

Oracle Process Manufacturing Formula and Lab Management Release 11i

Student Guide

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Preface

Profile

Before You Begin This Course

Before you begin this course, you should have the following qualifications:

Prerequisites

- There are no prerequisites for this course.

How This Course Is Organized

OPM Lab and Formula Management R11i is an instructor-led course featuring lecture and hands-on exercises. Online demonstrations and written practice sessions reinforce the concepts and skills introduced.

Related Publications

Additional Publications

- System release bulletins
- Installation and user's guides
- *read.me* files
- *Oracle Magazine*

Typographic Conventions

Typographic Conventions in Text

Convention	Element	Example
Bold italic	Glossary term (if there is a glossary)	The <i>algorithm</i> inserts the new key.
Caps and lowercase	Buttons, check boxes, triggers, windows	Click the Executable button. Select the Can't Delete Card check box. Assign a When-Validate-Item trigger to the ORD block. Open the Master Schedule window.
Courier new, case sensitive (default is lowercase)	Code output, directory names, filenames, passwords, pathnames, URLs, user input, usernames	Code output: <code>debug.set ('I', 300);</code> Directory: <code>bin</code> (DOS), <code>\$FMHOME</code> (UNIX) Filename: Locate the <code>init.ora</code> file. Password: User <code>tiger</code> as your password. Pathname: Open <code>c:\my_docs\projects</code> URL: Go to <code>http://www.oracle.com</code> User input: Enter <code>300</code> Username: Log on as <code>scott</code>
Initial cap	Graphics labels (unless the term is a proper noun)	Customer address (<i>but</i> Oracle Payables)
Italic	Emphasized words and phrases, titles of books and courses, variables	Do <i>not</i> save changes to the database. For further information, see <i>Oracle7 Server SQL Language Reference Manual</i> . Enter <code>user_id@us.oracle.com</code> , where <i>user_id</i> is the name of the user.
Quotation marks	Interface elements with long names that have only initial caps; lesson and chapter titles in cross-references	Select "Include a reusable module component" and click Finish. This subject is covered in Unit II, Lesson 3, "Working with Objects."
Uppercase	SQL column names, commands, functions, schemas, table names	Use the SELECT command to view information stored in the <code>LAST_NAME</code> column of the EMP table.

Convention	Element	Example
Arrow	Menu paths	Select File→ Save.
Brackets	Key names	Press [Enter].
Commas	Key sequences	Press and release keys one at a time: [Alternate], [F], [D]
Plus signs	Key combinations	Press and hold these keys simultaneously: [Ctrl]+[Alt]+[Del]

Typographic Conventions in Code

Convention	Element	Example
Caps and lowercase	Oracle Forms triggers	When-Validate-Item
Lowercase	Column names, table names	SELECT last_name FROM s_emp;
	Passwords	DROP USER scott IDENTIFIED BY tiger;
	PL/SQL objects	OG_ACTIVATE_LAYER (OG_GET_LAYER ('prod_pie_layer'))
Lowercase italic	Syntax variables	CREATE ROLE <i>role</i>
Uppercase	SQL commands and functions	SELECT userid FROM emp;

Typographic Conventions in Navigation Paths

This course uses simplified navigation paths, such as the following example, to direct you through Oracle Applications.

(N) Invoice > Entry > Invoice Batches Summary (M) Query > Find (B) Approve

This simplified path translates to the following:

1. (N) From the Navigator window, select Invoice > Entry > Invoice Batches Summary.
2. (M) From the menu, select Query > Find.
3. (B) Click the Approve button.

Notations :

(N) = Navigator

(M) = Menu

(T) = Tab

(I) = Icon

(H) = Hyperlink

(B) = Button

Typographical Conventions in Help System Paths

This course uses a “navigation path” convention to represent actions you perform to find pertinent information in the Oracle Applications Help System.

The following help navigation path, for example—

(Help) General Ledger > Journals > Enter Journals

—represents the following sequence of actions:

1. In the navigation frame of the help system window, expand the General Ledger entry.
2. Under the General Ledger entry, expand Journals.
3. Under Journals, select Enter Journals.
4. Review the Enter Journals topic that appears in the document frame of the help system window.

Getting Help

Oracle Applications provides you with a complete online help facility.

Whenever you need assistance, simply choose an item from the Help menu to pinpoint the type of information you want.

To display help for a current window:

1. Choose Window Help from the Help menu, click the Help button on the toolbar, or hold down the Control key and type 'h'.

A web browser window appears, containing search and navigation frames on the left, and a frame that displays help documents on the right.

The document frame provides information on the window containing the cursor. The navigation frame displays the top-level topics for your responsibility, arranged in a tree control.

2. If the document frame contains a list of topics associated with the window, click on a topic of interest to display more detailed information.
3. You can navigate to other topics of interest in the help system, or choose Close from your web browser's File menu to close help.

Searching for Help

You can perform a search to find the Oracle Applications help information you want. Simply enter your query in the text field located in the top-left frame of the browser window when viewing help, then click the adjacent Find button.

A list of titles, ranked by relevance and linked to the documents in question, is returned from your search in the right-hand document frame. Click on whichever title seems to best answer your needs to display the complete document in this frame. If the document doesn't fully answer your questions, use your browser's Back button to return to the list of titles and try another.

Course Introduction

Chapter 1

Course Introduction OPM Formula and Laboratory Management Release 11i

Course Introduction OPM Formula and Laboratory Management Release 11i

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Course Objectives

Course Objectives

After completing this course, you should be able to do the following:

- **Describe the concepts and flows that drive Oracle Process Manufacturing (OPM) Formula Management**
- **Navigate through the Formula Management responsibility**
- **Perform required setups**
- **Create formulas, routings, and effectivities**
- **Define formula modifications**
- **Use Formula Management online inquiries and reports**

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Course Objectives

Course Objectives

After completing this course, you should also be able to do the following:

- **Streamline new product development**
- **Integrate research and development operations**


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Course Overview

Course Overview

Formula and Lab Management for the process manufacturing industry

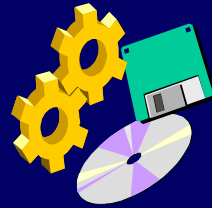


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Formula Management Goals

To understand and be able to establish the following:

- Products
- Coproducts
- By-products
- Formula use
- Routings
- Effectivities



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Formula and Product Terms

Formula and Product Terms

- **Formula**
- **Formula version**
- **Product**
- **Ingredient**
- **By-product**
- **Coproduct**
- **Effectivity**
- **Formula use**



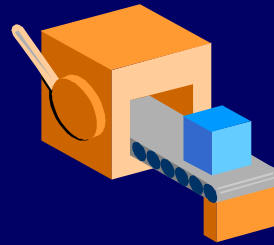
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Formula Routing Terms

Formula Routing Terms

- Routing
- Resource
- Activity
- Cost analysis code
- Operation



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Ingredient and Product Modification Terms

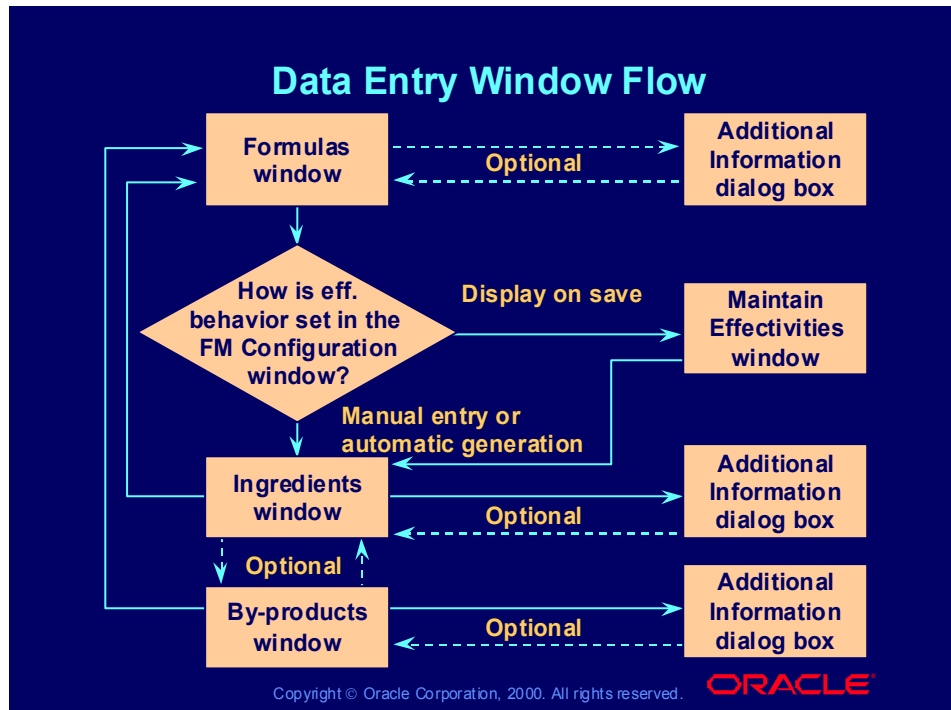
Ingredient and Product Modification Terms

