

**Oracle® Process Manufacturing**

Mobile Supply Chain Applications for Oracle Process Manufacturing

Release 12.1

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Oracle Process Manufacturing Mobile Supply Chain Applications for Oracle Process Manufacturing, Release 12.1

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# Contents

**Send Us Your Comments**

**Preface**

## **1 Mobile Supply Chain Applications for Oracle Process Manufacturing 12**

Using Mobile Supply Chain Applications.....	1-1
Using Mobile Supply Chain Applications with OPM.....	1-1
Understanding the MSCA Architecture.....	1-2
Major Benefits.....	1-3
Usability Tips .....	1-4
Setting Up.....	1-5
References.....	1-6

## **2 OPM Process Execution in the Oracle Mobile Supply Chain Application**

Using Oracle Process Mobile Manufacturing.....	2-1
Creating Material Reservations.....	2-2
Updating Material Reservations.....	2-6

## **3 Manufacturing Execution Systems for Process Manufacturing in Oracle Mobile Supply Chain Application**

Using Manufacturing Execution Systems for Process Manufacturing.....	3-2
Recording Ingredient Usage in Production Batches.....	3-3
Returning Ingredients .....	3-7
Completing Products for a Production Batch.....	3-9
Returning Products .....	3-12
Creating Pending Product Lots for a Production Batch.....	3-14

Updating Pending Product Lots.....	3-16
Performing Incremental Backflushing for a Production Batch.....	3-19
Performing LPN Transactions.....	3-21
Using the Product Completion Window.....	3-21
Using Product Completion with Directed Drop.....	3-25
Using Product Completion with Load.....	3-28
Using Product Completion with Manual Drop.....	3-31
Updating Resource Usage.....	3-34
Recording the Start of Resource Usage.....	3-35
Recording the End of Resource Usage.....	3-37
Releasing a Batch Step.....	3-39
Completing a Batch Step.....	3-41

## Index

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# Send Us Your Comments

## **Oracle Process Manufacturing Mobile Supply Chain Applications for Oracle Process Manufacturing, Release 12.1**

**Part No. E13683-05**

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document. Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Oracle E-Business Suite Release Online Documentation CD available on My Oracle Support and [www.oracle.com](http://www.oracle.com). It contains the most current Documentation Library plus all documents revised or released recently.

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If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at [www.oracle.com](http://www.oracle.com).



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# Preface

## Intended Audience

Welcome to Release 12.1 of the *Oracle Process Manufacturing Mobile Supply Chain Applications for Oracle Process Manufacturing*.

This guide assumes that you have working knowledge of your business area's processes, tools, principles, and customary practices. It also assumes that you are familiar with Oracle Process Manufacturing. If you have never used Oracle Process Manufacturing, we suggest you attend one or more of the Oracle Process Manufacturing training classes available through Oracle University.

See Related Information Sources on page viii for more Oracle E-Business Suite product information.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Structure

- 1 Mobile Supply Chain Applications for Oracle Process Manufacturing 12**
- 2 OPM Process Execution in the Oracle Mobile Supply Chain Application**
- 3 Manufacturing Execution Systems for Process Manufacturing in Oracle Mobile Supply**

## Related Information Sources

### Related Guides

Oracle Process Manufacturing shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other guides when you set up and use Oracle Process Manufacturing. You can read the guides online from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides. If you require printed guides, then you can purchase them from the Oracle Store at <http://oraclestore.oracle.com>

### Guides Related to All Products

#### *Oracle Alert User's Guide*

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

#### *Oracle E-Business Suite Concepts*

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12, or contemplating significant changes to a configuration. After describing the Oracle Applications architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

#### *Oracle E-Business Suite Flexfields Guide*

This guide provides flexfields planning, setup, and reference information for the Oracle Applications implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This guide also provides information on creating custom reports on flexfields data.

#### *Oracle Application Framework Personalization Guide*

This guide covers the design-time and run-time aspects of personalizing applications built with Oracle Application Framework.

#### *Oracle E-Business Suite Installation Guide: Using Rapid Install*

This book is intended for use by anyone who is responsible for installing or upgrading Oracle Applications. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle Applications Release 12, or as part of an upgrade from Release 11i to Release 12. The book also describes the steps needed to install the technology stack components only, for the special situations where this is applicable.

#### *Oracle Application Server Adapter for Oracle Applications User's Guide*

This guide covers the use of OracleAS Adapter in developing integrations between Oracle applications and trading partners.

Please note that this guide is in the Oracle Application Server 10g (10.1.3.1)

Documentation Library.

*Oracle E-Business Suite System Administrator's Guide Documentation Set*

This documentation set provides planning and reference information for the Oracle Applications System Administrator. *Oracle E-Business Suite System Administrator's Guide - Configuration* contains information on system configuration steps, including defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help. *Oracle E-Business Suite System Administrator's Guide - Maintenance* provides information for frequent tasks such as monitoring your system with Oracle Applications Manager, managing concurrent managers and reports, using diagnostic utilities, managing profile options, and using alerts. *Oracle E-Business Suite System Administrator's Guide - Security* describes User Management, data security, function security, auditing, and security configurations.

*Oracle E-Business Suite User's Guide*

This guide explains how to navigate, enter data, query, and run reports using the user interface (UI) of Oracle Applications. This guide also includes information on setting user profiles, as well as running and reviewing concurrent requests.

*Oracle e-Commerce Gateway User's Guide*

This guide describes the functionality of Oracle e-Commerce Gateway and the necessary setup steps in order for Oracle Applications to conduct business with trading partners through Electronic Data Interchange (EDI). It also contains how to run extract programs for outbound transactions, import programs for inbound transactions, and the relevant reports.

*Oracle e-Commerce Gateway Implementation Guide*

This guide describes implementation details, highlights additional setups for trading partner, code conversion, and Oracle Applications as well as provides the architecture guidelines for transaction interface files. This guide also contains troubleshooting information and how to customize EDI transactions.

*Oracle Report Manager User's Guide*

Oracle Report Manager is an online report distribution system that provides a secure and centralized location to produce and manage point-in-time reports. Oracle Report Manager users can be either report producers or report consumers. Use this guide for information on setting up and using Oracle Report Manager.

*Oracle iSetup User Guide*

This guide describes how to use Oracle iSetup to migrate data between different instances of the Oracle E-Business Suite and generate reports. It also includes configuration information, instance mapping, and seeded templates used for data migration.

*Oracle Workflow Administrator's Guide*

This guide explains how to complete the setup steps necessary for any product that includes workflow-enabled processes. It also describes how to manage workflow

processes and business events using Oracle Applications Manager, how to monitor the progress of runtime workflow processes, and how to administer notifications sent to workflow users.

*Oracle Workflow Developer's Guide*

This guide explains how to define new workflow business processes and customize existing Oracle Applications-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

*Oracle Workflow User's Guide*

This guide describes how users can view and respond to workflow notifications and monitor the progress of their workflow processes.

*Oracle Workflow API Reference*

This guide describes the APIs provided for developers and administrators to access Oracle Workflow.

*Oracle XML Gateway User's Guide*

This guide describes Oracle XML Gateway functionality and each component of the Oracle XML Gateway architecture, including Message Designer, Oracle XML Gateway Setup, Execution Engine, Message Queues, and Oracle Transport Agent. The integrations with Oracle Workflow Business Event System and the Business-to-Business transactions are also addressed in this guide.

*Oracle XML Publisher Report Designer's Guide*

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Using Microsoft Word or Adobe Acrobat as the design tool, you can create pixel-perfect reports from the Oracle E-Business Suite. Use this guide to design your report layouts.

*Oracle XML Publisher Administration and Developer's Guide*

Oracle XML Publisher is a template-based reporting solution that merges XML data with templates in RTF or PDF format to produce a variety of outputs to meet a variety of business needs. Outputs include: PDF, HTML, Excel, RTF, and eText (for EDI and EFT transactions). Oracle XML Publisher can be used to generate reports based on existing E-Business Suite report data, or you can use Oracle XML Publisher's data extraction engine to build your own queries. Oracle XML Publisher also provides a robust set of APIs to manage delivery of your reports via e-mail, fax, secure FTP, printer, WebDav, and more. This guide describes how to set up and administer Oracle XML Publisher as well as how to use the Application Programming Interface to build custom solutions.

**Guides Related to This Product**

*Oracle Process Manufacturing Cost Management User's Guide*

The Oracle Process Manufacturing Cost Management application is used by cost accountants to capture and review the manufacturing costs incurred in their process

manufacturing businesses. The guide describes how to set up and use this application.

*Oracle Process Manufacturing Process Execution User's Guide*

The Oracle Process Manufacturing Process Execution application lets you track firm planned orders and production batches from incoming materials through finished goods. Seamlessly integrated to the Product Development application, Process Execution lets you convert firm planned orders to single or multiple production batches, allocate ingredients, record actual ingredient usage, and then complete and close production batches. Production inquiries and preformatted reports help you optimize inventory costs while maintaining a high level of customer satisfaction with on-time delivery of high quality products. The *Oracle Process Manufacturing Process Execution User's Guide* presents overviews of the tasks and responsibilities for the Production Supervisor and the Production Operator. It provides prerequisite setup in other applications, and details the windows, features, and functionality of the application.

*Oracle Process Manufacturing Product Development User's Guide*

The Oracle Process Manufacturing Product Development application provides features to manage formula, routing, recipe, and validity rule development within process manufacturing operations. Use it to manage multiple laboratory organizations and support varying product lines throughout the enterprise. Characterize and simulate the technical properties of ingredients and their effects on formula performance and cost. Simulate and optimize formulations before beginning expensive laboratory test batches. Product Development coordinates each development function to provide a rapid, enterprise-wide implementation of new products in your plants. The guide describes how to set up and use this application.

*Oracle Process Manufacturing Quality Management User's Guide*

The Oracle Process Manufacturing Quality Management application provides features to test material sampled from inventory, production, or receipts from external suppliers. The application lets you enter specifications and control their use throughout the enterprise. Customized workflows and electronic recordkeeping automate plans for sampling, testing, and result processing. Compare specifications to assist in regrading items, and match customer specifications. Aggregate test results and print statistical assessments on quality certificates. Run stability testing with unrivaled ease. Several preformatted reports and inquiries help manage quality testing and reporting. The guide describes how to set up and use this application.

*System Administration User's Guide*

Much of the System Administration duties are performed at the Oracle Applications level, and are therefore described in the *Oracle E-Business Suite System Administrator's Guide*. The *Oracle Process Manufacturing System Administration User's Guide* provides information on the few tasks that are specific to Oracle Process Manufacturing. It offers information on performing Oracle Process Manufacturing file purge and archive, and maintaining such things as responsibilities, units of measure, and organizations.

*Regulatory Management User's Guide*

Oracle Process Manufacturing Regulatory Management provides solutions for document management that help meet the FDA 21 CFR Part 11 and other international regulatory compliance requirements. Regulatory information management is facilitated by use of electronic signatures. Manage hazard communications by collaborating with Oracle partners to dispatch safety documents, attached printed documentation sets such as the MSDS to shipments, and set up workflows to manage documentation revisions, approvals, and transmittals. The *Oracle Process Manufacturing Regulatory Management User's Guide* provides the information to set up and use the application.

