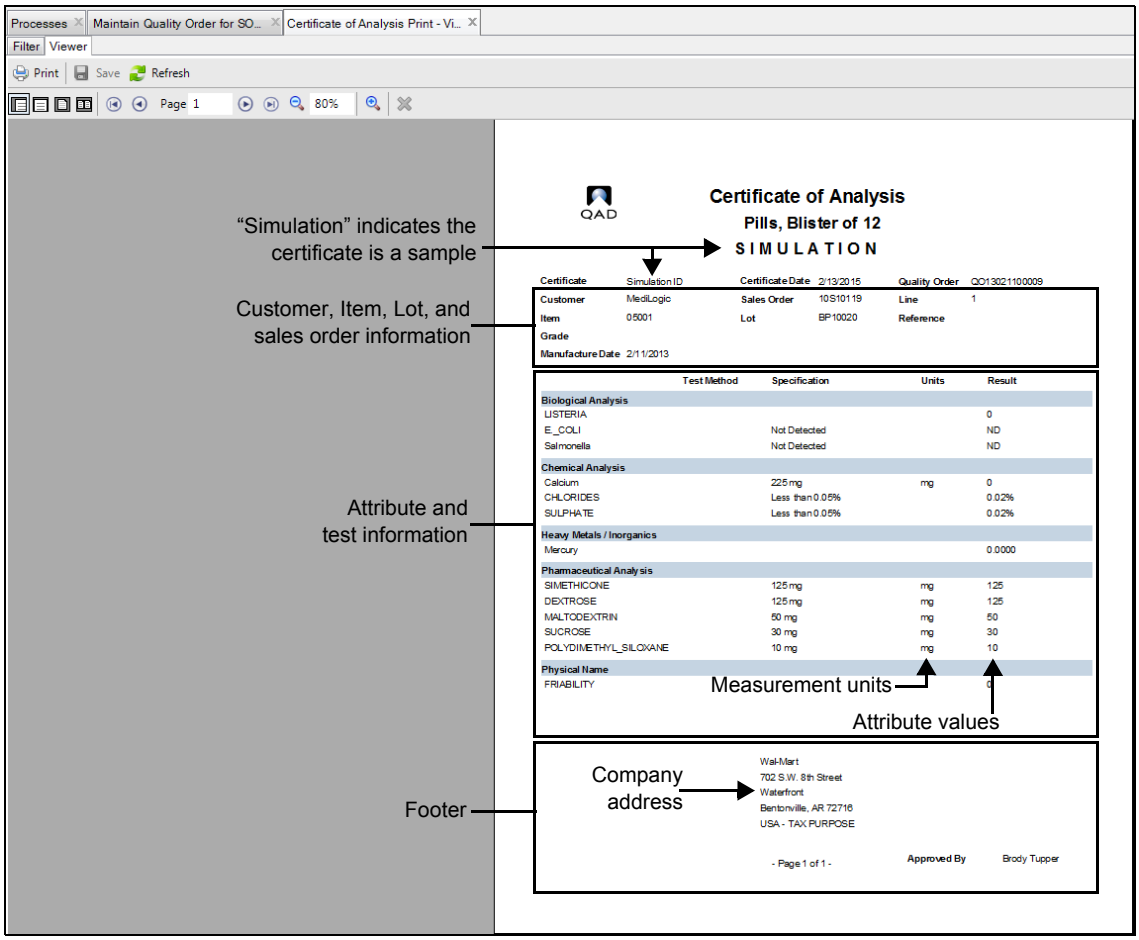
Effective Date. Enter the effective date for the certificate of analysis.

Reprint Last Certificate. Enter Yes to reprint the last certificate of analysis for a quality order or lot attribute order, when a certificate has already been printed for that order.

Reprint Last Certificate. Enter Yes to print the certificate of analysis in simulation mode. Enter No to print and save the certificate of analysis.

3 After setting the print controls, click Run to print the COA. The system generates a simulation of the complete certificate. Use this simulation to verify that the certificate runs with the correct attributes.