- **Scaling**
- **Theoretical yield**
- **Component class**

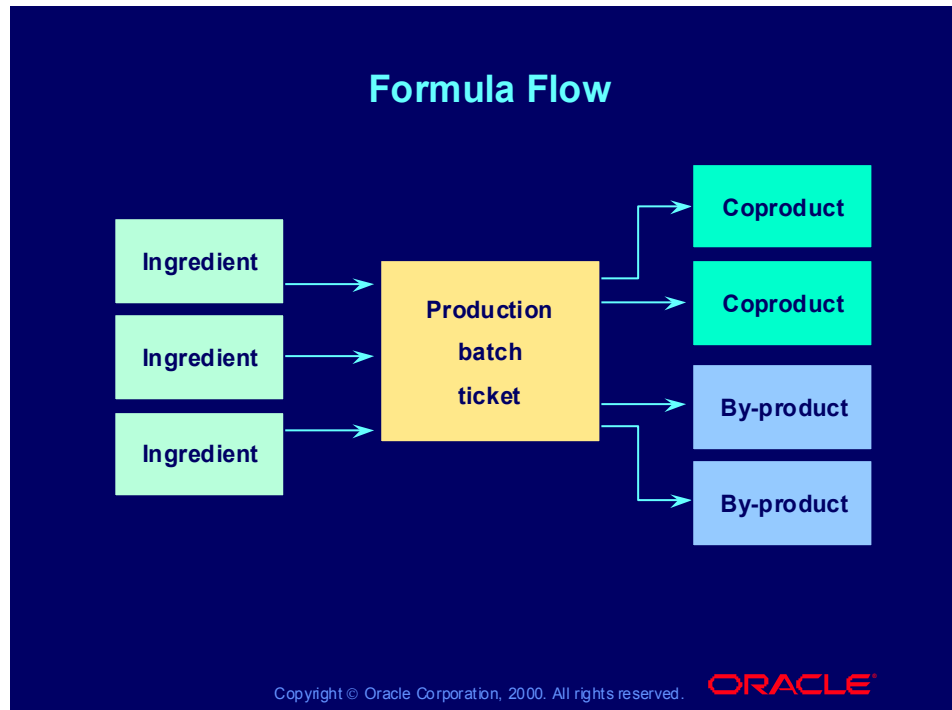
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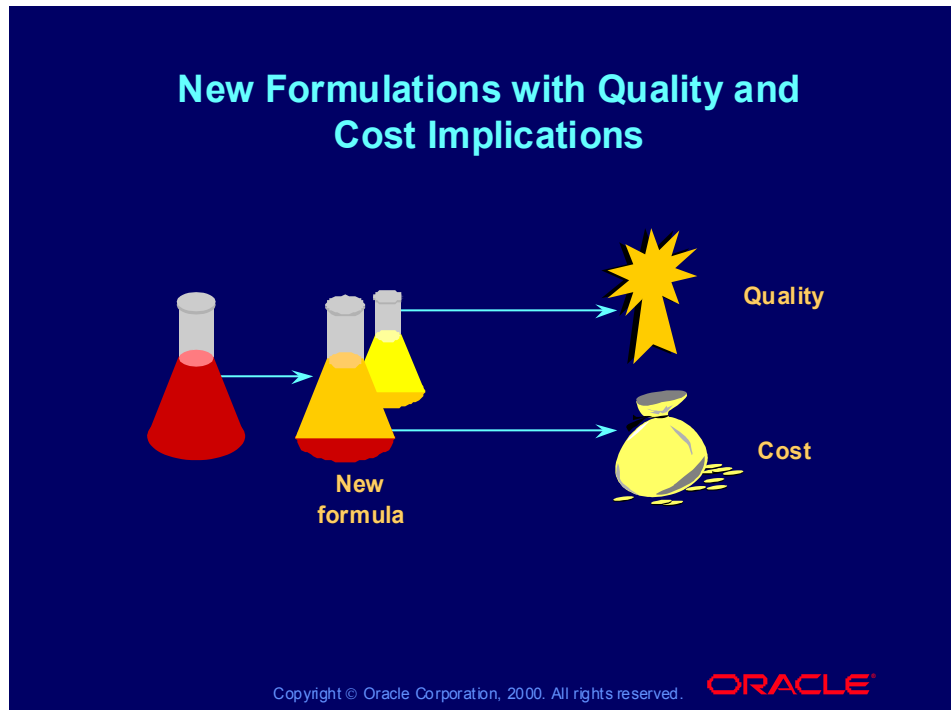
Data Entry Window Flow



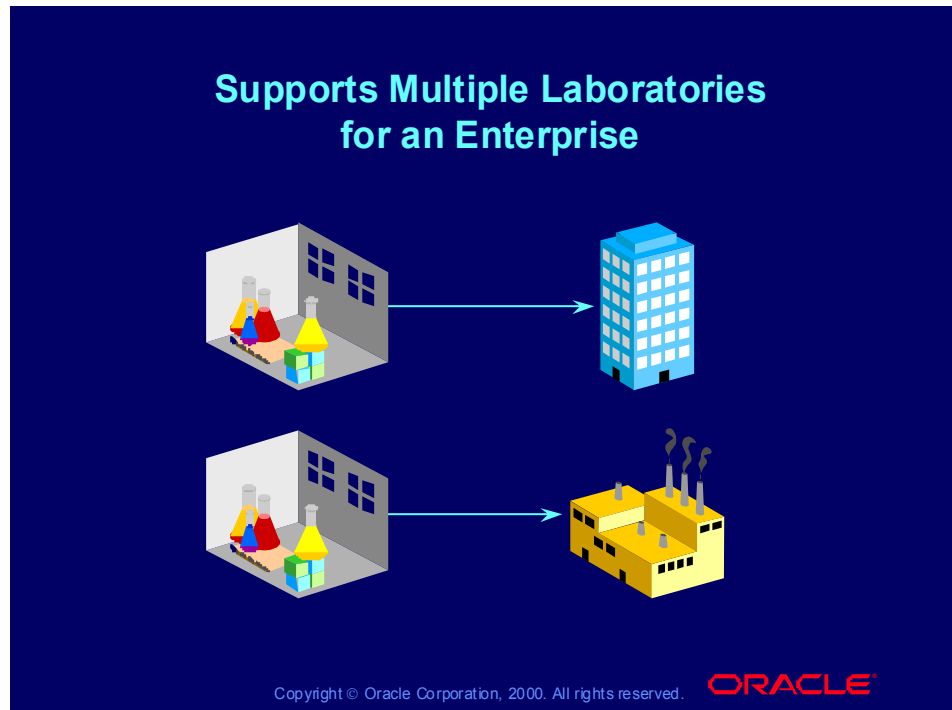
Formula Flow



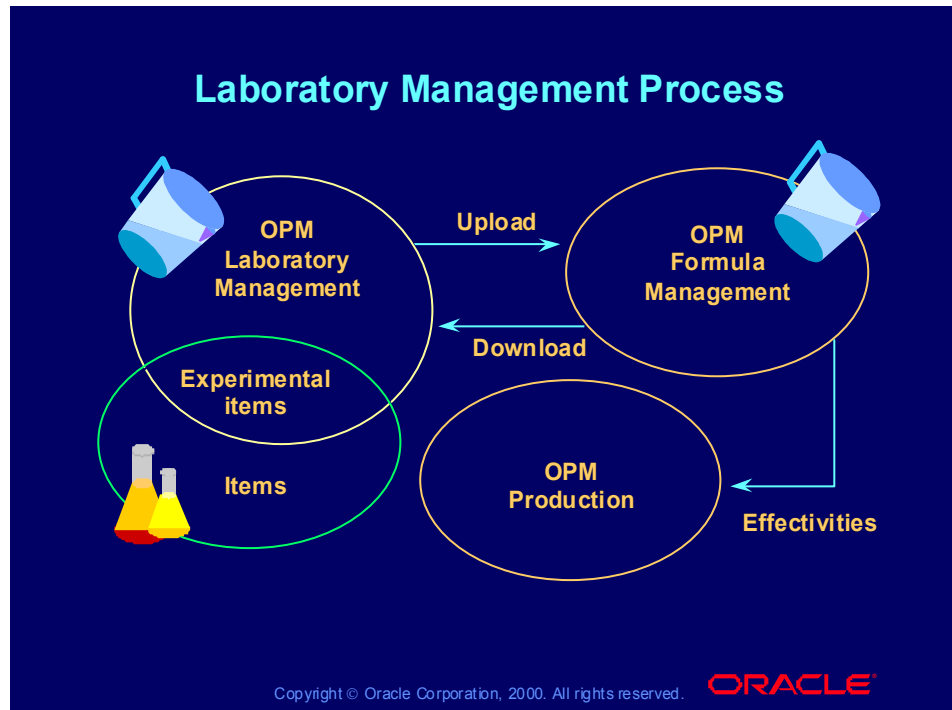
New Formulations with Quality and Cost Implications