*Oracle Manufacturing Execution System for Process Manufacturing*

Oracle Manufacturing Execution System (MES) for Process Manufacturing provides a seamless integration to product development and process execution applications for rapid deployment and tracking of procedures, work instruction tasks, and batch records. Set up and manage material dispensing operations and produce electronic batch records interactively with full electronic signature control, nonconformance management, and label printing routines. The *Oracle Manufacturing Execution System for Process Manufacturing User's Guide* delivers the information to set up and use the application.

*API User's Guides*

Public Application Programming Interfaces (APIs) are available for use with different Oracle Process Manufacturing applications. APIs pass information into and out of the application tables, thereby bypassing the user interface. Use of these APIs is documented in separately available documentation.

*Oracle Engineering User's Guide*

This guide enables your engineers to utilize the features of Oracle Engineering to quickly introduce and manage new designs into production. Specifically, this guide details how to quickly and accurately define the resources, materials and processes necessary to implement changes in product design.

*Oracle Inventory User's Guide*

This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory.

*Oracle Bills of Material User's Guide*

This guide describes how to create various bills of material to maximize efficiency, improve quality and lower cost for the most sophisticated manufacturing environments. By detailing integrated product structures and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple manufacturing sites.

*Oracle Work in Process User's Guide*

This guide describes how Oracle Work in Process provides a complete production management system. Specifically this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

### *Oracle Quality User's Guide*

This guide describes how Oracle Quality can be used to meet your quality data collection and analysis needs. This guide also explains how Oracle Quality interfaces with other Oracle Manufacturing applications to provide a closed loop quality control system.

### *Oracle Shipping Execution User's Guide*

This guide describes how to set up Oracle Shipping to process and plan your trips, stops and deliveries, ship confirmation, query shipments, determine freight cost and charges to meet your business needs.

### *Oracle Purchasing User's Guide*

This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

### *Oracle interMedia User's Guide and Reference*

This user guide and reference provides information about Oracle interMedia. This product enables Oracle9i to store, manage, and retrieve geographic location information, images, audio, video, or other heterogeneous media data in an integrated fashion with other enterprise information. Oracle Trading Community Architecture Data Quality Management uses interMedia indexes to facilitate search and matching.

### *Oracle Self-Service Web Applications Implementation Guide*

This manual contains detailed information about the overview and architecture and setup of Oracle Self-Service Web Applications. It also contains an overview of and procedures for using the Web Applications Dictionary.

## **Installation and System Administration**

### *Oracle E-Business Suite Concepts*

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11i. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as Business Intelligence (BIS), languages and character sets, and Self-Service Web Applications.

### *Oracle E-Business Suite Installation Guide: Using Rapid Install*

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11i, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications and the Oracle technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to

finish your installation. You should use this guide in conjunction with individual product user guides and implementation guides.

#### *Oracle E-Business Suite Upgrade Guide: Release 11i to Release 12.1.1*

The instructions in this book apply only to upgrading from Oracle E-Business Suite Release 11i (11.5.9 or later) to Release 12.1.1. If your system is earlier than 11.5.9, then you must upgrade to Oracle E-Business Suite Release 11.5.10 CU2 before you can upgrade to Release 12.1.1.

#### *"About" Document*

For information about implementation and user documentation, instructions for applying patches, new and changed setup steps, and descriptions of software updates, refer to the "About" document for your product. "About" documents are available on My Oracle Support for most products beginning with Release 11.5.8.

#### *Maintaining Oracle E-Business Suite*

Use this guide to help you run the various AD utilities, such as AutoUpgrade, AutoPatch, AD Administration, AD Controller, AD Relink, License Manager, and others. It contains how-to steps, screenshots, and other information that you need to run the AD utilities. This guide also provides information on maintaining the Oracle applications file system and database.

#### *Oracle E-Business Suite System Administrator's Guide*

This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.

#### *Oracle Alert User's Guide*

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

#### *Oracle E-Business Suite Developer's Guide*

This guide contains the coding standards followed by the Oracle Applications development staff and describes the Oracle Application Object Library components that are needed to implement the Oracle Applications user interface described in the *Oracle E-Business Suite User Interface Standards for Forms-Based Products*. This manual also provides information to help you build your custom Oracle Forms Developer forms so that the forms integrate with Oracle Applications.

#### *Oracle E-Business Suite User Interface Standards for Forms-Based Products*

This guide contains the user interface (UI) standards followed by the Oracle Applications development staff. It describes the UI for the Oracle Applications products and how to apply this UI to the design of an application built by using Oracle Forms.

### **Other Implementation Documentation**

#### *Oracle Applications Product Update Notes*

Use this guide as a reference for upgrading an installation of Oracle Applications. It

provides a history of the changes to individual Oracle Applications products between Release 11.0 and Release 11*i*. It includes new features, enhancements, and changes made to database objects, profile options, and seed data for this interval.

#### *Oracle Workflow Administrator's Guide*

This guide explains how to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes, as well as how to monitor the progress of runtime workflow processes.

#### *Oracle Workflow Developer's Guide*

This guide explains how to define new workflow business processes and customize existing Oracle Applications-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

#### *Oracle Workflow User's Guide*

This guide describes how Oracle Applications users can view and respond to workflow notifications and monitor the progress of their workflow processes. Oracle Workflow API Reference This guide describes the APIs provided for developers and administrators to access Oracle Workflow.

#### *Oracle E-Business Suite Flexfields Guide*

This guide provides flexfields planning, setup and reference information for the Oracle E-Records implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This guide also provides information on creating custom reports on flexfields data.

#### *Oracle eTechnical Reference Manuals*

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on *OracleMy Oracle Support*.

#### *Oracle Applications Message Manual*

This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

## **Integration Repository**

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As

your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

## **Do Not Use Database Tools to Modify Oracle E-Business Suite Data**

Oracle **STRONGLY RECOMMENDS** that you never use SQL\*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL\*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL\*Plus and other database tools do not keep a record of changes.

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# Mobile Supply Chain Applications for Oracle Process Manufacturing 12

This chapter covers the following topics:

- Using Mobile Supply Chain Applications
- Using Mobile Supply Chain Applications with OPM
- Understanding the MSCA Architecture
- Major Benefits
- Usability Tips
- Setting Upsetting up
- References

## Using Mobile Supply Chain Applications

The demand for accurate, real-time information and the need to increase inventory velocity throughout the supply chain drives rapid adoption of mobile computing for manufacturing. Mobile computers connected using Radio Frequency (RF) to the network, combined with the use of automatic identification techniques such as bar coding, permits activity execution, such as releasing a batch or creating material reservations, to be unified with the recording of that activity in the information system. This approach virtually eliminates sources of error. It also reduces latency, increases work efficiency, and reduces the complexity of the overall business process.

## Using Mobile Supply Chain Applications with OPM

Mobile Supply Chain Applications (MSCA) for Oracle Process Manufacturing (OPM) supports mobile execution of:

- Process manufacturing

- Manufacturing Execution Systems

MSCA is essential when the real-time recording of transactions on a desktop computer is not feasible at the point of execution.

## Process Inventory Enabled

MSCA for OPM supports the entry of process inventory specific information such as dual units of measure, including catch weights, and lots. Lot-specific unit of measure conversions cannot be created, but they are accounted for where they exist. Grade and lot status default from the item and lot.

## Manufacturing

MSCA for OPM allows recording ingredient consumption, product and byproduct yields, and resource usage during batch production. This allows for real-time production batch updates on the shop floor, and minimizes the data entry burden on the operator while increasing production data accuracy.

## Understanding the MSCA Architecture

Oracle leverages standard Internet technologies such as Java, XML, TCP/IP and Telnet to create a device-independent technology platform that supports mobile applications. Mobile devices are generally connected to the network using the radio frequency (RF) standard of 802.11b (11 mbs) and communicate using TCP/IP. The application logic runs on a Java-based middle tier and in the database to eliminate the requirement for application code on the device while permitting use of a variety of mobile RF devices from multiple vendors. Devices can be used concurrently, and the application can run on any PC or handheld device that can run a standard Telnet client. The architecture also supports all the standard barcode encoding formats, including 2D, and embedded data field identifiers.

## User Interface

Typical mobile devices have a small display area that makes the standard desktop browser interface unsuitable. The user interface for execution systems must be easy to learn and efficient to use for repetitive transactions. To accommodate these design goals, the mobile user interface is specifically designed to eliminate all extraneous information and to enable efficient transaction execution. Fields are validated in real time and display appropriate error messages if problems occur. Information requested is dependent on the prior information entered, so the resulting information displayed is dynamically updated to reflect the content and the context of entries. The user interface also permits the display language to be set dynamically by the user profile. This means that two users, operating side by side, can view text in different languages.

## **Major Benefits**

### **Real Time Transaction Processing**

Oracle MSCA for OPM enables users to enter, select or scan transactions and perform queries in real-time at the point of use. Transaction validation takes place online, identifying invalid data immediately. Real-time inventory information improves quality of supply chain collaboration, enables more accurate guaranteeing of customer orders, and optimizes manufacturing and subinventory scheduling of activities and resources. The user has access to current, accurate information for resolution of exceptions.

### **Real Time Data Validation**

Because Oracle MSCA for OPM is an integral part of the Oracle E-Business Suite, the application provides real time information and transaction processing as well as user validation for each transaction as the data is entered. Field level validation can inform the user of material restrictions and availability in addition to validating the data entered before the transaction is completed.

### **Mobile RF Transaction Support without Third Party Applications**

Oracle MSCA for OPM provides a mobile transaction server and mobile forms for materials management and manufacturing transactions and inquiries therefore there is no need to integrate third party middleware with the Oracle E-Business Suite.

### **Hardware Independence**

Because Oracle MSCA for OPM is designed to render Telnet-based windows over TCP/IP, the application can be run on a variety of radio frequency mobile hardware. Mobile devices require minimal configuration for use with the applications.

### **Paperless Transaction Processing**

Entering transactions at the point of use also eliminates duplicate data entry. With Oracle MSCA for OPM, users record the transaction as they work. Gone are the days of filling out forms for shop floor transactions that are later entered into a desktop computer.

### **Reduced Data Entry Errors**

Entering data using bar code scanning of required data instead of manual data entry improves data accuracy and reduces data entry time. Mobile devices increase productivity by reducing data entry, decreasing interruption of warehouse and manufacturing activities, and automating processes.

## Improved Inventory Accuracy

Oracle MSCA for OPM improves inventory accuracy by reducing data entry errors as well as identifying inventory inaccuracies faster. Inventory accuracy techniques are more efficient when

performed with real-time information. The benefits of improved inventory accuracy include improved customer satisfaction through higher fill rates and guaranteed delivery, and improved supply chain planning to optimize production and distribution plans.

## Oracle E-Business Suite as a Total Solution

Transform the way you conduct business with the Oracle Internet-enabled E-Business Suite. Put your demand chain, supply chain, and internal operations online with a comprehensive and fully integrated solution. Combine the wide reach of the Internet with Oracle's fully globalized product to run your business consistently and accurately worldwide. Reduce costs and complexity by running on corporate internet or the World Wide Web.