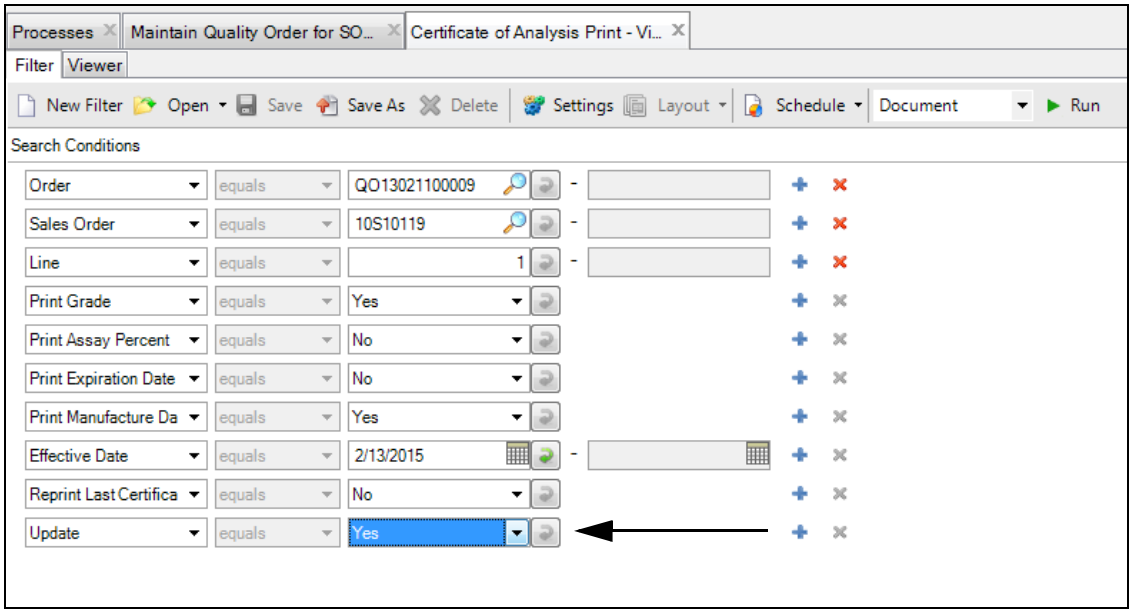
Fig. 4.66
Certificate of Analysis Simulation



4 To make any changes to the document, click the Filter tab to access the COA print controls. Once you make the changes, click Run to generate another COA simulation document.

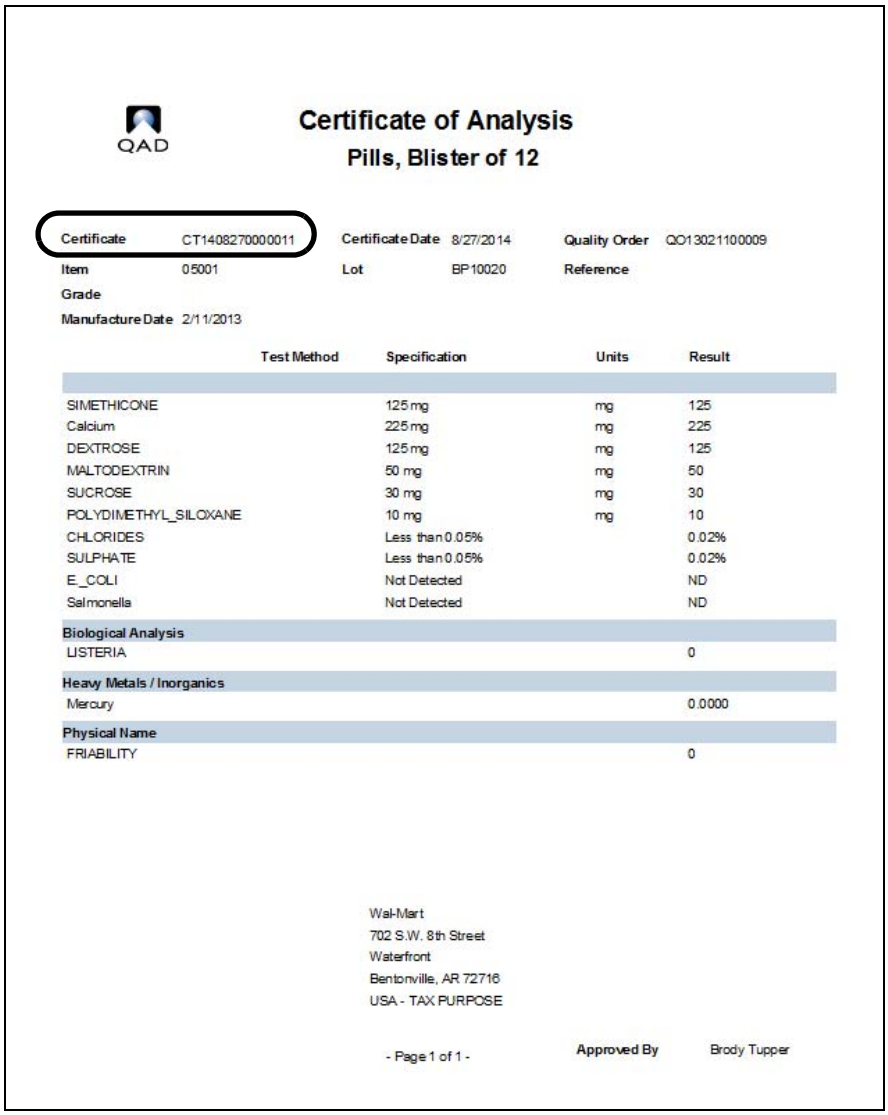
5 If the COA is good, select the Filter tab to access the COA print controls. Change the Update setting to Yes and click Run.