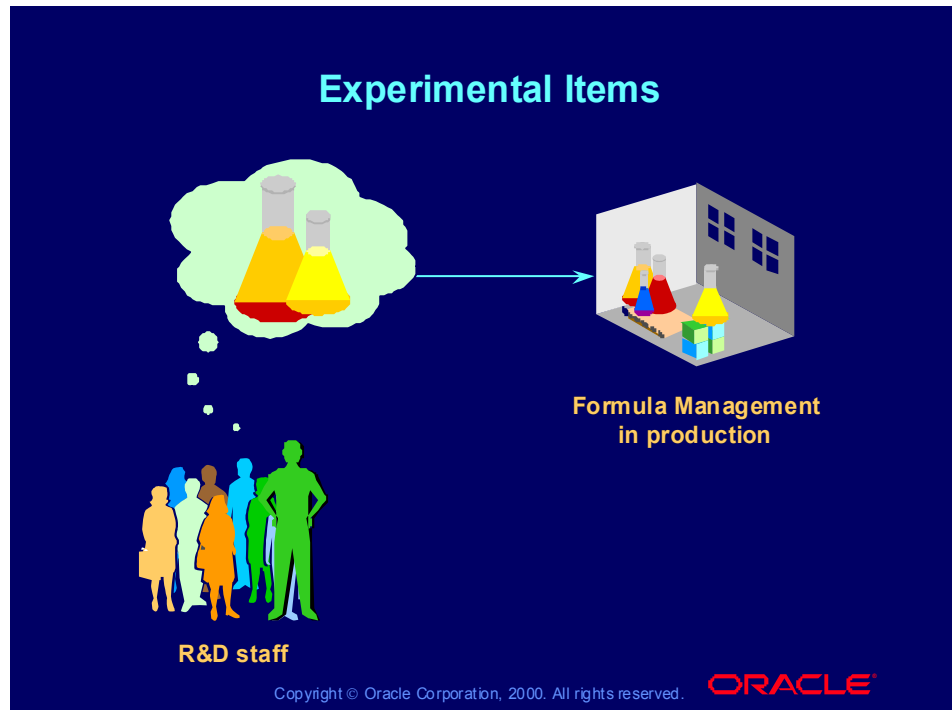
Supports Multiple Laboratories for an Enterprise



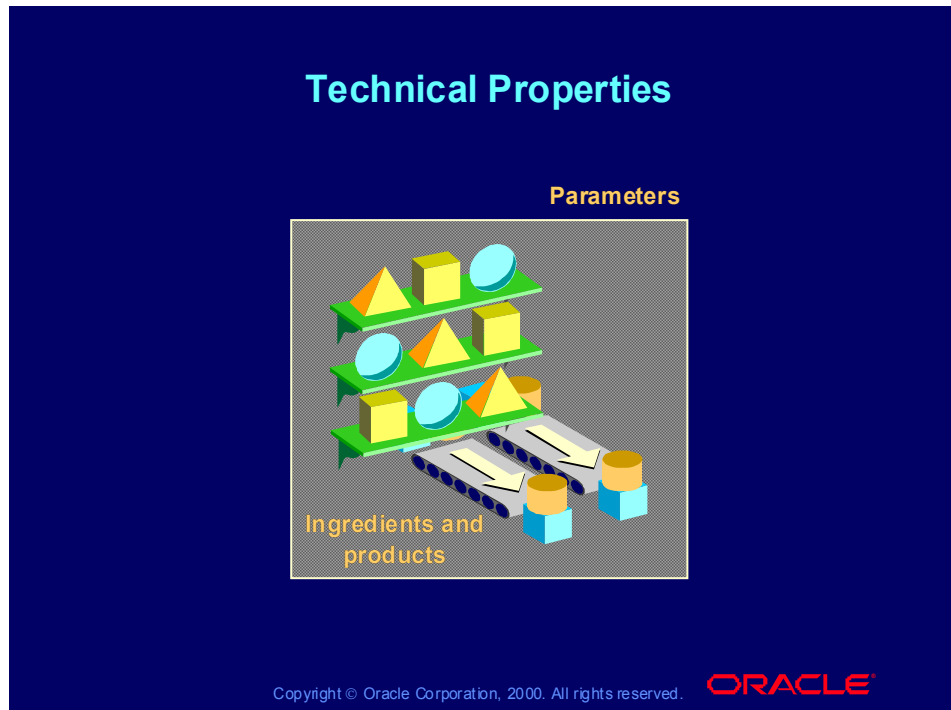
Laboratory Management Process



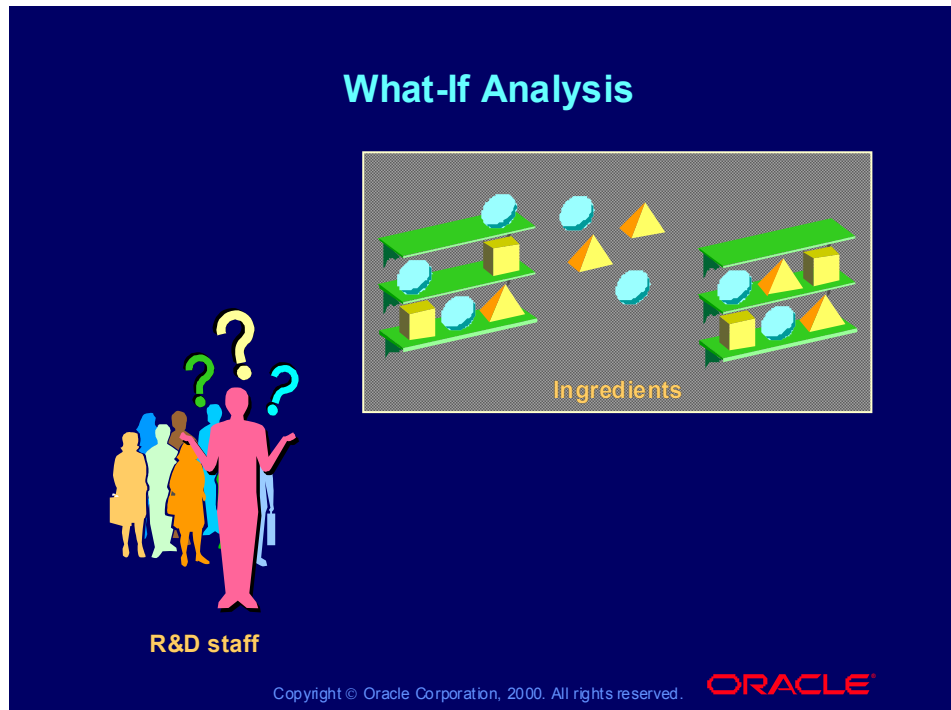
Experimental Items



Technical Properties



What-If Analysis



Formula Management Setup

Chapter 2

Formula Management Setup

Formula Management Setup

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Objectives

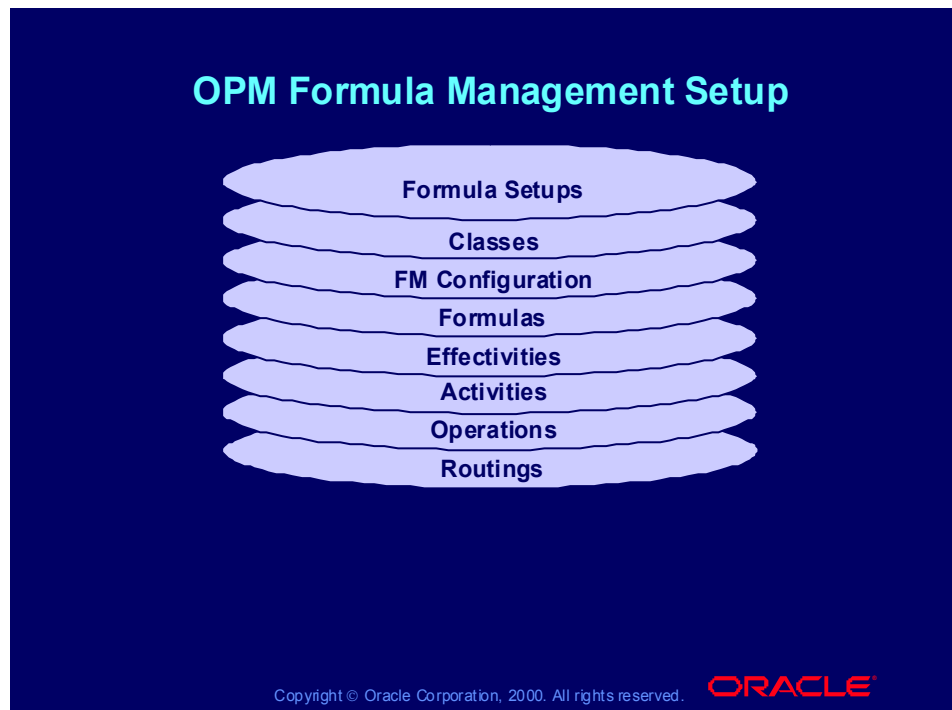
After completing this lesson, you should be able to do the following:

- **Perform formula classification code setups:**
 - Formula classes
 - Operation classes
 - Routing classes
- **Understand and define Formula Management (FM) Configuration**

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OPM Formula Management Setup



Defining Formula Classification Codes

Defining Formula Classification Codes

Go to the Formula Classes window to enter classes that group formulas with similar characteristics and requirements for reporting purposes

(N) OPM Product Development > Formula Management > Setup > Formula Classes

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Management Prerequisites > Setting Up Formula Classes (Optional)

... > Setting Up Formula Classes (Optional) Procedure

... > Formula Classes Field Reference

Defining Operation Classes

Defining Operation Classes

Go to the Operation Classes window to group operations with similar characteristics and requirements for reporting purposes.

(N) OPM Product Development > Formula Management > Setup > Operation Classes

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Management Prerequisites > Setting Up Operations Classes

... > Setting Up Operations Classes Procedure

... > Operation Classes Field Reference

Defining Routing Classes

Defining Routing Classes

Go to the Routing Classes window to group routings with similar characteristics and requirements for reporting purposes.

(N) OPM Product Development > Formula Management > Setup > Routing Classes

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Management Prerequisites > Setting Up Routing Classes (Optional)

... > Setting Up Routing Classes (Optional) Procedure

... > Routing Classes Field Reference

Setting Up Formula Management Configuration

Setting Up Formula Management Configuration

Go to the Configurations window to enter parameters that control the creation of effectivity records in Formula Management. Effectivity records specify when and in what circumstances a formula can be used.

(N) OPM Product Development > Formula Management > Setup > Configuration

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Management Prerequisites > Setting Up Configurations for Effectivity Records


... > Setting Up Configurations for Effectivity Records Procedure

... > Configurations Field Reference

Practice 2-1 Overview

Practice 2-1 Overview

The practice covers defining classification codes for formulas, operations, and routings.



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Practice 2-1

Defining Classification Codes

Classification codes are used for grouping or reporting purposes, and setup is optional.

In all of the following practices, substitute your unique identifier, such as your initials or terminal number, where you see *XX*.

Formula Classes

Create three formula classes that represent packaged formulas, bulk formulas, and intermediate formula groups (each identifier cannot exceed eight characters):

XXPACK

XXBULK

XXINTER

Operation Classes

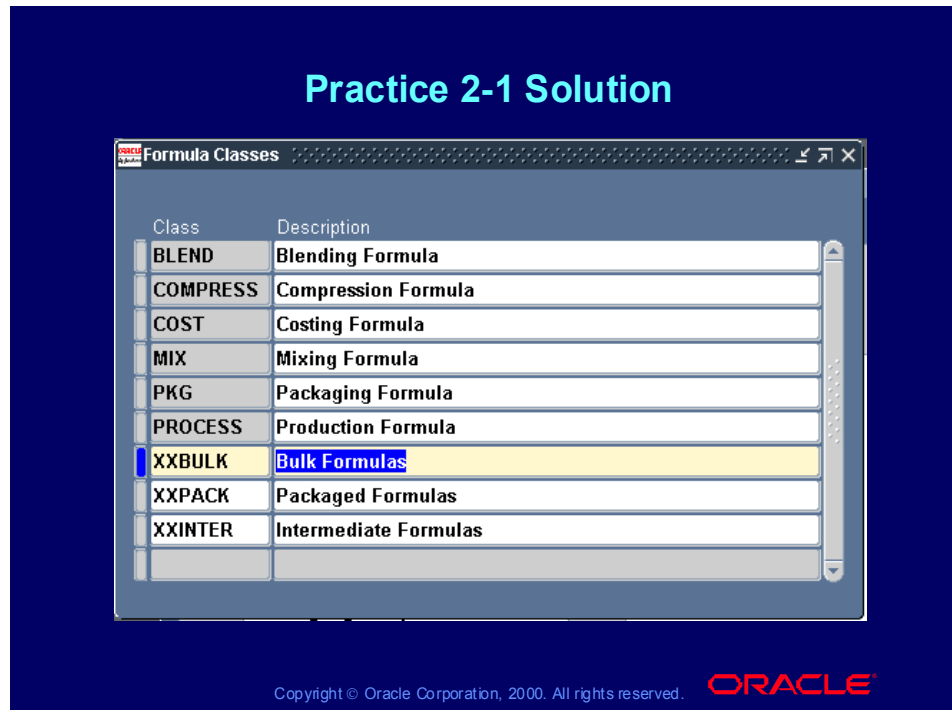
Create two operation classes that represent bulk and intermediate operation groups (each identifier cannot exceed four characters):

XXBK

XXIN

Routing Classes

Practice 2-1 Solution



Practice 2-1 (continued)

Create two routing classes that represent simple and complex formula routings (each identifier cannot exceed four characters):

XXSM

XXCX

Practice 2-1 Solution

Defining Classification Codes

Classification codes are used for grouping or reporting purposes, and setup is optional.

In all the following practices, substitute your unique identifier, such as your initials or terminal number, where you see *XX*.

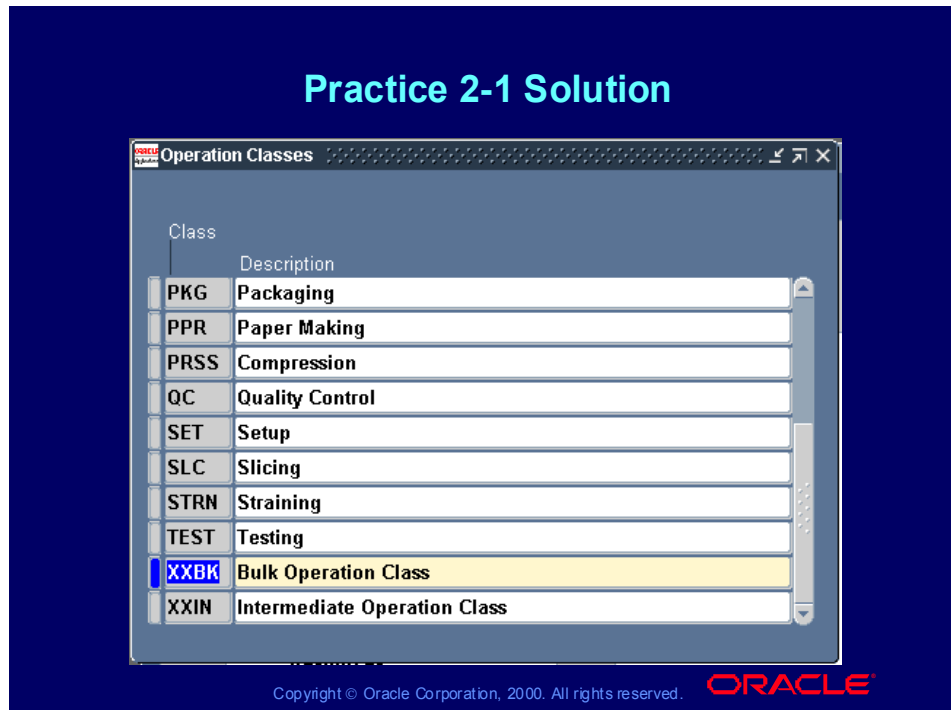
Formula Classes

Open the Formula Class window:

(N) OPM Product Development>Formula Mgmt>Setup>Formula Classes

1. Enter your unique identifier for each formula class (*XXPACK*).
2. Enter a description for this classification.
3. Save your work.