## Usability Tips

Refer to "Navigating in Mobile Supply Chain Applications" in the *Oracle Mobile Supply Chain Applications User's Guide*, Release 12 for a complete discussion of common navigation patterns. Following are some usability tips:

## Function Key and Action Button Mappings

Oracle Mobile Supply Chain Applications provides several commands that are accessed by function keys and action buttons. The function key default values can be changed. Press F1 to display how your function keys are mapped. The default mappings are explained in "Function Key and Action Button Mappings" in *Oracle Mobile Supply Chain Applications User's Guide*.

## Hot Keys

When the cursor is positioned on a prompt, the hot key cannot function. For example, if the cursor is positioned on Cancel, then the hot key Esc+C does not function.

## Case Sensitivity

Item fields can be case sensitive. Use the Shift key appropriately to accommodate this.

## Scrolling Functions

Use the right arrow and left arrow keys to display information that is not visible due to excessive field length.

## Window List of Values

The List Of Values (LOV) window is available in prompts with the greater than symbol (>) at the end of a field name. Field values enter, selected or scanned are validated.

Access the LOV by:

- Using the key combination Ctrl+L. Optional fields are accessed only by this method.
- Entering part of the value in the field, the LOV window displays values limited to this criteria.
- Enter % as a wildcard to display the LOV.

## Setting Up

Refer to "Setting Up" in *Oracle Mobile Supply Chain Applications User's Guide*, Release 12 for a complete discussion of setting up Mobile Supply Chain Applications for Oracle Process Manufacturing. Following are some important highlights:

- You can set up users for both desktop and mobile responsibilities.
- Mobile responsibilities are set up in System Administration.
- Mobile menus are attached to each mobile responsibility through System Administration.
- Mobile users can have only one active session at a time.
- Restart the Telnet port if you make changes to profile options in System Administration. Profile options are cached by the Telnet server.

### Setting Up the GME: Mobile Location LOV Profile Option

The GME: Mobile Location LOV profile option lets you choose whether to display all locations in a warehouse, or only those locations where an item has onhand inventory, in the Locator field LOV in the OPM MSCA pages. All warehouse locations display for products and byproducts. Set the profile option to:

- **Location Master** to display all warehouse locations.
- **Location Inventory** to restrict display in the LOV to only those locations where an

item has onhand inventory.

If you enter or scan a location into the Location field, for a location controlled item, the application validates the type of item location control, the profile option setting, and whether the location entered is present in the list of warehouse locations. (irrespective of whether or not the location entered has onhand inventory for an item)

---

<b>Type of Item Location Control</b>	<b>GME: Mobile Location LOV Setting</b>	<b>Exists in the warehouse</b>	<b>Action Taken by the Application</b>
Validated	Location Master	No	Error message
Non- Validated	Location Master	Yes	Creates a new location
Validated	Location Inventory	No	Error message
Non- Validated	Location Inventory	Yes	Creates a new location

---

#### **Default**

Location Master

#### **Recommended Change Level**

Site

## **References**

Following are information resources for Mobile Supply Chain Applications for Oracle Process Manufacturing 12.

## **User's Guide**

Refer to the *Oracle Mobile Supply Chain Applications User's Guide*, Release 12 for information on the following topics:

**Overview of Mobile Supply Chain Applications** provides an overview of Oracle Process Manufacturing including a discussion of the mobile applications server, and the available mobile discrete applications.

**Navigation** describes how to navigate in Oracle Mobile Supply Chain Applications, including:

**Setting Up** describes how to set up Oracle Mobile Supply Chain Applications, including:

- Related Product Setup Steps
- Setup Flowchart
- Setup Checklist
- Setup Steps
- Defining Parameters

## Installation and Implementation Guide

Refer to the *Oracle Mobile Supply Chain Applications Installation and Implementation Guide* for:

**MWA Server Information** including how to configure and operate the MWA server and dispatcher.

**Responsibility and Menu Setup** including information on how to setup menus and responsibilities in Oracle Mobile Supply Chain Applications.

**Using Efficient Barcoding Techniques** for a discussion of the methods of concatenating barcodes and the setup and use of data field identifiers.

**Implementation Tips** to ensure a successful Oracle Mobile Supply Chain Application implementation.



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## OPM Process Execution in the Oracle Mobile Supply Chain Application

This chapter covers the following topics:

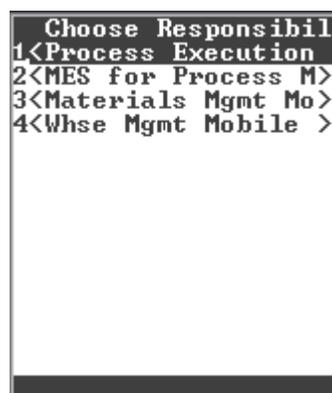
- Using Oracle Process Mobile Manufacturing
- Creating Material Reservations
- Updating Material Reservations

### Using Oracle Process Mobile Manufacturing

Oracle Process Mobile Manufacturing enables you to perform OPM Process Execution transactions on mobile device hardware.

#### To log into the Process Execution responsibility:

1. Log onto the Oracle Mobile Supply Chain application.



2. Choose <Process Execution>. The Process Execution window appears.

```
Process Execution
1<Create Rsrv
2<Update Rsrv >
3<Change Responsibi>
4<Logout >
```

3. Choose one of the following:
  - <Create Rsrv> to create batch material reservations
  - <Update Rsrv> to update batch material reservations
  - <Change Responsibility> to access a different mobile application responsibility
  - <Logout> to exit the mobile application

## Creating Material Reservations

The Create Rsrv function enables you to reserve ingredients for a production batch. Using the Create Rsrv function, you can create detailed-level reservations only. A detailed-level reservation is an inventory reservation for an item with a more detailed level of inventory control, such as revision, lot, subinventory, and locator.

Refer to "Understanding Batch Reservations" in the *Oracle Process Manufacturing Process Execution User's Guide* for more information on creating reservations.

### To reserve ingredients for a production batch:

1. Navigate to the Process Execution window.

```
Process Execution
1<Create Rsrv
2<Update Rsrv >
3<Change Responsibi>
4<Logout >
```

2. Choose <Create Rsrv>. The Choose Organization window appears.

```
Select Organization
Org Code>pr1
```

**Note:** The Choose Organization window appears when you log onto the Mobile Supply Chain application, and select a Process Execution function.

3. Enter the Organization code. The Query Batch window appears.

```
Query Batch (PR1)
Batch>42
Line >1
Item >8809
<Query>
<Cancel>
```

4. In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access Pending or WIP batches. You cannot access Closed or Canceled batches. Required.
5. In the Line field, enter, select, or scan the batch line number for the material. The Item field defaults to the item code for the line entered.
6. Choose <Query>. The Create Rsrv window appears. The Create Rsrv window enables you to enter detailed reservations for the Item.

```

Create Rsrv <PR1>
<Next>
Batch      :42
Line       :1
Item       :8809
Lot        >051206
Sub        >PHAR-RM
Locator    >PHAR-RM.1.
UOM        >KGM
Avail Qty :101.2
Req Qty    :0
Qty        :0
Sec UOM    :LB
Sec Qty    :
NeedBy Dt :24-MAR-200

```

7. The following fields appear:
  - Batch is the batch document number that you enter in the Query Batch window.
  - Line is the line number of the material in the batch.
  - Item is the item code for the line entered.

```

Create Rsrv <PR1>
Line       :1
Item       :8809
Lot        >051206
Sub        >PHAR-RM
Locator    >PHAR-RM.1.
UOM        >KGM
Avail Qty :101.2
Req Qty    :0
Qty        :5
Sec UOM    :LB
Sec Qty    :11.02312
NeedBy Dt :24-MAR-200
<Save/Next>
<Cancel>

```

8. If the item is lot controlled, then in the Lot field, enter, select, or scan the lot number to use for the reservation.

**Note:** Lot, Locator, Dual UOM, Grade, Status, Revision, and Qty fields display dynamically based on item controls set in the inventory application.

9. In the Sub field, enter, select, or scan the supply subinventory for the item.
10. In the Locator field, enter, select, or scan the locator where the material to be reserved is present.
11. The following fields appear:
  - UOM is the default unit of measure for the material reservation and defaults to the batch line UOM.
  - Avail Qty is the Available To Reserve (ATR) quantity for the item. This is updated when you enter the subinventory.
  - Req Qty is the quantity that remains to be reserved for the batch line i.e. the planned quantity for the batch line after deducting any other reservations.
  - Qty field defaults to the Req Qty. If the total quantity required is different than the Req Qty, then edit the Qty field.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - Sec Qty is the quantity of material to reserve for items that are dual unit of measure controlled.
  - NeedBy Dt is the date when the material is required. This defaults to the NeedBy Dt of the batch line.
12. Choose one of the following after entering reservation information:
  - <Save> to save the material reservation
  - <Next> to create reservations for the next ingredient line of the batch
  - <Save/Next> to save the material reservation and create reservations for other ingredient lines of the batch. This option is available for batches with multiple ingredient lines
  - <Cancel> to navigate to the Process Execution window

## Updating Material Reservations

The Update Reservation function enables you to review and update material reservations for a production batch. You can update the reservation details but cannot create new detailed reservations using this window.

**Note:** Changing the reservation quantity to zero deletes the reservation.

### To update the material reservations for a batch:

1. Navigate to the Process Execution window.

```
Process Execution
1<Create Rsrv >
2<Update Rsrv >
3<Change Org >
4<Change Responsibi>
5<Logout >
```

2. Choose <Update Rsrv>. The Choose Organization window appears.
3. Enter the Organization code. The Query Rsrv window appears.

```
Query Rsrv (PR1)
Batch >42
Line >1
Item >8809
Lot >051206
Sub >PHAR-RM
Locator>PHAR-RM.1.
<Query>
<Cancel>
```

4. Enter any one of the following search criteria to query ingredient reservations:
  - In the Batch field, enter, select, or scan the document number of the batch for which you want to update material reservations. Required.

- In the Line field, enter, select, or scan the batch line number of the material for which you want to update reservations. The Item field defaults to the item code for the line entered.
  - In the Lot field, enter, select, or scan the item lot number.
  - In the Subinventory field, enter, select, or scan the line item subinventory.
  - In the Locator field, enter, select, or scan the item locator.
5. Choose <Update Rsrv>. The Update Rsrv window appears.

```

Update Rsrv <PR1>
<Next>
Batch      :42
Line       :1
Item       :8809
Lot        >051206
Sub        >PHAR-RM
Locator    >PHAR-RM.1.
UOM        >KGM
Avail Qty :113.4
Req Qty    :0
Qty        :5
Sec UOM    :LB
Sec Qty    :11.02312
Grade      :A
  
```

6. The following fields appear:
- Batch is the batch document number that you enter in the Query Rsrv window.
  - Line is the batch line number.
  - Item is the code for the line item.

**Note:** Lot, Locator, Dual UOM, Grade, Status, Revision, and Qty fields display dynamically based on item controls set in the inventory application.

- Lot is the lot number to which the item belongs.
- Subinventory is the code for the subinventory from which the line item is reserved. You can edit this field.
- Locator is the item locator in the subinventory. You can edit this field.
- UOM is the default unit of measure for the material reservation and defaults to the batch line UOM.