Fig. 4.67
COA Print Viewer



6 The certificate of analysis has been created. The system generates a COA number and adds it to the document. To print the COA, click Print.

Fig. 4.68
Certificate of Analysis



QAD

Certificate of Analysis

Pills, Blister of 12

Certificate	CT1408270000011	**Certificate Date**	8/27/2014	**Quality Order**	QO13021100009
Item	05001	**Lot**	BP10020	**Reference**	
Grade					
Manufacture Date	2/11/2013				

	Test Method	Specification	Units	Result
SIMETHICONE		125 mg	mg	125
Calcium		225 mg	mg	225
DEXTROSE		125 mg	mg	125
MALTODEXTRIN		50 mg	mg	50
SUCROSE		30 mg	mg	30
POLYDIMETHYL_SILOXANE		10 mg	mg	10
CHLORIDES		Less than 0.05%		0.02%
SULPHATE		Less than 0.05%		0.02%
E_COLI		Not Detected		ND
Salmonella		Not Detected		ND
Biological Analysis				
LISTERIA				0
Heavy Metals / Inorganics				
Mercury				0.0000
Physical Name				
FRIABILITY				0

Wal-Mart
702 S.W. 8th Street
Waterfront
Bentonville, AR 72716
USA - TAX PURPOSE

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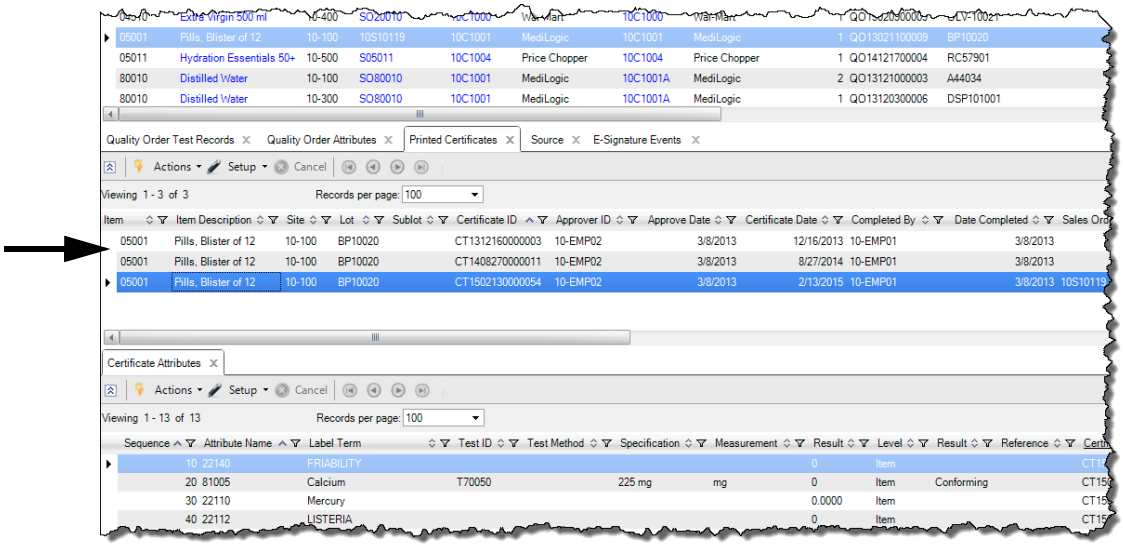
Approved By Brody Tupper