Practice 2-1 Solution

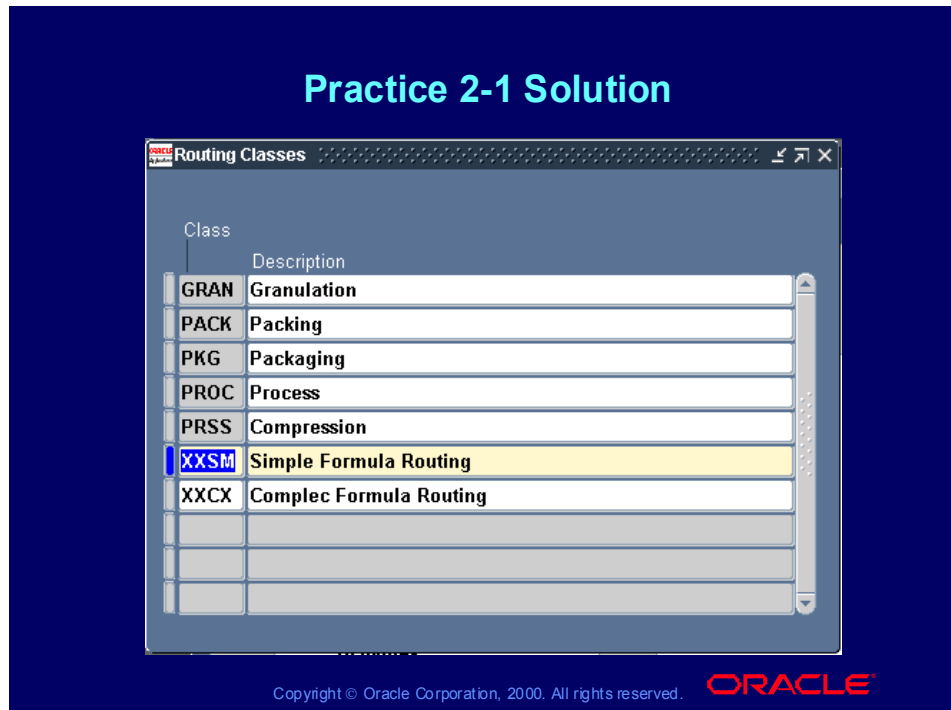


Practice 2-1 Solution (continued)

Operation Classes

1. Open the Operation Classes window:
(N) OPM Product Development>Formula Mgmt>Setup>Operation Classes
2. Enter your unique identifier for each operation class (XXBK).
3. Enter a description for this classification.
4. Save your work.

Practice 2-1 Solution



Practice 2-1 Solution (continued)

Routing Classes

Open the Routing Classes window:


(N) OPM Product Development>Formula Mgmt>Setup>Routing Classes.

1. Enter your unique identifier for each routing class (XXSM).
2. Enter a description for this classification.
3. Save your work.

Practice 2-2 Overview

Practice 2-2 Overview

This practice covers configuring effectivities behavior.



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Practice 2-2

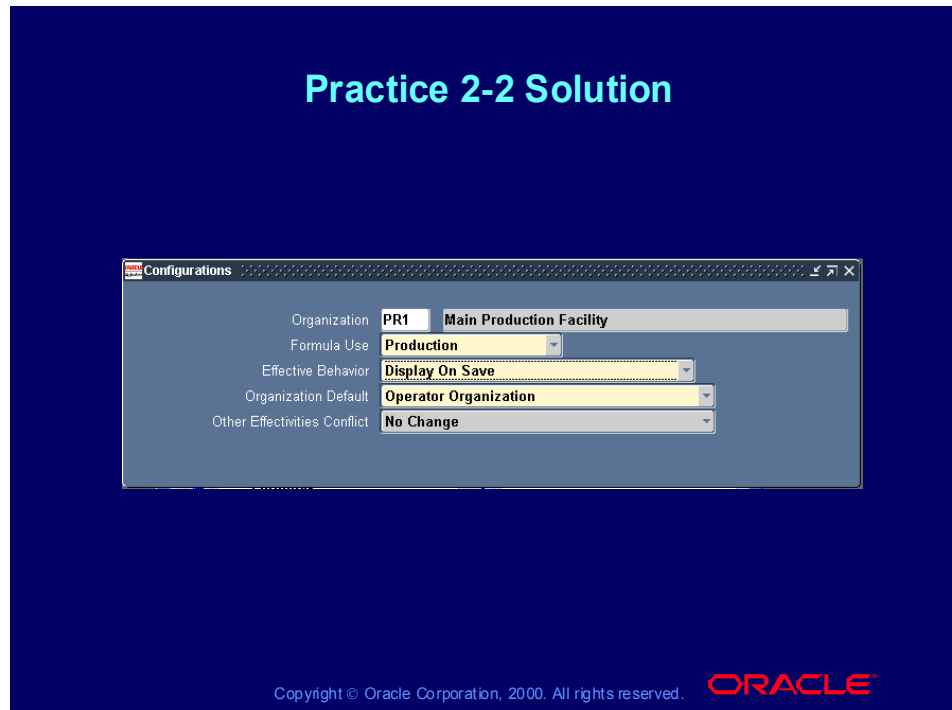
Defining Formula Management Configuration

Enter the parameters that control the creation of effectivity records in Formula Management.

Note: If you do not fill out the Configurations window, effectivity records must be entered manually.

1. Set the organization to your unique identifier (*XXP1*) and specify that the formulas be used for production.
2. What happens when you set the effective behavior to Manual Entry?
3. Now set the effective behavior to Automatic Generation. Which fields remain?
4. Have OPM prompt you to enter an effectivity for this class. Make this effectivity valid for only your organization.

Practice 2-2 Solution



Practice 2-2 Solution

Defining Formula Management Configuration

Enter the parameters that control the creation of effectivity records in Formula Management.

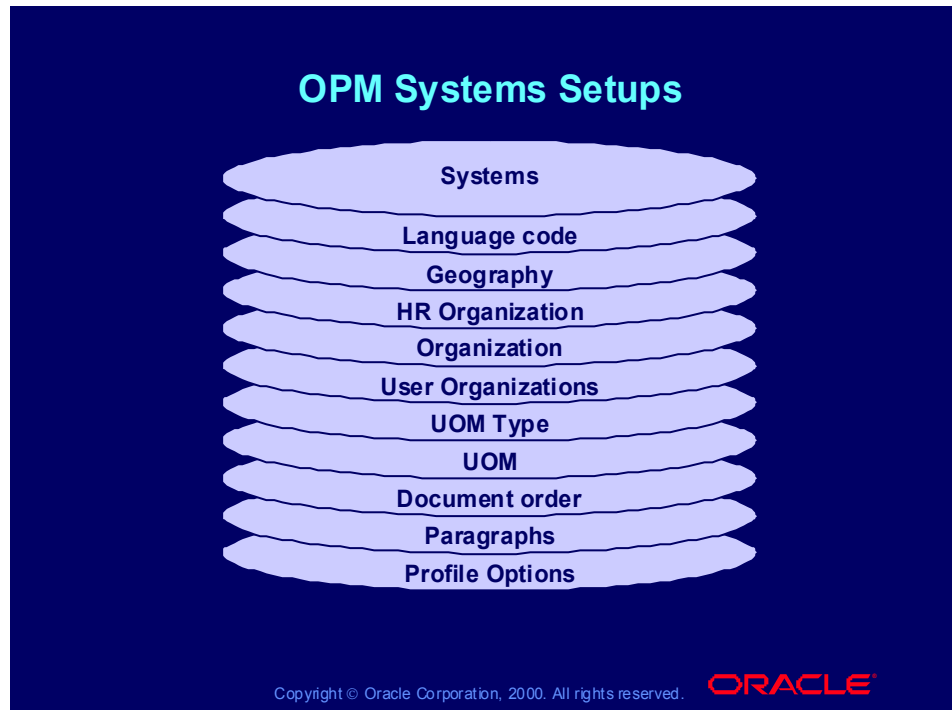
Note: If you do not fill out the Configurations window, effectivity records must be entered manually.