- Available Quantity is the Available To Reserve (ATR) quantity for the item.
- Req Qty is the quantity that remains to be reserved for the batch line i.e. the planned quantity for the batch line after deducting any other reservations.
- Qty is the total quantity reserved for the batch line. You can update this field and modify the quantity of the ingredient reserved.
- Sec UOM is the unit of measure in which the secondary quantity is expressed.
- Sec Qty is the quantity of material to reserve, if the item is dual unit of measure controlled.
- Grade displays the grade of the item lot.
- Status displays the material lot status.
- NeedBy Dt is the date when the material is required. This defaults from the NeedBy Dt of the batch line. You can update this field.

```

Update Rsrv (PR1)
Lot      >051206
Sub      >PHAR-RM
Locator  >PHAR-RM.1.
UOM      >KGM
Avail Qty:101.2
Req Qty  :0
Qty      :5
Sec UOM  :LB
Sec Qty  :11.02312
Grade    :A
Status   :GOOD
NeedBy Dt:24-MAR-200
<Save/Next>
<Cancel>

```

7. Choose one of the following:
  - <Save> to save the changes to the ingredient reservations
  - <Next> to update reservations for the next ingredient line in the batch
  - <Save/Next> to save and update other ingredient reservations. This option is available for batches with multiple ingredients lines
  - <Cancel> to navigate to the Query Rsrv window

---

# Manufacturing Execution Systems for Process Manufacturing in Oracle Mobile Supply Chain Application

This chapter covers the following topics:

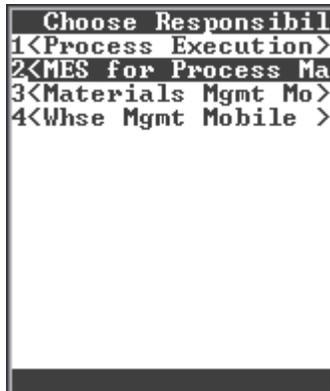
- Using Manufacturing Execution Systems for Process Manufacturing
- Recording Ingredient Usage in Production Batches
- Returning Ingredients
- Completing Products for a Production Batch
- Returning Products
- Creating Pending Product Lots for a Production Batch
- Updating Pending Product Lots
- Performing Incremental Backflushing for a Production Batch
- Performing LPN Transactions
- Using the Product Completion Window
- Using Product Completion with Directed Drop
- Using Product Completion with Load
- Using Product Completion with Manual Drop
- Updating Resource Usage
- Recording the Start of Resource Usage
- Recording the End of Resource Usage
- Releasing a Batch Step
- Completing a Batch Step

# Using Manufacturing Execution Systems for Process Manufacturing

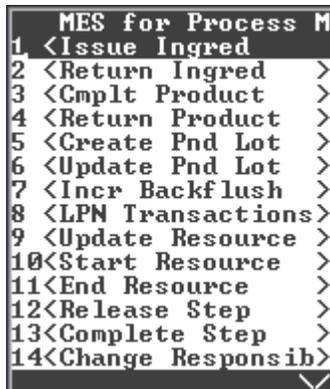
Oracle Process Mobile Manufacturing enables you to perform Manufacturing Execution Systems (MES) for Process Manufacturing transactions on mobile device hardware.

## To log into the MES for Process Manufacturing responsibility:

1. Log onto the Oracle Mobile Supply Chain application.



2. Choose < MES for Process Manufacturing>. The MES for Process Manufacturing window appears.



3. Choose one of the following:
  - <Issue Ingrid> to record ingredient issue for production batches
  - <Return Ingrid> to record the return of ingredients to inventory from the batches
  - <Cmplt Product> to yield products, byproducts, or co-products of production batches into lots

- <Return Product> to record the return of products of production batches to inventory or a correction made to a material yield transaction
  - <Create Pnd Lot> to create pending product and by-product lots for a production batch
  - <Update Pnd Lot> to update the pending product lots for a production batch
  - <Incr Backflushing> to incrementally backflush an item in a production batch
  - <LPN Transactions> to perform LPN transactions for a production batch
  - <Update Resource> to update resource usage
  - <Start Resource> to record the start date and time of usage for a resource
  - <End Resource> to record the end date and time of usage for a resource
  - <Release Step> to release a batch step
  - <Complete Step> to complete a batch step
4. <Change Responsibility> to access a different mobile application responsibility.
  5. <Logout> to exit the mobile application.

## Recording Ingredient Usage in Production Batches

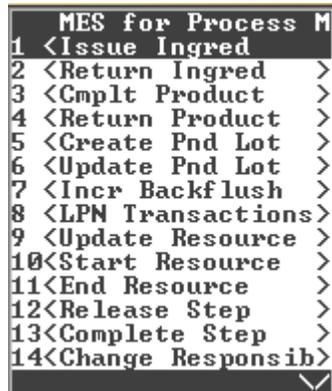
The Ingredient Issue function supports the issue of ingredients for production batches. When you issue ingredients, the application creates WIP Issue transactions. Ingredient issues do not affect existing reservations and are only used to record additional usage. Using the GME\_MOB\_ING\_ISSUE or Issue Ingrid, function you can either create new transactions for ingredient consumption or transact existing reservations for ingredients. You must set the TXN\_MODE parameter in the Application Developer responsibility to transact existing ingredient reservations.

Set the parameter to:

- NEW to create only new transactions.
- RSRV to transact existing reservations.
- BOTH to create new transactions and transact the existing reservations.

**To record ingredient consumption in a production batch using the Issue Ingred window:**

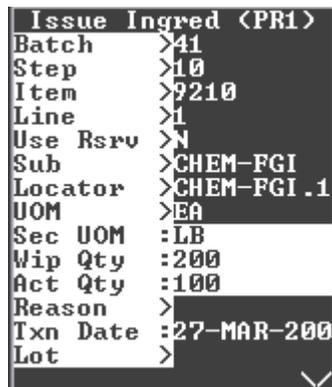
1. Navigate to the MES for Process Manufacturing window.



2. Choose <Issue Ingred>. The Choose Organization window appears.

**Note:** The Choose Organization window appears when you log onto the Mobile Supply Chain application, and select an MES for Process Manufacturing function.

3. Enter the Organization code. The Issue Ingred window appears.



4. In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access WIP batches. You cannot access Completed, Closed or Canceled batches. Required.

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields display dynamically based on item controls set in the inventory application.

5. In the Step field, enter or select the batch step number. If you enter a step number, then only items that are associated to the step display in the Item and Line fields.
6. In the Item field, enter or select the item number for the ingredient. When you enter the line number, this field defaults to the item code for the line entered.
7. In the Line field, enter, select, or scan the batch line number. This field appears if the item is not entered or if the item entered is used in multiple batch lines.
8. In the Use Rsrv field, select the reservation for the material line. The LOV for this field displays all high and detailed level reservations for the selected material line. If you select a detailed level reservation, then the Revision, Subinventory, Locator, Lot, and Lot Qty fields default to the values entered in the reservation. This field is enabled based on the TXN\_MODE function parameter setting as follows:
  - If the TXN\_MODE is NEW, then the Use Rsrv field is not enabled.
  - If the TXN\_MODE is RSRV, or BOTH, then the Use Rsrv field is enabled.
9. In the Rev field, enter or select the item revision.
10. In the LPN Name field, enter or select appropriate license plate number. This field is only applicable for WMS-enabled organizations. Based on the value for Use Rsrv field, the LOV displays the following:
  - If the value for the Use Rsrv field is set to Y, the LPN is automatically populated similar to rest of the fields such as Subinventory, Locator, Lot, etc.
  - If the value for the Use Rsrv field is set to N, you can manually enter the LPN. You can also leave this field blank. The other fields such as Subinventory and Locator are automatically populated but you can edit them.
11. In the Subinventory field, enter or select the line item subinventory.
12. In the Locator field, enter or select the locator for the item in the subinventory.
13. The following fields appear:
  - UOM is the unit of measure for the selected item as on the material line.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - WIP Qty is the Work-In-Process Planned Quantity for the ingredient on the batch line.
  - Act Qty is the Actual Quantity of the ingredient already consumed in batch production.

14. In the Qty field, enter the quantity of the ingredient to consume apart from the quantity already consumed in batch production. If you enter a value in the Qty field, then the Sec Qty field is updated. If the item is Default UOM controlled, then this field is optional and you can enter a value in the Sec Qty field.
15. In the Reason field, you can optionally enter a reason for the ingredient consumption transaction.
16. In the Txn Date field, verify the default transaction date and time. The default is the system date.

```

Issue Ingrid <PR1>
Sub      >CHEM-FGI
Locator  >CHEM-FGI .1
UOM      >EA
Sec UOM  :LB
Wip Qty  :200
Act Qty  :110
Reason   >ADD
Txn Date :27-MAR-200
Lot      >1
Lot Qty  :10
SecLotQty:5
<Next Lot>
<Save>
<Cancel>

```

17. If the item is lot controlled, then in the Lot field, enter, select, or scan the lot number to use for consumption.
18. In the Lot Qty field, enter the quantity of the item to consume from the lot. You can choose to consume from one or more lots. Consumptions from lot quantities add up to the actual quantity. As lot quantities are issued, the system automatically updates the Act Qty field. This option is available only if the TXN\_MODE is set to New or Both.
19. The Remaining field shows the ingredient quantity remaining to be consumed.  
Remaining = Qty - Act Qty.
20. In the Sec Qty field, enter the quantity of the ingredient to consume in the item's secondary UOM. You can choose to enter Sec Qty or Qty. If you enter a value in the Sec Qty, then the Qty field is updated.
21. Choose one of the following:
  - <Next Lot> to save the transaction and proceed to the next lot to record the next ingredient consumption for the batch. This option is available only if TXN\_MODE is set to New or Both.
  - <Save> to save the completed transaction and return to the MES for Process Manufacturing window

- <Cancel> to return to the MES for Process Manufacturing window

## Returning Ingredients

The Ingredient Return function enables you to return ingredients from production batches to inventory. For example, when you unrelease a batch, consumed ingredients are returned to inventory. WIP Returns reverse WIP Issues. You can return an ingredient only to the lot from which it was issued. The quantity returned can be less than or equal to the quantity issued.

### To return ingredients from a production batch to inventory:

1. Navigate to the MES for Process Manufacturing window.
2. Choose < Return Ingrid >. The Return Ingrid window appears.

```

Return Ingrid <PR1>
Batch      >41
Step       >10
Item       >7210
Line       >1
Sub        >CHEM-FGI
Locator    >CHEM-FGI .1
UOM        >EA
Sec UOM    :LB
Wip Qty    :200
Act Qty    :100
Reason     >
Txn Date   :26-MAR-200
Lot        >
Lot Qty    :
  
```

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.

3. In the Batch field, enter, select, or scan the document number of the batch from which you want to return ingredients. You can access only WIP and Completed batches. Required.
4. In the Step field, enter or select the step number of the batch from which you want to return an ingredient.
5. In the Item field, enter or select the item to return to inventory. The LOV displays items associated to the selected step. If no step is selected, then all items display.
6. In the Rev field, enter or select the item revision.