7 The Printed Certificates tab displays the COAs that have been created for the order.

Fig. 4.69
Quality Order Collection - Printed Certificates Tab

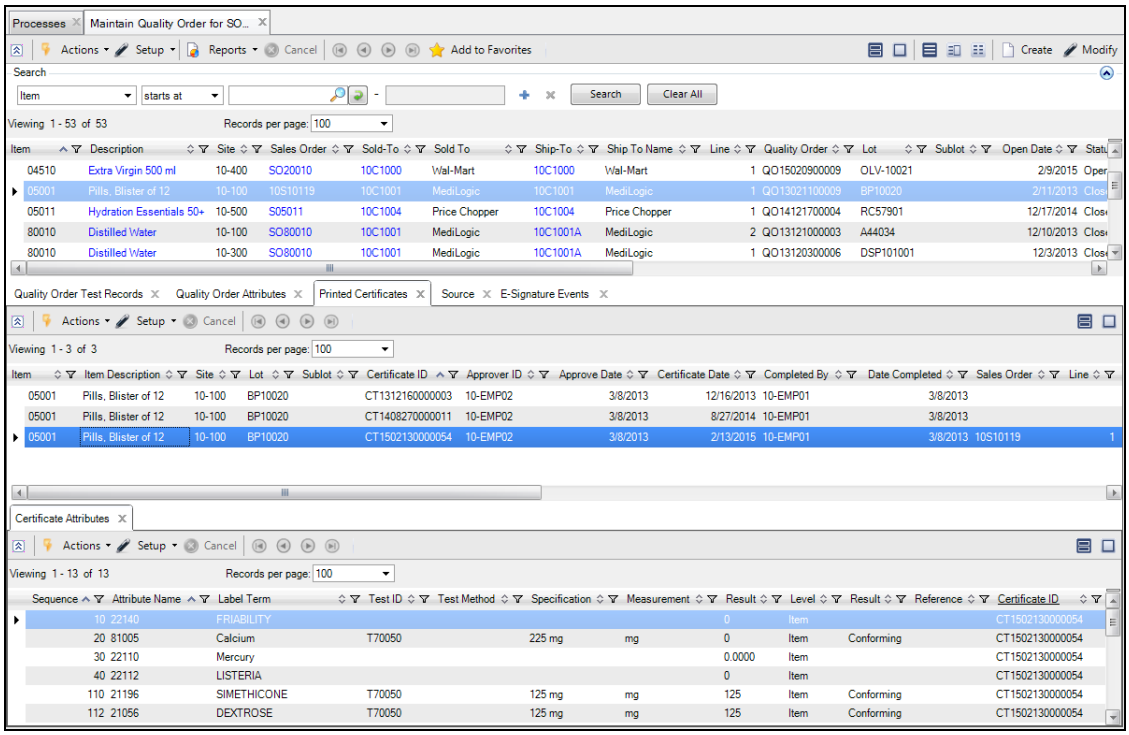


Printing the COA from a Quality or Lot Attribute Order

Follow these steps to print the COA from a lot attribute or quality order:

1. Navigate to the correct lot attribute or quality order collection (inventory, purchasing, sales, or production). See “Navigating to the Correct Type of Order” on page 37 or “Navigating to Quality Order Collections” on page 96.
2. Select the Printed Certificates tab.
3. Highlight the COA and select Reprint.

Fig. 4.70
Quality Order Collection - Printed Certificates Tab



Chapter 5

Integration with QAD QMS for NCR/CAPA

This chapter provides information about the integration between IAQ and QAD QMS for NCR/CAPA. It discusses the following:

Overview

Item Attributes and Quality Control is integrated with QAD QMS for NCR/CAPA. A non-conformance report (NCR) is an analysis of a material non-conformance and a statement of actions that should be taken as a result of the non-conformance. Corrective Action and Preventative Action (CAPA) describes the specific activities to address and to prevent a non-conformance.

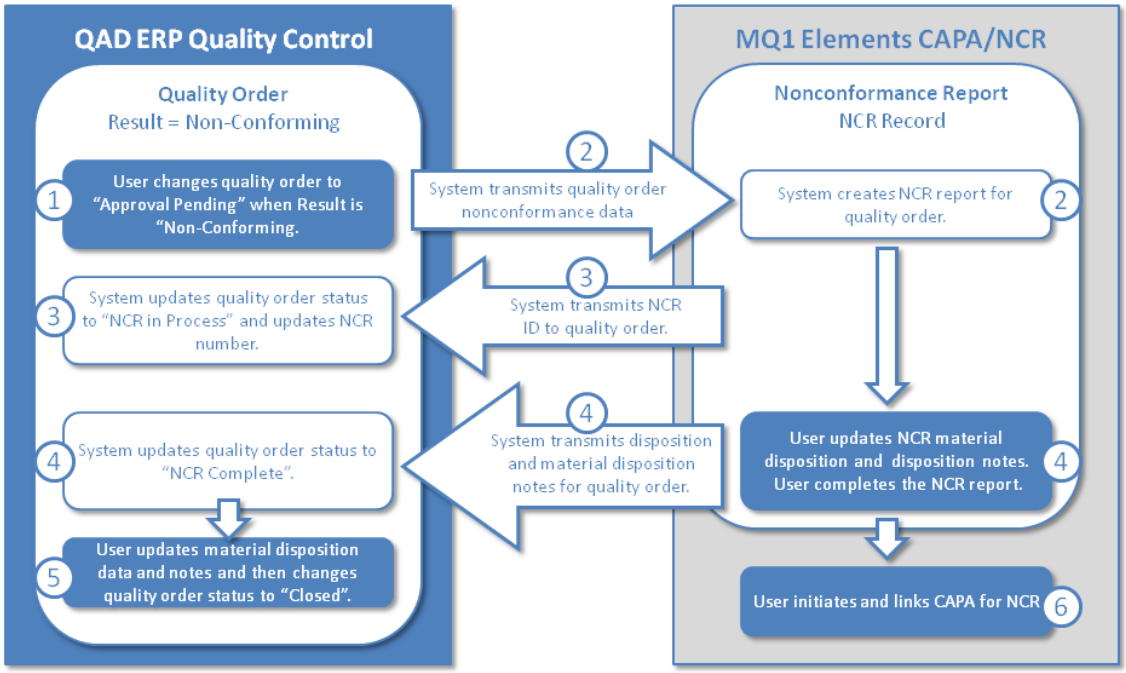
The IAQ and QAD QMS integration eliminates redundancy and duplicate data entry and it assures the initiation of non-conformance reports. Quality orders that have a nonconforming quality result provide the source data for NCR.