1. Set the organization to your unique identifier (XXP1) and specify that the formulas be used for production.
 - a. Open the FM Configuration window:
(N) Product Development>Formula Mgmt>Setup>Configuration
 - b. Enter the organization with your unique identifier.
 - c. Select Production from the drop-down list in the Formula Use field.
 - d. Select Manual Entry from the drop-down list in the Effective Behavior field.
2. What happens when you set the effective behavior to Manual Entry?
The Other Effectivities Conflict field is not accessible.
3. Now set the effective behavior to Automatic Generation. Which fields remain?
Select Automatic Generation from the drop-down list in the Effective

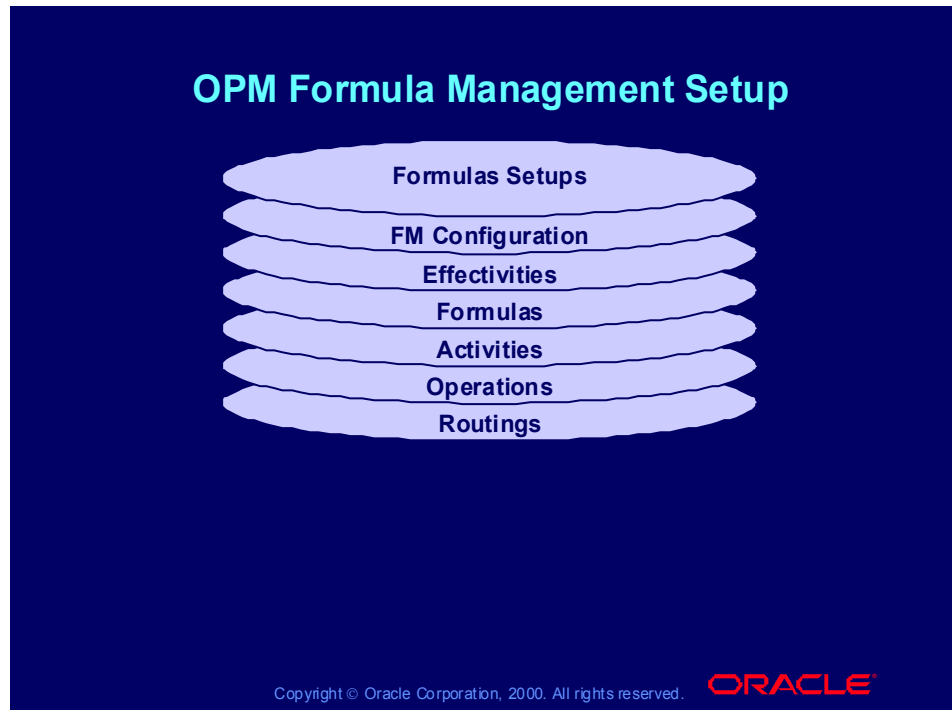
Behavior field. All fields are now accessible.

4. Have OPM prompt you to enter an effectivity for this class. Make this effectivity valid for only your organization.
 - a. Select Display on Save from the drop-down list in the Effective Behavior field.
 - b. Select Operator Organization from the Organization Default field.
 - c. Save your work.

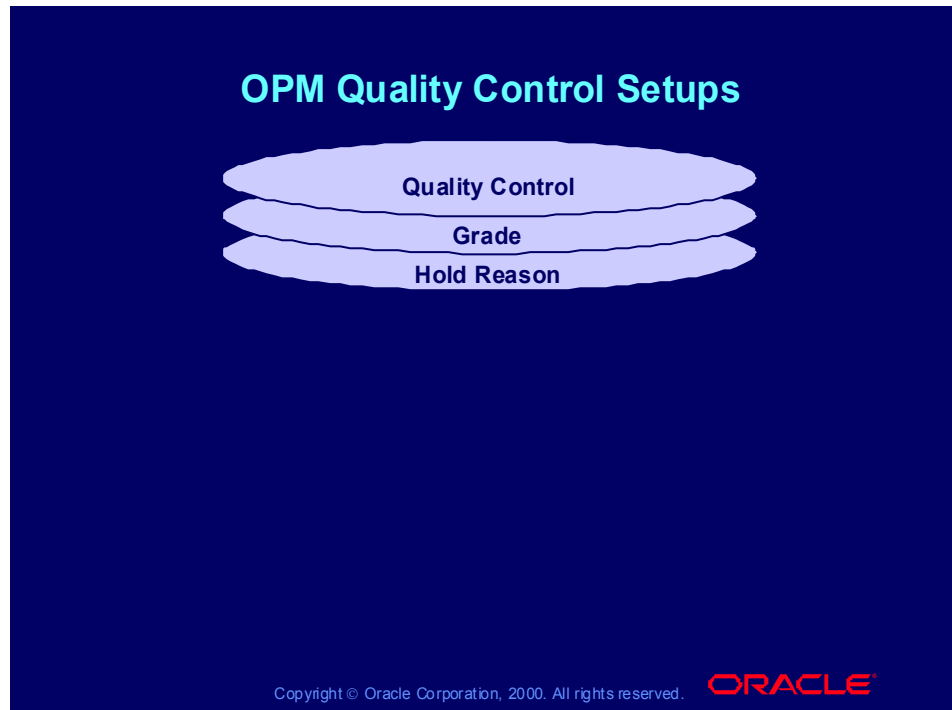
OPM Systems Setups



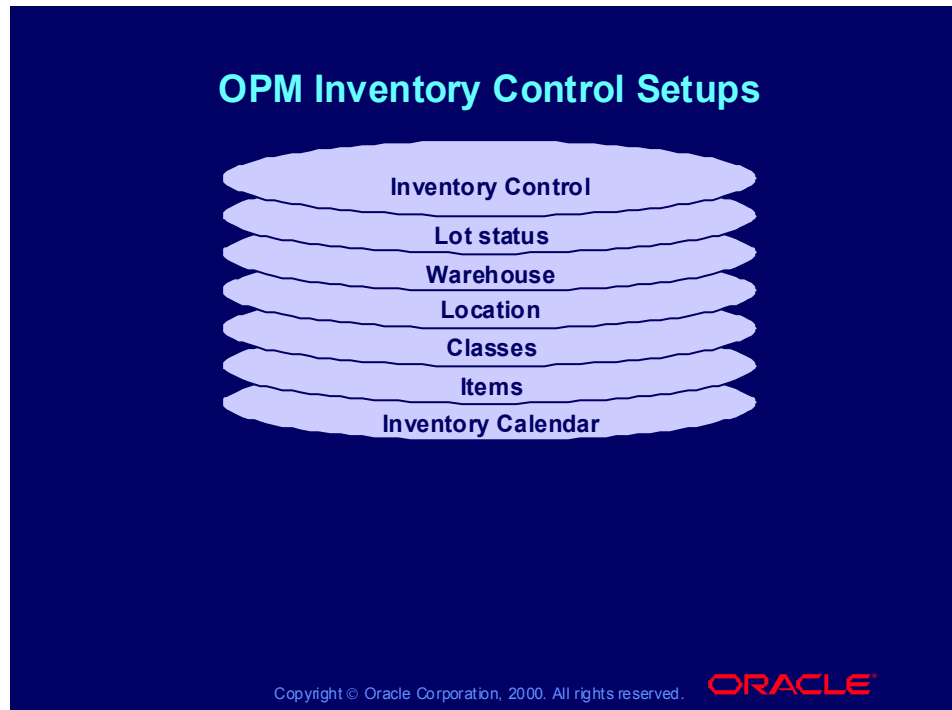
OPM Formula Management Setup



OPM Quality Control Setups



OPM Inventory Control Setups



Summary

Summary

In this lesson, you should have learned how to:

- **Create formula classification codes for reporting and sorting purposes**
- **Identify requirements for the FM Configurations window**

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Creating Formulas

Chapter 3

Creating Formulas

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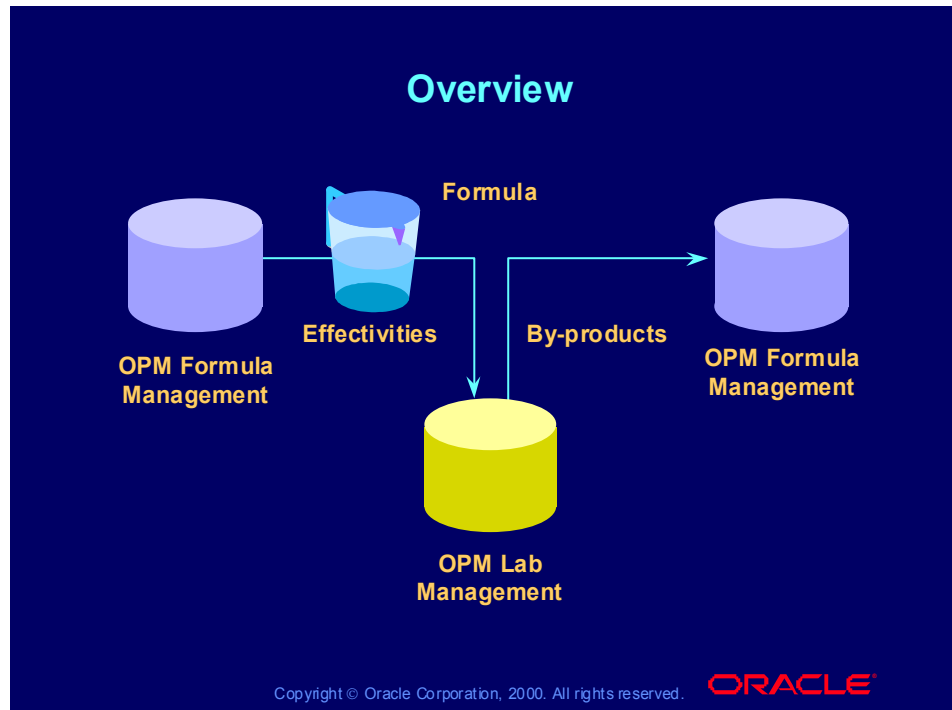
Objectives