7. The Line field defaults to the line number of the item. If no step is selected, then the LOV displays all ingredient lines. If a step is selected then, the LOV displays the lines associated with the step.

```

Return Ingrid <PR1>
Line      >1
Sub       >CHEM-FGI
Locator   >CHEM-FGI.1
UOM       >EA
Sec UOM   :LB
Wip Qty   :200
Act Qty   :100
Reason    >
Txn Date  :26-MAR-200
Lot       >060712-01
Lot Qty   :100
SecLotQty:50
<Save>
<Cancel>

```

8. In the Subinventory field, enter or select the line item subinventory.
9. In the Locator field, enter or select the locator for the item in the subinventory.
10. UOM is the unit of measure for the selected ingredient as expressed on the material line.
11. Sec UOM is the unit of measure in which the secondary quantity is expressed.
12. WIP Qty is the Work-In-Process Planned Quantity for the ingredient on the batch line.
13. Act Qty is the Actual Quantity of the ingredient already issued to the batch.
14. In the Reason field, enter a reason for the return ingredient transaction.
15. In the Txn Date field, verify the default transaction date and time. The default is the system date.
16. If the item is lot-controlled, then in the Lot field, enter, select or scan the lot to which the item belongs.
17. In the Lot Qty field, enter the quantity of the ingredient to return to the lot.
18. Sec Lot Qty is the secondary quantity of material to be returned, if the item is dual unit of measure controlled.
19. Choose one of the following:
  - Choose <Save> to save changes to the return ingredient transactions and enter another transaction.

- Optionally, choose <Cancel> to navigate to the MES for Process Manufacturing window.

## Completing Products for a Production Batch

The Complete Product function enables you to yield products, byproducts, or co-products of a production batch into lots. Use the Complt Product window to enter the details of product completion for WIP and Completed batches. Using the Complt Product or GME\_MOBILE\_CMPLT\_PROD function you can either create new transactions for product completion or transact into existing pending lots for products, byproducts, and co-products. You must set the TXN\_MODE parameter using the Application Developer responsibility to transact existing pending product lots.

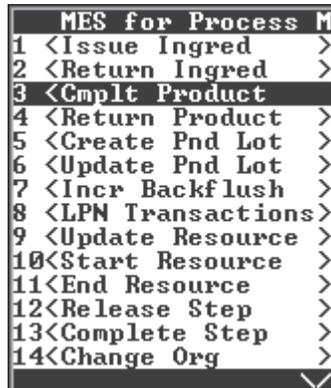
Set the parameter to:

- NEW to create only new transactions
- PNDLOT to transact the existing pending lots
- BOTH to create new transactions and transact the existing pending product lots

Refer to "Setting Up" in the *Oracle Process Manufacturing Process Execution User's Guide* for more information.

### To yield products of a production batch:

1. Navigate to the MES for Process Manufacturing window.
2. Choose <Complt Product>. The Complt Product window appears.



3. In the Batch field, enter, select, or scan the document number of the batch for which you want to record product yield. If you set the TXN\_MODE parameter to PND\_LOT, then you can access only WIP batches. Required.

```

Cmplt Product (PR1)
Batch      >41
Step       >30
Type       >2
Item       >7010
Line       >1
Use Pnd Lo >N
Sub        >CPG-FGI
Locator    >
UOM        >CSE
Sec UOM    :LB
Wip Qty    :20
Act Qty    :80
Reason     >
Txn Date   :27-MAR-20

```

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields display dynamically based on item controls set in the inventory application.

4. In the Step field, enter or select the batch step number.
5. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
6. In the Item field, enter or select the item number for the product. If you select a step number, then only items associated to the step display. When you enter the line number, this field defaults to the item code for the line entered.
7. The Line field defaults to the line number of the item. The LOV displays all the products of the batch if no step is selected. If a step is selected then, the LOV displays the product associated to the step.
8. In the Use Pnd Lot field, select any of the existing pending product lots. The pending product lot LOV displays all the pending lots for the selected item. You can only transact the existing pending lots. If you select a pending lot, then the Lot, Lot qty, and UOM display by default. Use Pnd Lot field is enabled based on the TXN\_MODE function parameter setting as follows:
  - If the TXN\_MODE is NEW, then the Use Pnd Lot field is not enabled.
  - If the TXN\_MODE is PND LOT, or BOTH, then the Use Pnd Lot field is enabled.
9. In the Revision field, enter or select the item revision.
10. In the Subinventory field, enter or select the line item subinventory. If the item subinventory is specified on the material line, then this field displays that subinventory.

11. In the Locator field, enter or select the locator for the item in the subinventory. If the locator is specified on the material line, then this field displays that locator.

```

Cmplt Product <PR1>
Locator      >CPG-FGI.3
UOM         >CSE
Sec UOM     :LB
Wip Qty    :20
Act Qty    :81
Reason     >ADD
Txn Date   :27-MAR-20
ParentLot  >0102-01
Lot        >0102-01
Lot Qty    :1
SecLotQty  :5
<Next Lot>
<Save>
<Cancel>
  
```

12. The Following fields appear:
  - UOM is the unit of measure for the selected item as expressed on the material line.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - WIP Qty is the Work-In-Process Planned Quantity for the product on the batch line.
  - Act Qty is the Actual Quantity of the product yielded from the batch.
13. In the Qty field, enter the quantity of the product to issue apart from the quantity already issued from the batch. If the item is Default UOM controlled, then Qty field is optional, and the quantity consumed is entered in the Sec Qty field.
14. In the Reason field, enter or select a reason code for the transaction.
15. In the Txn Date field, verify the default transaction date and time. The default is the system date.
16. Optionally, in the Parent Lot field, enter the parent lot number.
17. In the Lot field, enter or select the lot into which you want to yield the product.
18. In the Lot Qty field, enter the quantity of the product to yield to the lot. If the PND\_LOT option is set to New or Both, then you can choose to yield the product to more than one lot. You can either enter Lot Qty or SecLot Qty. If you enter Lot Qty, then SecLot Qty is updated.
19. In the SecLot Qty field, enter the quantity of the product to yield to the lot in the secondary UOM. If you enter SecLot Qty, then Lot Qty is updated.

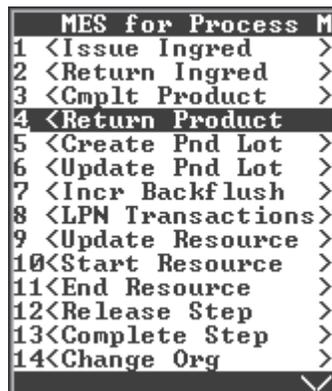
20. Choose one of the following
  - <Save> to save the completed transaction and return to the MES for Process Manufacturing window.
  - <Next Lot> to save the transaction and proceed to the next lot to issue product from the batch. This option is available only if the PND\_LOT option is set to New or Both.
  - <Cancel> to return to the MES for Process Manufacturing window.

## Returning Products

The Return Product function enables you to make corrections to recorded product yield. Inventory is adjusted according to the corrections made. For example, if you accidentally complete a batch and revert back to WIP, then the inventory returns the products.

### To return a product:

1. Navigate to the MES for Process Manufacturing window.



2. Choose < Return Product >. The Return Product window appears.

```

Return Product <PR1>
Batch      >41
Step       >30
Type       >2
Item       >9010
Line       >1
Sub        >CPG-FGI
Locator    >CPG-FGI.3.
UOM        >CSE
Sec UOM    :LB
Wip Qty    :20
Act Qty    :80
Reason     >
Txn Date   :26-MAR-200
Lot        >

```

3. In the Batch field, enter, select or scan the document number of the batch from which you want to return products. You can access only WIP and Completed batches. Required.

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields display dynamically based on item controls set in the inventory application.

4. In the Step field, enter or select the step number of the batch from which you want to return a product.
5. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
6. In the Item field, enter or select the item to return to inventory. The LOV displays items associated to the selected step. If no step is selected, then all items display.
7. The Line field defaults to the line number of the item. The LOV displays all ingredient lines if no step is selected. If a step is selected then, the LOV displays the lines associated to the step.
8. In the Subinventory field, enter or select the line item subinventory.
9. In the Locator field, enter or select the locator for the item in the subinventory.
10. The following fields appear:
  - UOM is the unit of measure for the selected item as expressed on the material line.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - WIP Qty is the Work-In-Process Planned Quantity for the product on the batch line.

- Act Qty is the Actual Quantity of the product already completed and issued from the batch.

11. In the Reason field, enter or select a reason for the transaction.
12. In the Txn Date field, verify the default transaction date and time. The default is the system date.

```

Return Product <PR1>
Line      >1
Sub       >CPG-FGI
Locator   >CPG-FGI.3.
UOM       >CSE
Sec UOM   :LB
Wip Qty   :20
Act Qty   :80
Reason    >
Txn Date  :26-MAR-200
Lot       >0102-01
Lot Qty   :70
SecLotQty:350
<Save>
<Cancel>
  
```

13. In the Lot field, enter or select the Lot from which you want to return the product.
14. In the Lot Qty field, enter the quantity of product you want to return from inventory. This defaults to the actual quantity. You can edit this field. The quantity returned can be equal or less than the actual quantity yielded from the batch.
15. SecLot Qty is the Lot Qty expressed in the secondary UOM of the item.
16. Choose one of the following:
  - <Save> to save the product return transaction and return to the MES for Process Manufacturing window.
  - <Cancel> to return to the MES for Process Manufacturing window

## Creating Pending Product Lots for a Production Batch

The Create Pnd Lot function enables you to create pending product and by-product lots for a production batch. You can specify the product and the lots to yield the product after production.

### To create pending product lots for a batch:

1. Navigate to the MES for Process Manufacturing window.

- Choose <Create Pnd Lot>. The Create Pnd Lot window appears.

```

MES for Process M
1 <Issue Ingred >
2 <Return Ingred >
3 <Cmplt Product >
4 <Return Product >
5 <Create Pnd Lot >
6 <Update Pnd Lot >
7 <Incr Backflush >
8 <LPN Transactions>
9 <Update Resource >
10<Start Resource >
11<End Resource >
12<Release Step >
13<Complete Step >
14<Change Responsib>

```

- In the Batch field, enter or select the batch number for which you want to create pending product lots. Required.

```

Create Pnd Lot <PR1>
Batch >26
Step >30
Type >2
Line >1
Item >9010
Sequence :1
ParentLot>0102
Lot >030313-01
UOM >CSE
Lot Qty :10
Reason >
<Save>
<Cancel>

```

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.

- In the Step field, enter or select the step that yields the product for which you want to create pending product lots.
- In the Type field, enter or select the line type. Valid values are Product and Byproduct. Product displays by default. You can edit this field.
- In the Line field, enter or select the batch line number.
- The Item field defaults from the batch line number in cases where there is only one product. For lines with more than one product, you can enter or select from the list of values that displays for the field.
- Revision displays the item revision for the material line.

9. In the Sequence field, enter a sequence as the order in which the lots are to be yielded.
10. In the Parent Lot field, enter the parent lot number. This is the parent lot to which a new lot is associated. The lot has default attributes derived from this parent lot during creation. This field does not display if the item is not child lot-controlled.
11. In the Lot field, enter the lot number.
12. The following fields appear:
  - The UOM field displays the unit of measure for the material. This defaults to the UOM specified on the material line.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - Sec Qty is the quantity of material to be yielded into the lot, if the item is dual unit of measure controlled.
13. In the Lot Qty, enter the quantity to yield into the lot.
14. In the Reason field, enter a reason code to associate with the transaction.
15. Choose one of the following:
  - <Save> to save the pending product lot
  - <Next> to save the pending product lot and refresh the window to create more pending lots
  - <Cancel> to cancel the current transaction and navigate to the MES for Process Manufacturing window

## Updating Pending Product Lots

The Update Pnd Lot function enables you to update the pending product lots for a production batch.