IAQ and QAD QMS Process Flow

The following graphic and steps describe the process flow when IAQ is integrated with QAD QMS for NCR/CAPA:

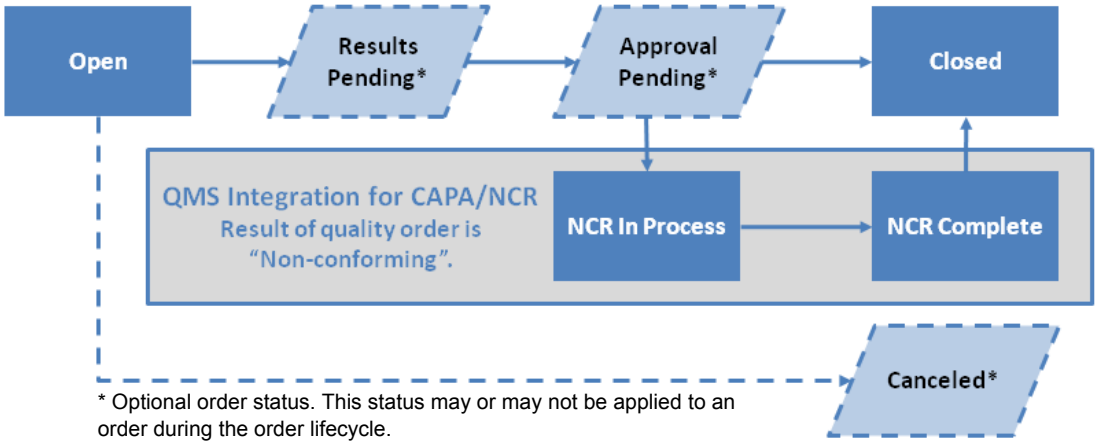
1. The process is initiated when the user changes the quality order status to “Approval Pending” and the quality result is “Non-conforming.”
2. The system transmits the non-conformance data for the quality order to QAD QMS and then QAD QMS creates an NCR report for the quality order.
3. The system transmits the NCR ID to the quality order and updates the quality order status to NCR In Process.
4. After the user updates the NCR material disposition, adds disposition notes, and completes the NCR in QAD QMS, the system transmits the disposition and material notes to the quality order by updating the status to NCR Complete.
5. Based on the material disposition data, the user performs the necessary material transactions (scrapping, location transfer, and so on), completes the quality order, and changes the status to “Closed.”
6. In QAD QMS, the user initiates and links the CAPA with the NCR report.

Fig. 5.1
Scenario for NCR and Material Disposition



The following graphic shows the lifecycle of a quality order when IAQ is integrated with QAD QMS.