After completing this lesson, you should be able to do the following:

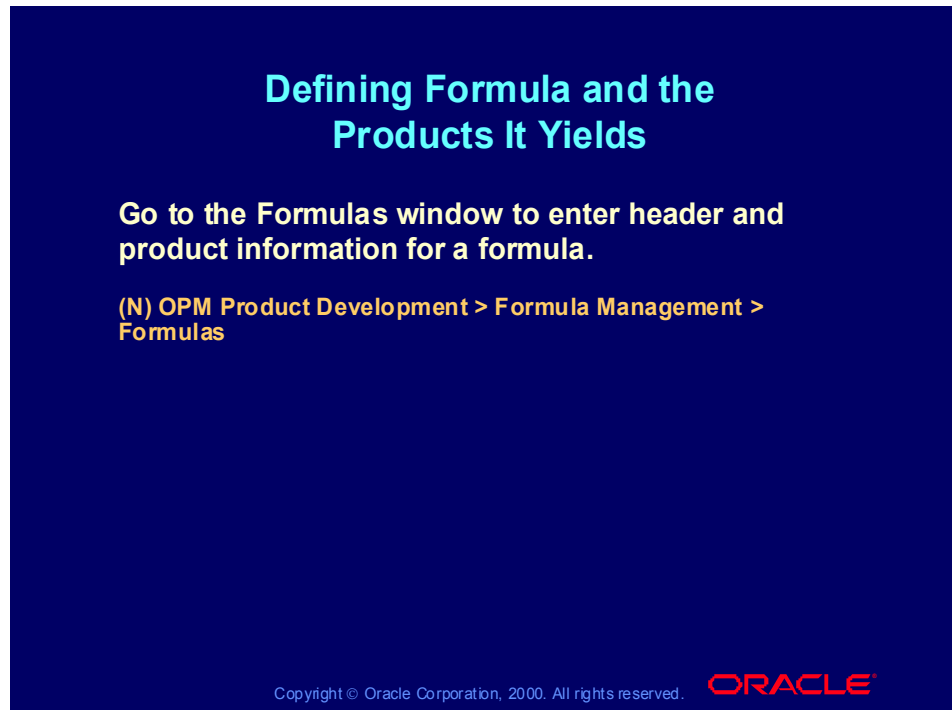
- **Describe formula features**
- **Describe formula effectivities**
- **Create formulas**

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Overview



Defining Formula and the Products It Yields



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Setting Up Formula Header and Products Info

- ... > Setting Up Formula Header and Product Procedure
- ... > Formulas Field Reference
- ...> Formula Header and Products - Actions Menu

Designating Formula Ingredients



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Adding Ingredients to Formulas

- ... > Adding Ingredients to Formulas Procedure
- ... > Formula Ingredient Field Reference
- ...> Formula Ingredients - Additional Setup in FM

Defining Formula By-Products

Defining Formula By-Products

Go to the Formula By-products window to enter by-products and by-product quantities for a formula. By-products are items produced by a formula. However, they differ from products in that you do not plan your production to make by-products, and you cannot cost by-products.

(N) OPM Product Development > Formula Management > Formulas (B) By-products

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Adding By-products to Formulas

... > Adding By-products to Formulas Procedure

... > Formula Byproducts Field Reference

...> By-products - Actions Menu

Defining Additional Formula Header Information

Defining Additional Formula Header Information

Go to the **Formula Additional Information** window to add or inquire about additional information for a specific product or coproduct in a formula.

(N) OPM Product Development > Formula Management > Formulas (M) Actions > Additional Information

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Setting Up Formula Header and Products Info

... > Setting Up Formula Header and Products Procedure

... > Formulas Field Reference

...> Formula Header and Products - Actions Menu

Defining Additional Formula Ingredient Information

Defining Additional Formula Ingredient Information

Go to the Formula Additional Information window to add or inquire about additional information for a specific ingredient or by-product in a formula.

(N) OPM Product Development > Formula Management > Formulas (B) Ingredients (M) Actions > Additional Information

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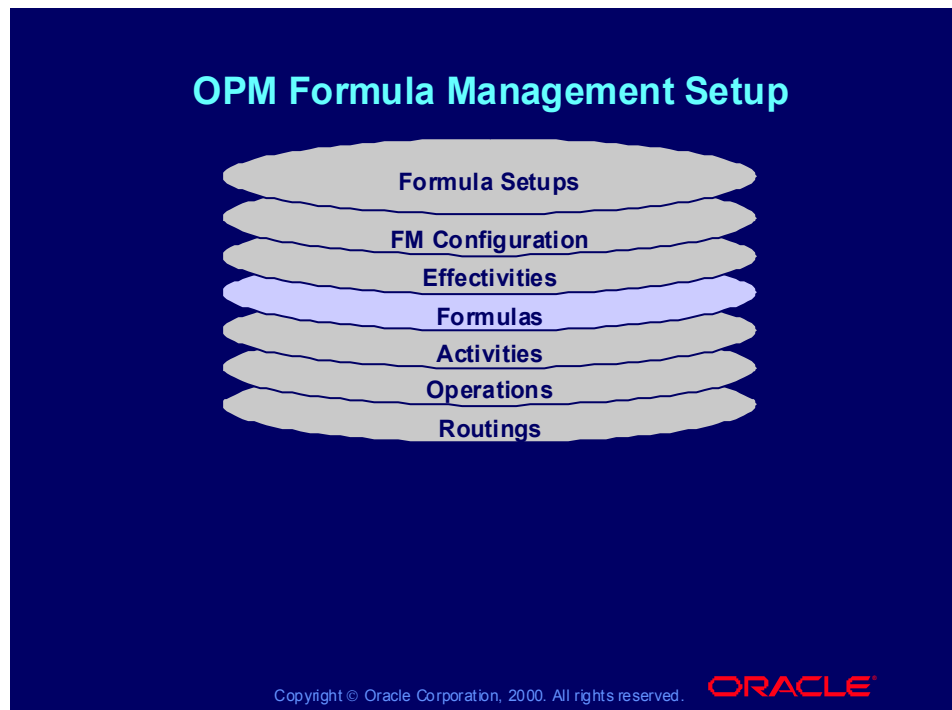
Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Adding Ingredients to Formulas

... > Adding Ingredients to Formulas Procedure

... > Formula Ingredients Field Reference

...> Formula Ingredients - Additional Setup in Formula Management

OPM Formula Management Setup



Practice 3-1 Overview

Practice 3-1 Overview

This hands-on practice covers creating formulas.



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Practice 3-1

Creating Formulas

With the item codes and other inventory information in place, you can now tell OPM how you process the raw material into intermediate and finished goods.

Define three formulas for each manufactured product *XXFGS*, *XXFGC*, and *XXINTC*

ITEM	<i>XXFGS</i>	<i>XXFGC</i>	<i>XXINTC</i>
Formula	<i>XXFGS</i>	<i>XXFGC</i>	<i>XXINTC</i>
Version	1	1	1
Description	Simple FG	Complex FG	Complex Intermediate
Comments	Optional	Optional	Optional
Formula Class	<i>XXBULK</i>	<i>XXPACK</i>	<i>XXINTER</i>
Scaling	Checkmark	Checkmark	Checkmark
Inactive	No	No	No checkmark

Products

Item	<i>XXFGS</i>	<i>XXFGC</i>	<i>XXINTC</i>
Quantity	100 LB	100 LB	100 LB

Add the following formula ingredients:

ITEM	XXFGS	XXFGC	XXINTC
------	-------	-------	--------

Ingredients

Item	XXRM1S	XXINTC	XXRM1C
Quantity	55 LB	100 LB	60 LB
Item	XXRM2S	XXPKGKGC	XXRM2C
Quantity	55 LB	4 EA	40 LB

Add the following formula by-products:

ITEM	XXFGS	XXFGC	XXINTC
------	-------	-------	--------

By-Products

Item	XXBP
Quantity	10 LB

Practice 3-1 Solution



Practice 3-1 Solutions

Creating Formulas

With the item codes and other inventory information in place, you can now tell OPM how you process the raw material into intermediate and finished goods.