### To update pending product lots:

1. Navigate to the MES for Process Manufacturing window.

```

MES for Process M
1 <Issue Ingrid >
2 <Return Ingrid >
3 <Cmplt Product >
4 <Return Product >
5 <Create Pnd Lot >
6 <Update Pnd Lot >
7 <Incr Backflush >
8 <LPN Transactions>
9 <Update Resource >
10<Start Resource >
11<End Resource >
12<Release Step >
13<Complete Step >
14<Change Org >

```

2. Choose <Update Pnd Lot>. The Query Lot window appears.

```

Query Lot <PR1>
Batch>26
Type >2
Line >1
Item >9010
Lot >030313-01
<Query>
<Cancel>

```

3. In the Batch field, enter or select the batch to update the pending product lots. Required.
4. In the Type field, enter or select the line type. Valid values are Product and Byproduct. Product displays by default. You can edit this field.
5. In the Line field, enter or select the batch line number.
6. The Item field defaults from the batch line number in cases where there is only one product. For lines with more than one product, you can enter or select from the list of values that displays for the field.
7. In the Lot field, enter or select the item lot number.
8. Click <Query>. The Update Pnd Lot window appears.

```

Update Pnd Lot <PR1>
Batch      :26
Type       :2
Line       :1
Item       :9010
Sequence   :2
ParentLot  >030313
Lot        >030313-01
UOM        >CSE
Lot Qty    :10
Reason     >
<Save>
<Cancel>

```

9. The following fields display:
  - Batch is the batch document number.
  - Line Type is the line type of the batch item.
  - Line is the batch line number.
  - Item is the item code that defaults from the batch line number.
  - Revision is the item revision.
  - Sequence specifies the order in which the lots are to be yielded. You can edit this field.
  - Lot is the item lot number.
  - UOM is the unit of measure for the material. This defaults to the UOM specified on the material line.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
10. Lot Qty is the quantity of material to be yielded into the lot, specified when the pending lot is created. You can edit this field. Enter a new lot quantity.
11. Sec Qty is the quantity of material to be yielded into the lot, if the item is dual unit of measure controlled. This is updated when you edit the value in Qty field. When you change the Qty, then the following message displays:

"Apply converted quantity to Secondary quantity?" Select Yes to apply converted quantity to Secondary Quantity. If you update the Sec Qty, then the Qty field is updated.
12. In the Reason field, enter a reason code to associate with the transaction.
13. Choose one of the following:

- <Save> to save the changes to the pending product lot and navigate to the next record that displays based on the criteria you entered in the Query Lot window
- <Next> to view the next record based on the query criteria
- <Cancel> to cancel the changes and navigate to the MES for Process Manufacturing menu

## Performing Incremental Backflushing for a Production Batch

The Incr Backflush window enables you to perform incremental backflushing for an item in a production batch and enables you to record production output or yield incrementally as it occurs prior to batch completion. The application calculates the ingredient usage by backflushing the ingredients based on product yield and WIP planned quantities. You can enter incremental quantities, a new actual quantity, or a new percent of planned quantity for an item.

### To incrementally backflush a batch:

1. Navigate to the MES for Process Manufacturing window.
2. Choose <Incr Backflush>. The Incr Backflush window appears.



3. In the Batch field, enter or select the batch for which you want to perform incremental backflushing. You can only access WIP and Completed batches. Required.

```

Incr Backflush
Batch      >53
Step      >
Type      >2
Line      >2
Item      >SI-REU
Rev       >1
UOM       >EA
Incr Qty  :3
NewActual:3
PrctPlan :5
Txn Date  :02-APR-200
<Save>
<Cancel>

```

4. In the Step field, enter or select the batch step.
5. In the Type field, enter or select the line type. Valid values are 1 for product, 2 for byproduct, and 3 for ingredient.
6. In the Line field, enter or select the batch line number.
7. In the Item field, enter or select the item that you want to backflush.
8. In the Rev field, enter or select the item revision for a revision-controlled item.
9. The UOM field displays the unit of measure for the item. This defaults to the UOM specified on the material line.
10. To backflush an item, enter any one of the following:
  - In the Incr Qty field, enter an incremental quantity.
  - In the New Actual field, enter a new actual quantity.
  - In the Percent Plan field, enter a new percent of the planned quantity. Enter the percent as a whole number. For example, enter five percent as 5.

Based on the field you enter, the application calculates the values for the other fields. For example, if you enter a new actual quantity, then the values are calculated for the incremental quantity and percent of planned quantity.

11. In the Txn Date field, enter a transaction date. The default value for this field is the system date. To override the entry of the default system date and time for the incremental backflushing operation, enter the Txn Date as the actual date on which incremental backflushing is performed.
12. Choose one of the following:
  - <Save> to save the incremental backflush transaction

- <Cancel> to cancel the incremental backflush transaction

Refer to "Understanding Incremental Backflushing" in the *Oracle Process Manufacturing Process Execution User's Guide* for more information.

## Performing LPN Transactions

The Product Completion function enables you to record batch output into an LPN. This function is enabled only for WMS-enabled organizations. The following options are available:

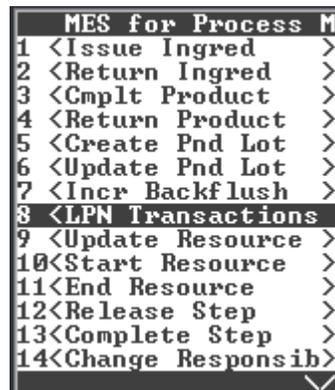
- Product Completion
- Product Completion with Directed Drop
- Product Completion with Load
- Product Completion with Manual Drop

## Using the Product Completion Window

Use the Product Completion window to yield a product directly to an LPN. When you yield a product using the Product Completion window, a putaway task is generated in the application, but the product is not delivered into inventory until you transact the task. This transaction can be used in a scenario, where a production operative records the batch yield, but material is putaway by inventory workers who will perform the putaway task depending on their workload. Thus, the increase in inventory may occur some time after production is recorded. The LPN status is In WIP.

### To yield a product into an LPN:

1. Navigate to the MES for Process Manufacturing window.



2. Choose <LPN Transactions>. The LPN Transactions window appears.



3. Choose <Product Completion>. The Product Completion window appears.



**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.

4. Choose <Product Completion>. The Complt Product window appears.

```

Cmplt Product <PR1>
LPN      >41
Batch    >41
Step     >30
Type     >2
Line     >1
Item     >7010
Sub      :CPG-FGI
Locator  :CPG-FGI.3.
UOM      >CSE
Wip Qty  :20
Act Qty  :80
Reason   >
Txn Date :01-APR-200
ParentLot>

```

5. In the LPN field, enter the LPN to which you want to yield the product. Press CTRL+G to create a new LPN.
6. In the Batch field, enter, select, or scan the document number of the batch from which you want to issue products. You can access only WIP and Completed batches. Required.
7. In the Step field, enter or select the batch step number.
8. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
9. In the Item field, enter or select the item number for the product. When you enter the line number, this field defaults to the item code for the line entered.
10. Line field defaults to the line number of the item. The LOV displays all the products of the batch if no step is selected. If a step is selected then, the LOV displays the product associated to the step.
11. In the Revision field, enter or select the item revision.
12. In the Subinventory field, enter or select the line item subinventory.
13. In the Locator field, enter or select the locator for the item in the subinventory.

```

Cmplt Product <PR1>
Item      >9010
Sub       :CPG-FGI
Locator   :CPG-FGI.3.
UOM       >GSE
Wip Qty   :20
Act Qty   :85
Reason    >
Txn Date  :01-APR-200
ParentLot >
Lot       >0102-01
Lot Qty   :5
<Next Lot>
<Done>
<Cancel>

```

14. The following fields appear:
  - UOM is the default unit of measure for the selected item.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - WIP Qty displays the Work-In-Process Planned Quantity for the product on the batch line.
  - Act Qty displays the Actual Quantity of the product issued from the batch.
15. In the Qty field, enter the quantity of the product to issue apart from the quantity already issued from the batch. If the item is Default UOM controlled, then this field is optional and the quantity consumed is entered in the Sec Qty.
16. The Remaining field displays the product quantity remaining to be issued into a lot. This defaults to the Qty entered and is updated as Qty is entered for a lot.
17. In the Reason field, enter or select a reason code for the transaction.
18. In the Txn Date field, verify the default transaction date and time. The default is the system date.
19. In the Parent Lot field, enter the parent lot number.
20. In the Lot field, enter or select the lot into which you want to issue the product. Press CTRL+G to create a new lot.
21. In the Lot Qty field, enter the quantity of the product to issue to the lot. You can choose to issue the product to more than one lot.
22. In the SecLot Qty field, enter the quantity of the product to yield to the lot in the secondary UOM. If you enter in this field, then the Lot Qty field is updated.

23. Choose one of the following
- <Next Lot> to enter a transaction for the next lot
  - <Done> to complete the transaction and go to the MES for Process Manufacturing window
  - <Cancel> to return to the MES for Process Manufacturing window

## Using Product Completion with Directed Drop

Use the Product Completion with Directed Drop window to record production and also transfer the product to its defined inventory location. When you enter the details into the Product Completion with Directed Drop window, the Drop LPN window displays and lets you drop the product into its inventory location. The Drop LPN page displays the storage location based on putaway rules defined for the organization.

### To yield a product into an LPN and drop it to its inventory location:

1. Navigate to the MES for Process Manufacturing window.
2. Choose <LPN Transactions>. The Product Completion window appears.



3. Choose <Product Completion w Directed Drop>. The Complt Product window appears.

```

Cmplt Product <PR1>
LPN          >41
Batch       >41
Step        >30
Type        >2
Line        >1
Item        >7010
Sub         :CPG-FGI
Locator     :CPG-FGI.3.
UOM         >CSE
Wip Qty     :20
Act Qty     :80
Reason      >
Txn Date    :01-APR-200
ParentLot   >

```

4. In the LPN field, enter the LPN to which you want to yield the product.
 

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.
5. In the Batch field, enter, select, or scan the document number of the batch from which you want to issue products. You can access only WIP and Completed batches. Required.
6. In the Step field, enter or select the batch step number.
7. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
8. The Line field defaults to the line number of the item. The LOV displays all the products of the batch if no step is selected. If a step is selected then, the LOV displays the product associated to the step.
9. In the Item field, enter or select the item number for the product. When you enter the line number, this field defaults to the item code for the line entered.
10. In the Revision field, enter or select the item revision.
11. In the Subinventory field, enter, scan, or select the item subinventory.
12. In the Locator field, enter, scan, or select the item locator.
13. The following fields appear:
  - UOM is the default unit of measure for the selected item.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.