Fig. 5.2
Lifecycle of a Quality Order with QMS Integration

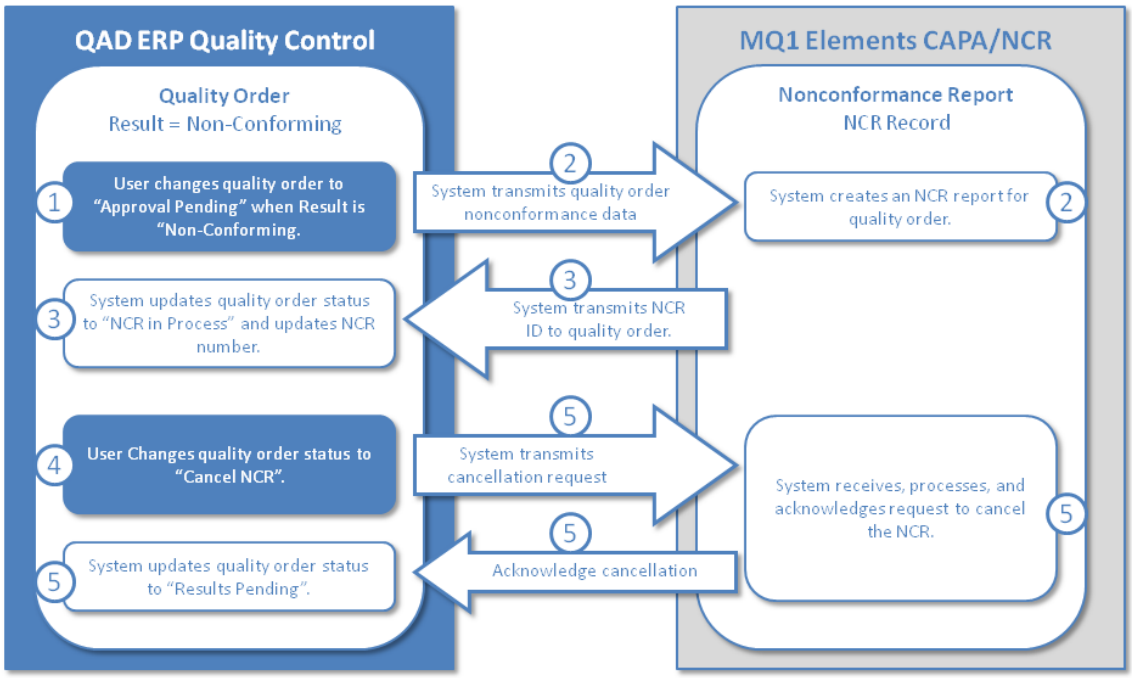


IAQ and QAD QMS Process Flow - Canceling an NCR

The following graphic and steps describe the process flow when IAQ is integrated with QAD QMS for NCR and the NCR is canceled:

1. The process is initiated when the user changes the quality order status to “Approval Pending” and the quality result is “Non-conforming.”
2. The system transmits the non-conformance data for the quality order to QAD QMS and then QAD QMS creates an NCR report for the quality order.
3. The system transmits the NCR ID to the quality order and updates the quality order status to NCR In Process.
4. The user changes the quality order to “Cancel NCR.”
5. The system transmits the cancellation request to QAD QMS. The system receives, processes, and acknowledges the request and then updates the quality order status to “Results Pending.”

Fig. 5.3
Scenario for NCR & Material Disposition



Appendix A

Reference Information

This appendix contains the following reference information for Item Attributes and Quality Control (IAQ):

Frequently Asked Questions

This section contains frequently asked questions.

Is it necessary to create labels and use them for attributes? Why not simply use the attribute description instead of a label for the attribute?

Labels are not required, but when there are many attributes with different datatypes and/or formats for a characteristic, such as ‘Protein’, the description can be used to help distinguish between the different attributes. Labels enable the translation of attribute names.

What are the advantages of having the system automatically assign identifiers for item attributes instead of entering it manually with a more meaningful identifier?

The need for meaningful or significant identifiers is not required because functions are supported by browses that allow people to search and sort for attributes by label or description. Significant identifiers are only effective when there are relatively few instances. The disadvantage of using a scheme with meaningful or significant identifiers is that the system quickly breaks down when the number of attributes increases.

When maintaining attributes for an item using Maintain Item Profile, why is it important to leave the Site field blank?

By creating attributes for an item with a blank site, the attribute parameters that you define apply across all sites within a domain. Therefore, you only need to create profile attributes for an item and site only when there are exceptions or deviations to the basic item profile.

Are the attribute profiles, test specifications, and item lot attribute values visible across domains?

No. Like items, item attribute and quality control data is specific to a domain.

How can I avoid record locks when viewing or modifying data within a collection, such as Maintain Item Profile or Maintain Quality Order?

To avoid record locks, the following is recommended:

- When opening a window to add or modify data for a browse line at one level of a collection, that window should be closed before opening another window at a different level for the same collection.
- When not editing data, view the data using the ‘Hybrid’ view supported by QAD .NET.

Can the new Quality Control module be used with the old Quality Management module?

The old and new modules can be used in parallel but do not use the modules for the same item. For example, use the new Quality Control module for most activities and the old Quality Management module for a few low volume items.

How does security work for the new Attributes and Quality functions? How is it set up?

Security is based on a combination of a person having access to the top-level browse in a collection and the programs that are used to create and modify browse data in a collection. Use menu level security for each of those programs to determine who can maintain data for any of the programs for each collection. Information to support this activity is included in the Item Attributes and Quality Control Training Guide.

How can the test result or quality order be 'Conforming' when one or more of the attributes are 'Non-conform'?

When an attribute has a specification and a value, the result of the attribute is either conforming or non-conforming. The result of a test record is determined by the test specification attributes, if those attributes have a specification, a value, and Validation = True. When the Validation parameter = False, the result for the attribute is not considered. This allows you to set up an attribute to collect historical data that does not determine the conformance of a test or lot.

There are many parameters when adding an attribute to an item. Which parameters are important for an item attribute versus a lot attribute?

The principal parameters for item attributes that have Level = 'Item' are:

- Attribute ID
- Sequence
- Print
- Status
- Default Value
- Specification

The principal parameters for item attributes that have Level = 'Lot' are:

- Attribute ID
- Sequence
- Print
- Status
- Input Method
- Certification
- Certification Category
- Default Value
- Specification
- Specification Type
- Measurement
- Value Required
- Validation
- Edit Specification

Can an item have both item attributes and lot attributes?

Yes. An item can have item or lot attributes only or a mix of item attributes and lot attributes.

How is an attribute different than a specification?

An attribute is a characteristic. An attribute specification is the specification for that characteristic.

What is the difference between an attribute specification if the same attribute specification appears on an item profile and a test specification?

The specification for a lot attribute on an item profile appears as the attribute specification on a lot attribute order and not a quality order. The specification for a test specification attribute applies to a corresponding test record and to the attribute when it appears on a quality order.

What is the difference between a test specification and a test record?

A test specification represents a formal document to collect attribute specifications. A test specification is analogous to an attribute profile. A test record is the document that contains the values and results from having applied a test specification.

What are the differences between a lot attribute order and a quality order?

In a lot attribute order, you can update all of the lot attributes for an item and lot. In a quality order, you can record the results of one or more tests for an item and lot, as well as update the lot attributes.

Why would using lot attributes for expire date, grade, and assay percent be better than using inventory detail attributes?

There are several important advantages when using lot attributes.

- The lot attributes are associated with an attribute lot master record.
- The number of attributes are not limited.
- The values for lot attributes are visible when using the Lot Trace Workbench.
- The values for lot attribute persist, even when there is no inventory for the lot.

Can an item have both lot attributes and sublot attributes?

Yes.

Does MRP determine the current and/or future availability of material based on the values for item lot attributes?

No. Lot attributes are only evaluated by MRP to verify that operational activities, such as allocating, picking, issuing, and shipping inventory can be executed. Item lot attributes are not evaluated for either scheduling or planning activities.

Do the available-to-promise (ATP) calculations determine the current and/or future availability of material based on the values for item lot attributes?

No. Lot attributes are only evaluated by MRP to verify that operational activities, such as allocating, picking, issuing, and shipping inventory can be executed. Item lot attributes are not evaluated for either scheduling or planning activities, including ATP.

What is the function of sublot attributes? Why are there special considerations when using sublot attributes?

Sublot attributes use the Reference field, which appears on inventory detail records. When using sublot attributes, the value for the Reference field needs to be consistent when an inventory quantity for the lot and sublot move from one location to another.

When would you want attributes, which appear on test specifications for an item, to also appear on the item profile?

The following are two scenarios when you would want to copy the attributes on a test specification to an item profile:

1. When one or more attributes on a test specification also need to appear on a certificate of analysis.
2. When you want to have the values for one or more test attributes to be visible as lot attributes on functions such as View Item Lots and the Lot Trace Workbench.

Why do all of a quality order's attributes not appear on a certificate of analysis?

For an attribute value to appear on a certificate of analysis, the Certification parameter for the attribute must be set to True when the quality order is created.

When using View Item Lots, why can I not see if a lot is conforming or non-conforming?

The system determines that an item lot is conforming or non-conforming for a specific order because the specifications that apply to a lot can vary from order to order, depending on whether there are deviations. Use the Monitor Materials for Sales and Monitor Materials for Production to determine what lots are conforming or non-conforming.

Why is a lot not available to allocate, even when it is conforming?

Inventory allocations depend on a number of additional factors, such as the values for the inventory status code.

Why is the result for a lot attribute neither conforming or nonconforming?

The value for an attribute result is blank when a value has been entered for a lot attribute and 'Specification Type' is 'None'.

What do I do with the quality orders that are created if it is not necessary to inspect every lot?

If there is a quality order that is not required, change the status to ‘Canceled’.

What do I do with a quality order that includes a test if it is not necessary to complete the test?

If it is not required to perform a test, you can change its status to ‘Canceled’.

How do the ‘Value Required’ and ‘Validation’ settings for attribute parameters work together?

These parameters work independently.

- When ‘Value Required’ = True for a lot or test record attribute, you must enter a value for that attribute.
- When ‘Validation’ = True, the value is not required. When a value is entered, that value is used to determine if the result for a quality record is conforming or non-conforming.

How and when is the ‘Edit Specification’ parameter for a profile attribute important?

The value for the ‘Edit Specification’ parameter for an item profile attribute determines whether deviations can be created for that item and attribute. Set ‘Edit Specification’ to True to allow a deviation to be created for a higher-level profile, such as an item and supplier or PO line. Set ‘Edit Specification’ to False to lock the specification for the item profile attribute.

What does the ‘Print’ parameter for a profile attribute do?