- WIP Qty displays the Work-In-Process Planned Quantity for the product on the batch line.
  - Act Qty displays the Actual Quantity of the product issued from the batch.
14. In the Qty field, enter the quantity of the product to issue apart from the quantity already issued from the batch. If the item is Default UOM controlled, then this field is optional and the quantity consumed is entered in the Sec Qty.
  15. The Remaining field displays the product quantity remaining to be issued into a lot. This defaults to the Qty entered and is updated as Qty is entered for a lot.
  16. In the Reason field, enter or select a reason code for the transaction.
  17. In the Txn Date field, verify the default transaction date and time. The default is the system date.
  18. In the Parent Lot field, enter the parent lot number.

```

Cmplt Product <PR1>
Item      >9010
Sub       :CPG-FGI
Locator   :CPG-FGI.3.
UOM       >CSE
Wip Qty   :20
Act Qty   :85
Reason    >
Txn Date  :01-APR-200
ParentLot>
Lot       >030313-01
Lot Qty   :5
<Next Lot>
<Drop>
<Cancel>

```

19. In the Lot field, enter or select the lot into which you want to yield the product.
20. In the Lot Qty field, enter the quantity of the product to issue to the lot. You can choose to issue the product to more than one lot. You can enter Lot Qty or SecLot Qty for dual UOM controlled items. If you enter Lot Qty, then the SecLot Qty field is updated.
21. In the SecLot Qty field, enter the quantity of the product to issue to the lot in the secondary UOM. If you enter SecLot Qty, then the Lot Qty field is updated.
22. Choose one of the following:
  - <Next Lot> to enter a transaction for the next Lot
  - <Drop> to complete the transaction and access the Drop LPN window. The

Drop LPN window enables you to transfer the product to the specified inventory location.

- <Cancel> to return to the MES for Process Manufacturing window

Refer to "Explaining Directed Drops" in the *Oracle Warehouse Management User's Guide* for more information.

## Using Product Completion with Load

Use the Product Completion w Load window to record production and load an LPN with the product quantity. The on-hand inventory quantity for the product increases after the LPN is dropped to a storage location.

### To use the Product Completion w Load window:

1. Navigate to the MES for Process Manufacturing window.
2. Choose <LPN Transactions>. The Product Completion window appears.

```
Product Completion
1<Product Completio>
2<Prod Compl w Dire>
3<Prod Compl w Load>
4<Prod Compl w Manu>
5<Logout          >
```

3. Choose <Product Completion w Load>. The Complt Product window appears.

```

Cmplt Product <PR1>
LPN          >12
Batch       >41
Step        >30
Type        >2
Line        >1
Item        >0010
Sub         :CPG-FGI
Locator     :CPG-FGI.3.
UOM         >CSE
Wip Qty    :20
Act Qty    :80
Reason     >
Txn Date   :01-APR-200
ParentLot >

```

4. In the LPN field, enter the LPN to which you want to yield the product.
 

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.
5. In the Batch field, enter, select, or scan the document number of the batch from which you want to issue products. You can access only WIP and Completed batches. Required.
6. In the Step field, enter or select the batch step number.
7. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
8. The Line field defaults to the line number of the item. The LOV displays all the products of the batch if no step is selected. If a step is selected then, the LOV displays the product associated to the step.
9. In the Item field, enter or select the item number for the product. When you enter the line number, this field defaults to the item code for the line entered.
10. In the Revision field, enter or select the item revision.
11. In the Subinventory field, enter or select the line item subinventory.
12. In the Locator field, enter or select the item locator.
13. The following fields appear:
  - UOM is the default unit of measure for the selected item.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.

- WIP Qty displays the Work-In-Process Planned Quantity for the product on the batch line.
  - Act Qty displays the Actual Quantity of the product issued from the batch.
14. In the Qty field, enter the quantity of the product to issue apart from the quantity already issued from the batch. If the item is Default UOM controlled, then this field is optional and the quantity consumed is entered in the Sec Qty field.
  15. The Remaining field displays the product quantity remaining to be issued into a lot. This defaults to the Qty entered and is updated as Qty is entered for a lot.
  16. In the Reason field, enter or select a reason code for the transaction.
  17. In the Txn Date field, verify the default transaction date and time. The default is the system date.
  18. In the Parent Lot field, enter the parent lot number.

```

Cmplt Product <PR1>
Item      >9010
Sub       :CPG-FGI
Locator   :CPG-FGI.3.
UOM       >CSE
Wip Qty   :20
Act Qty   :90
Reason    >
Txn Date  :01-APR-200
ParentLot >
Lot       >0102-01
Lot Qty   :10
<Next Lot>
<Load>
<Cancel>

```

19. In the Lot field, enter or select the lot into which you want to issue the product.
20. In the Lot Qty field, enter the quantity of the product to issue to the lot. You can choose to issue the product to more than one lot. You can enter Lot Qty or SecLot Qty for dual UOM controlled items. If you enter Lot Qty, then the SecLot Qty field is updated.
21. In the SecLot Qty field, enter the quantity of the product to issue to the lot in the secondary UOM. If you enter in this field, then the Lot Qty field is updated.
22. Choose one of the following:
  - <Next Lot> to enter a transaction for the next lot
  - <Load> to load the product and complete the transaction using the Manual

Load window. The on-hand quantity for the product is increased only after it is dropped to a storage location.

- <Cancel> to cancel the present transaction and return to the MES for Process Manufacturing window

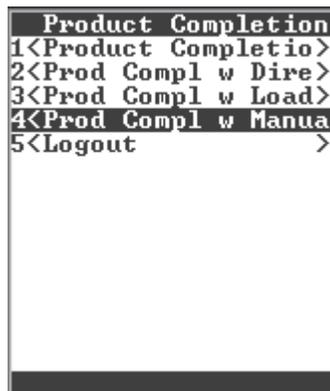
Refer to "Explaining Manual Loads" in the *Oracle Warehouse Management User's Guide* for more information.

## Using Product Completion with Manual Drop

Use the Product Completion w Manual Drop window to yield a product into an LPN and also transfer the product to the inventory using the Manual Drop window. The Manual Drop window displays the product storage subinventory and location. You can edit the storage subinventory and location details and are not defined by putaway rules.

### To use the Product Completion w Manual Drop window:

1. Navigate to the MES for Process Manufacturing window.
2. Choose <LPN Transactions>. The Product Completion window appears.



3. Choose <Product Completion w ManualDrop>. The Cmplt Product window appears.

```

Cmplt Product <PR1>
LPN      >14
Batch    >41
Step     >30
Type     >2
Line     >1
Item     >7010
Sub      :CPG-FGI
Locator  :CPG-FGI.3.
UOM      >CSE
Wip Qty  :20
Act Qty  :80
Reason   >
Txn Date :31-APR-200
ParentLot>

```

4. In the LPN field, enter the LPN to which you want to yield the product.
 

**Note:** Lot, Locator, Dual UOM, Revision, Status, and Qty fields appear dynamically based on item controls set in the inventory application.
5. In the Batch field, enter, select, or scan the document number of the batch from which you want to issue products. You can access only WIP and Completed batches. Required.
6. In the Step field, enter or select the batch step number.
7. In the Type field, enter or select the type as Product or Byproduct. Default value is Product.
8. The Line field defaults to the line number of the item. The LOV displays all the products of the batch if no step is selected. If a step is selected then, the LOV displays the product associated to the step.
9. In the Item field, enter or select the item number for the product. When you enter the line number, this field defaults to the item code for the line entered.
10. In the Revision field, enter or select the item revision.
11. The following fields appear:
  - UOM is the default unit of measure for the selected item.
  - Sec UOM is the unit of measure in which the secondary quantity is expressed.
  - WIP Qty displays the Work-In-Process Planned Quantity for the product on the batch line.
  - Act Qty displays the Actual Quantity of the product issued from the batch.

12. In the Qty field, enter the quantity of the product to issue apart from the quantity already issued from the batch. If the item is Default UOM controlled, then this field is optional and the quantity consumed is entered in the Sec Qty field.
13. The Remaining field displays the product quantity remaining to be issued into a lot. This defaults to the Qty entered and is updated as Qty is entered for a lot.
14. In the Reason field, enter or select a reason code for the transaction.
15. In the Parent Lot field, enter the parent lot number.

```

Cmplt Product <PR1>
Item      >9010
Sub       :CPG-FGI
Locator   :CPG-FGI.3.
UOM       >GSE
Wip Qty   :20
Act Qty   :85
Reason    >
Txn Date  :01-APR-200
ParentLot>
Lot       >0102-01
Lot Qty   :5
<Next Lot>
<Drop>
<Cancel>

```

16. In the Lot field, enter or select the lot into which you want to issue the product.
17. In the Lot Qty field, enter the quantity of the product to issue to the lot. You can choose to issue the product to more than one lot. You can enter Lot Qty or SecLot Qty for dual UOM controlled items. If you enter Lot Qty, then the SecLot Qty field is updated.
18. In the SecLot Qty field, enter the quantity of the product to issue to the lot in the secondary UOM. If you enter in this field, then the Lot Qty field is updated.
19. In the Txn Date field, verify the default transaction date and time. The default is the system date.
20. Choose one of the following:
  - <Next Lot> to enter a transaction for the next lot
  - <Drop> to drop the product and complete the transaction using the Manual Drop window
  - <Cancel> to cancel the present transaction and return to the MES for Process Manufacturing window

Refer to "Explaining Manual Drops" in the *Oracle Warehouse Management User's*

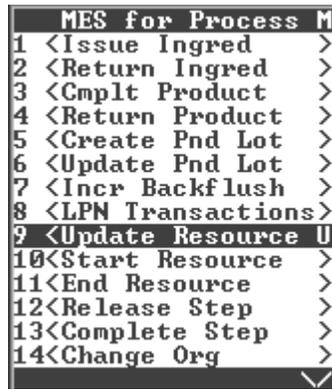
Guide for more information.

## Updating Resource Usage

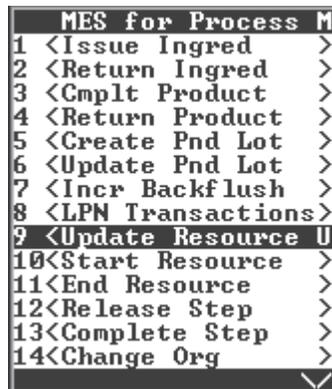
You can update resource usage for a batch, batch steps, and activities. The batch must have a status of WIP or Completed. You cannot access Closed or Canceled batches.

### To update resource usage for a production batch:

1. Navigate to the MES for Process Manufacturing responsibility.

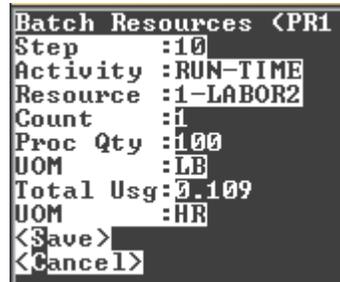


2. Choose <Update Resource Usage>. The Query Resource window appears.



3. In the Batch field, enter, select, or scan the document number assigned to the batch. Required.
4. In the Step field, enter, select, or scan the Step containing the resources to edit.
5. In the Activity field, enter, select or scan the activity containing the resources to edit. Note that if the Activity field is left blank, then all resources for all activities in the step are retrieved.

6. In the Resource field, enter, select, or scan the resource to update. Note that If the Resource field is left blank, then all resources for the Activity are retrieved.
7. Choose <Query>. The Batch Resources window appears.