The ‘Print’ parameter determines whether the attribute is printed on supported functions. Set ‘Print’ to False to exclude an attribute from being printed.

When an item has lot attributes and no test specifications, why is a lot attribute order not always created when a PO is received?

A lot attribute order is created when there is at least one lot level attribute with ‘Value Required’ = True and an attribute value has not been entered. To reduce the steps that are required to complete the processing of item lots, lot attribute orders are not created when all the values have been entered.

When an attribute appears on an item profile and a higher-level profile, such as the Item and Supplier or PO Line Profile, what is the best practice for the ‘Default Value’ parameter?

The ‘Default Value’ and specification data should be set for the specific profile. For example, if there is a lot level attribute for ‘Supplier’ or ‘Item Revision’, the Default Value for an item profile might be left blank. For an Item Supplier Profile, the default value should be set for that supplier.

Can the value for an item lot attribute be determined by the lot attribute values from one or more of its components?

The value for an item lot attribute cannot be calculated from another lot attribute.

Why is the option to print attributes not on all reports?

The capability to print attributes has initially been provided for reports that are supported by the QAD Report Framework.

Can the information for item profiles and test specifications be bulk loaded, or do they have to be entered manually?

Yes. Data can be loaded by using QXtend Inbound schema and receivers together with Excelerator documents.

Rule Expression

The system uses an instruction set constructed from a combination of conditions, values, and conjunctions to determine if the value for an attribute result is conforming or non-conforming for these types of specifications. The system uses a rule expression that includes a set of rules constructed from a combination of reserved variable names, conditions, values, and conjunctions. A Rule Expression should normally be constructed by an IT professional or qualified business analyst.

All operators supported in Progress: >, <, <>, =, and, or, () can be used in rule expressions. You can use acronyms in place of operator symbols, such as:

GE (greater than or equal to)

LE (less than or equal to)

GT (greater than)

EQ (equals)

MS (membership)

MM (minimum maximum value)

For example:

```
attribute_value GE .90 and attribute_value LE 1.00
```

The following are examples of rule expressions.

character: attribute_value > “aaa”

integer: attribute_value > 10

decimal: attribute_value > 11.23

percentage: attribute_value > 0.99

Note The system does not support the percentage (%) sign. You must enter a decimal with your value, as in 0.99.

date: date (attribute_value) > 01/01/2012

Note The date format is based on server setting; for an environment session that is `us`, the format is `mm/dd/yy`.

Other rule expression examples include the following:

Specification	Rule Expression Syntax	Sample Results
Percentage	attribute_value >= .90 and attribute_value <= 1.00	User entry of 89.9 and 101 results in non-conformance. User entry of 90, 99.99, and 100 result in conformance,
Percentage	False	Any user entry results in non-conformance.
Percentage	True	All user entries result in conformance.
Character	attribute_value GT “aaa”	User entry of aaa results in non-conformance. User entry of aaa10 results in conformance.
Date	date (attribute_value) > today + 7	With today’s date of July 4, 2013, user entry of Aug 1, 2013 results in conformance. User entry of June 12, 2013 results in non-conformance.
Date	date (attribute_value) > 8/1/2013 and date (attribute_value) < 12/31/2013	User entry of a date that falls between 8/1/13 and 12/31/13 results in conformance. User entry of 7/7/13 or 9/6/2014 results in non-conformance.
Date	date (attribute_value) > today - 30 and date (attribute_value) < today + 30) or date (attribute_value) = 10/01/2012	With today’s date of August 7, 2013, user entry of 8/1/2013 or 10/1/2012 results in conformance. User entry of 7/7/2013 or 9/7/2013 results in non-conformance.
Decimal	attribute_value <= 0.975 and attribute_value >= 0.010	User entry of 0.220 or 0.975 results in conformance. User entry of 0.005 results in non-conformance.

Important Use the Attribute Specification Preview within the browse collections to confirm that you set up the specification of a Rule Exp (rule expression) attribute correctly.

ERD Diagrams

Entity diagrams (ERDs) for this version of Item Attributes and Quality Control are available in the QAD Document Library as part of the QAD 2016 EE documentation. See *QAD Entity Diagrams Technical Reference*.

The ERDs detail major relationships between tables in a QAD Enterprise Edition database. These diagrams are meant to be used with *QAD Database Definitions Technical Reference*, which is available separately.

Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

QAD Forums (community.qad.com)
Ask questions and share information with other members of the user community, including QAD experts.

QAD Knowledgebase (knowledgebase.qad.com)*
Search for answers, tips, or solutions related to any QAD product or topic.

QAD Document Library (documentlibrary.qad.com)
Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

QAD Learning Center (learning.qad.com)*
Visit QAD's one-stop destination for all courses and training materials.

*Log-in required