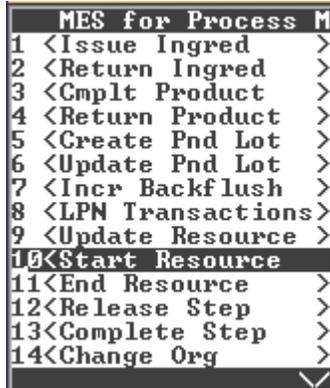
8. In the Count field, enter, select or scan the number of resources needed for this activity.
9. In the Proc Qty field, enter, select or scan the quantity of material processed by the resource displayed. This value combined with the total usage (Total Usg) defines the usage rate.
10. In the Total Usg field, enter, select or scan the actual total usage for the resource displayed.
11. Choose <Save> to save the updates to the resource.
12. Optionally, choose <Cancel> to cancel the updates to the resource.

## Recording the Start of Resource Usage

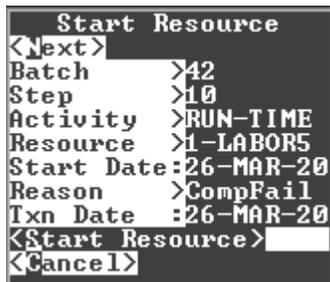
The Start Resource window enables you to record the start date and time of usage for a resource.

### To record the start of resource usage:

1. Navigate to the MES for Process Manufacturing window.



2. Choose <Start Resource>. The Choose Organization window appears.
3. Enter the Organization code. The Start Resource window appears.



4. In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access WIP or Completed batches with routings. Required.
5. In the Step field, enter or select the batch step associated with the resource to record the start of usage. You can only select steps with a status of WIP or Completed.
6. In the Activity field, enter or select scan the activity.
7. In the Resource field, enter, select, or scan the resource. The list of values (LOV) for this field displays the following information so you can select the required resource:
8. Resource Code is the code for the resource.
9. Start Date is the planned start date for a step in WIP status or the actual start date for a step in Completed status.
10. Optionally, in the Instance field, enter, select, or scan the instance of the resource to record the start of usage. This field displays if there are more than one instances of the resource used in the batch.
11. In the Start Date field, enter or scan the start date and time for the resource usage.

The default is the system date. Edit this field by entering a start date that is greater than or equal to the resource actual start date and less than or equal to the resource actual end date. If you enter a start date, then it cannot be greater than the system date.

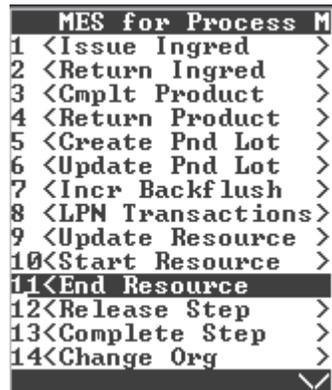
12. Optionally, in the Reason field, enter, select, or scan the reason code.
13. In the Txn Date field, verify the default transaction date and time. The default is the system date. You can also enter a transaction date. If you enter a transaction date, then it must be in an open period. If you enter a Start Date, then this field defaults to the Start Date.
14. Select <Start Resource> to save the transaction.
15. Select <Next> to navigate to another batch step to record the start of resource usage or select <Cancel> to cancel the process and return to the MES for Process Manufacturing window.

## Recording the End of Resource Usage

The End Resource window lets enables you to record the end date and time of usage for a resource.

### To record the end of resource usage:

1. Navigate to the MES for Process Manufacturing window.



2. Choose <End Resource>. The End Resource window appears.

```

End Resource
<Next>
Batch      >42
Step       >10
Activity   >
Resource   >
Instance   >
Start Date:
End Date  :
Reason    >
Txn Date  :
<End Resource>
<Cancel>

```

- In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access WIP or Completed batches with routings. Required.

```

End Resource
Batch      >42
Step       >10
Activity   >RUN-TIME
Resource   >1-LABOR5
Start Date:26-MAR-20
End Date  :26-MAR-20
Reason    >
Txn Date  :26-MAR-20
<End Resource>
<Cancel>

```

- In the Step field, enter, select, or scan the batch step associated with the resource to record the end of usage. You can only select steps with a status of WIP or Completed.
- In the Activity field, enter, select, or scan the activity.
- In the Resource field, enter, select, or scan the resource. Only resources with existing transactions display. The LOV for this field displays the following information so you can select the required resource:
- Optionally, in the Instance field, enter, select, or scan the instance of the resource to record the end of usage. This field displays if there are more than one instances of the resource used in the batch.
- Start Date field displays the start date of resource usage entered on the Start Resource window.
- In the End Date field, enter or scan the end date and time for the resource usage. The default is the system date. Edit this field by entering an end date that is greater than or equal to the resource transaction start date and less than or equal to the

resource actual end date. If you enter an end date, then it cannot be greater than the system date.

10. In the Reason field, verify the reason code. This defaults to the reason code entered for the resource on the Start Resource window. You can edit this field.
11. In the Txn Date field, verify the default transaction date and time. This defaults to the transaction date entered for the resource on the Start Resource window. You can also enter a transaction date. If you enter a transaction date, then it must be in an open period. You can only enter a date that is greater than or equal to the resource actual start date and less than or equal to the resource actual end date. If you enter a transaction date, then it cannot be greater than the system date.
12. Choose any one of the following:
  - <End Resource> to save the transaction
  - <Next> to navigate to the next resource transaction. This displays only for resources with multiple transactions.
  - <Cancel> to cancel the process and return to the MES for Process Manufacturing window

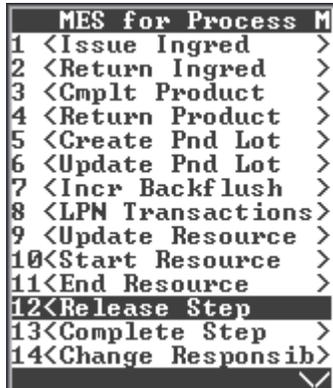
## Releasing a Batch Step

The Step Release window enables you to release a batch step. If an ingredient associated to a step has a consumption type of Automatic by Step, then that ingredient line is consumed when you release the step. The application enforces the Step Controls Batch Status parameter. The combinations of step release type and step dependency enforcement are also considered.

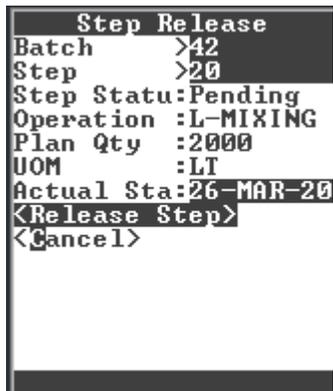
Refer to "Setting Up" in the *Oracle Process Manufacturing Process Execution User's Guide* for more information.

### **To release a batch step:**

1. Navigate to the MES for Process Manufacturing window.



2. Choose <Release Step>. The Choose Organization window appears.
3. Enter the Organization code. The Step Release window appears.



4. In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access pending or WIP batches. Required.
5. In the Step field, enter, select, or scan the batch step to release. You can only select steps with a status of pending.
6. The following fields appear:
  - Step Status is the step status. You can only select steps with a status of pending.
  - Operation is the operation name.
  - Plan Qty is the planned quantity for the step process.
  - UOM is the unit of measure for the planned step quantity.
7. Actual Start Dt is the actual start date for the batch step. This defaults to the system date if not entered. You can edit this field with a new start date.

8. Choose <Release Step> to release the step.
9. Select another step to release or choose <Cancel> to cancel the release process and return to the MES for Process Manufacturing window.

## Completing a Batch Step

The Step Complete window enables you to complete a batch step. If a product associated to a step has a yield type of Automatic by Step, then that product is yielded when you complete the step. If you complete the last step in a batch and the OPM Process Execution parameter, Step Controls Batch Status profile option is set to Yes, then the batch is completed. The combinations of step release type and step dependency enforcement are also considered.

Refer to "Setting Up" in the *Oracle Process Manufacturing Process Execution User's Guide* for more information.

### To complete a batch step:

1. Navigate to the MES for Process Manufacturing window.



2. Choose <Complete Step>. The Step Complete window appears.

```

Step Complete
Batch      >42
Step       >10
Step Statu:WIP
Operation  :1-PHARMAC
ASQC      :No
Plan Qty   :245
Act Qty    :245
UOM        :KGM
Actual Sta:20-MAR-20
Actual Com:26-MAR-20
<Complete Step>
<Cancel>

```

3. In the Batch field, enter, select, or scan the document number assigned to the batch. You can only access pending or WIP batches. Required.
4. In the Step field, enter, select, or scan the batch step to release. You can only select steps with a status of WIP.
5. The following fields appear:
  - Step Status is the step status. You can only select steps with a status of pending.
  - Operation is the operation name.
  - ASQC indicates if the automatic step quantity calculation feature is enabled for the batch.
  - If the automatic step quantity calculation is off, then the planned numbers for Pending steps are scaled, and WIP and Completed steps are not changed.
  - If the automatic step quantity calculation is on, then the step quantities and resource usage are not changed, since none of the material quantities used were changed. Once the steps are completed, the automatic step quantity calculation selects the appropriate actual quantities to use in calculations.
  - Plan Qty is the planned quantity for the step process.
  - UOM is the unit of measure for the planned step quantity.
  - Actual Qty is the actual quantity for the step process and defaults to the actual step quantity entered on the Batch Steps window. If the actual step quantity is not entered on the Batch Steps window, then it defaults to the planned step quantity. You cannot edit this field.
  - Actual Start Dt is the actual start date for the batch step as entered on the Step Release window.

6. Actual Comp Dt is the actual completion date of the batch step. This defaults to the system date if not entered. You can edit this field with a new completion date.
7. Choose <Complete Step> to complete the step.
8. Select another step to complete or choose <Cancel> to cancel the completion process and return to the MES for Process Manufacturing window.



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# Index

## B

---

bar coding, 1-1

## C

---

case sensitivity, 1-4

checklist, setup, 1-7

Complete

    Batch Step, 3-41

Complete Product, 3-21

    Directed Drop, 3-25

Complete Product

    Load, 3-28

    Manual Drop, 3-31

Complete Products, 3-9

consumption, 1-2

Create Reservations, 2-2

## D

---

dispatcher, 1-7

dual units of measure, 1-2

## F

---

flowchart, setup, 1-7

function key mappings, 1-4

## G

---

grade, default, 1-2

## H

---

hot keys, 1-4

## I

---

implementation, tips, 1-7

Incremental Backflush, 3-19

Ingredient Usage, 3-3

## J

---

Java, 1-2

java-based middle tier, 1-2

## L

---

lot status,default, 1-2

LOV, 1-5

LPN Transactions, 3-21

## M

---

Manufacturing Execution Systems, 3-2

mobile computers, 1-1

## O

---

overview, MSCA, 1-6

## P

---

parameters, 1-7

Pending Product Lot

    Create, 3-14

Pending Product Lot

    Update, 3-16

Process Execution, 2-1

process manufacturing, 1-1

profile options, 1-5

## **R**

---

real-time information, 1-1  
receiving, 1-1  
Release  
    Batch Step, 3-39  
Resource Usage  
    End, 3-37  
    Start, 3-35  
    Update, 3-34  
Return Ingredient, 3-7  
Return Product, 3-12

## **S**

---

scrolling functions, 1-5  
server, 1-7  
server, Telnet, 1-5  
setting up, 1-5  
setup steps, 1-7  
shipping, 1-1  
System Administration, 1-5

## **T**

---

TCP/IP, 1-2  
Telnet, 1-2, 1-5  
transaction processing, 1-3  
transaction validation, 1-3

## **U**

---

Update Reservations, 2-6

## **X**

---

XML, 1-2