Define three formulas for each manufactured product, *XXFGS*, *XXFGC*, and *XXINTC*.

Perform the following steps for each item:

1. Open the formulas window:
(N) OPM Product Development>Formula Mgmt>Formulas
2. Enter the formula name and the version number by which this formula will be identified.
3. Enter a description of the formula.
4. (Optional) Enter comments.
5. Select a Formula Class from the list of values.
6. Select the check box to allow scaling.
7. Clear the inactive check box to flag the formula as active.
8. Enter the product code in the Item field.
9. Enter the quantity yielded of the product in this formula.
10. Click the Ingredients button (do not complete the effectivities window, this will be done in a future practice).

11. Enter the ingredient item code in the Item field.
12. Enter the ingredient quantity required to produce the yielded quantity of the product.
13. (Optional) Click the By-products button.
14. Enter the by-product item code in the Item field.
15. Enter the by-product quantity produced from this formula.
16. Save your work.

Summary

Summary

In this lesson, you should have learned how to:

- **Differentiate the features of a formula**
- **Explain formula effectivities**
- **Enter formulas**

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Creating Routings

Chapter 4

Creating Routings

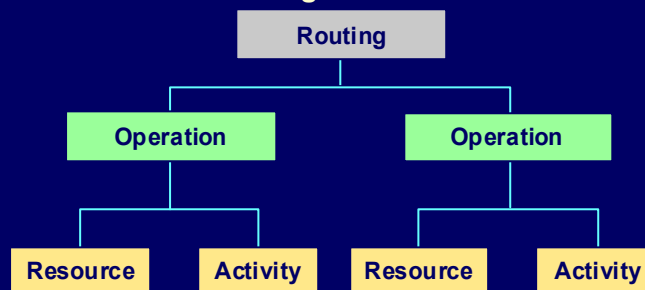
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Objectives

Objectives

After completing this lesson, you should be able to do the following:

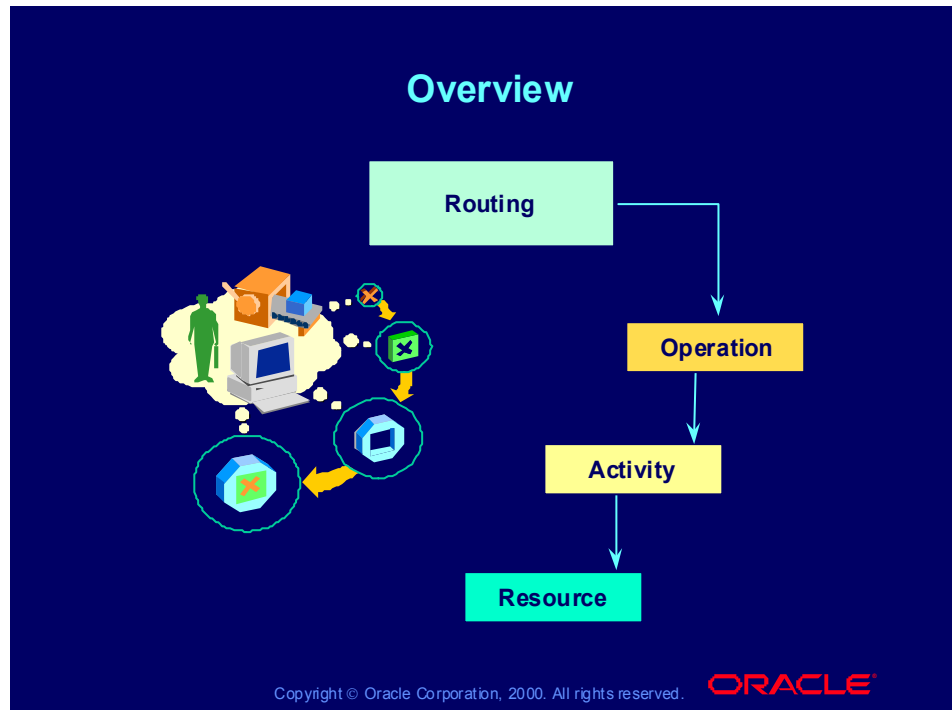
- Explain formula routings
- Create formula routings



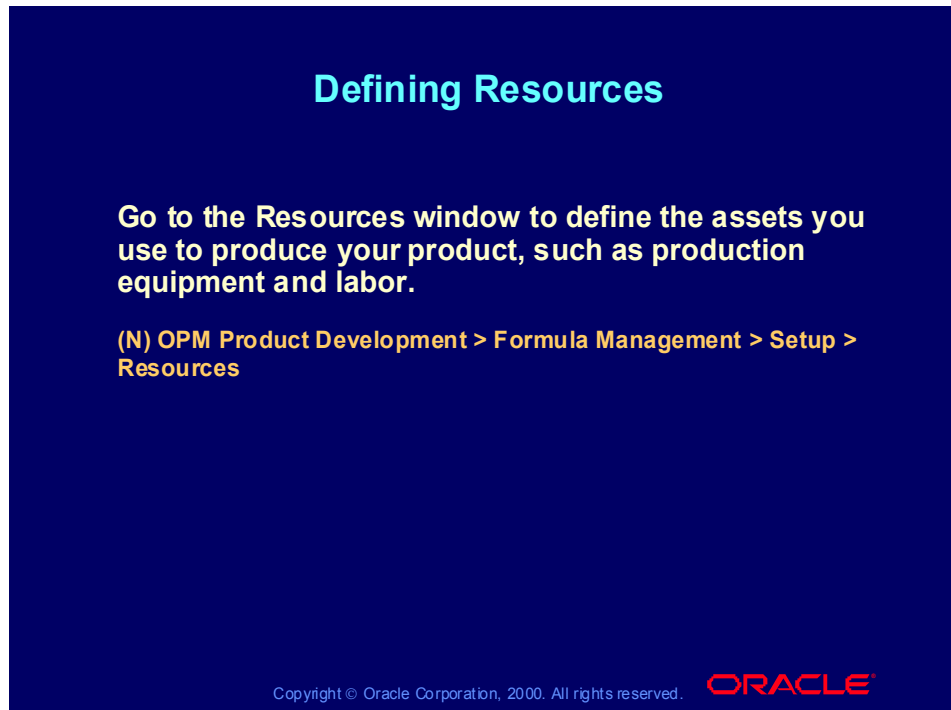
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Overview

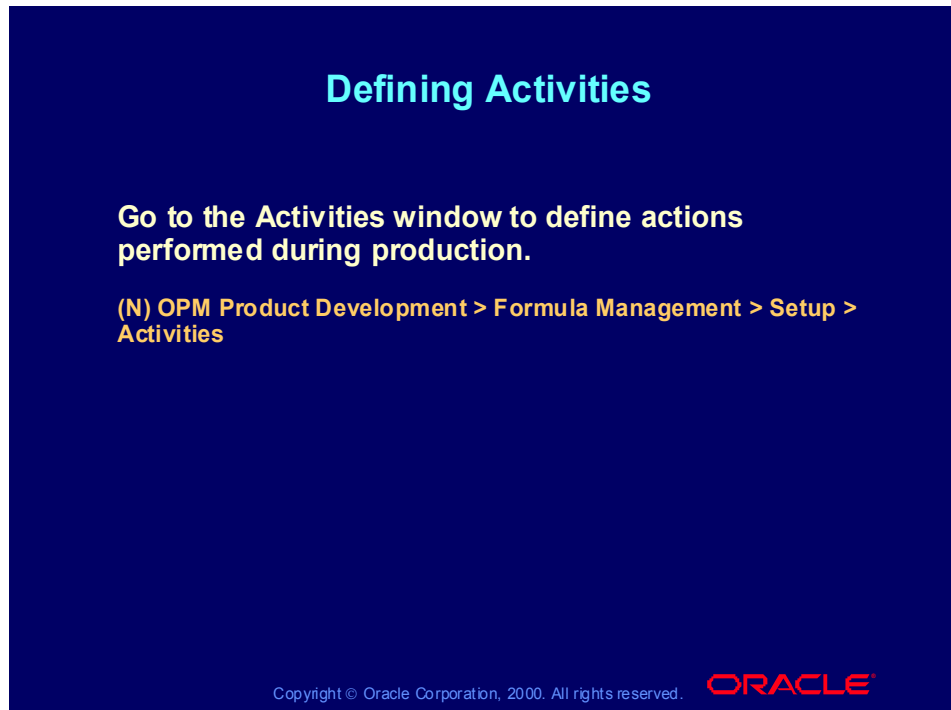


Defining Resources



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Formula Management User's Guide > Formula
Setup > Routings Setup > Setting Up Resources
 ... > Setting Up Resources Procedure
 ... > Resources Field Reference

Defining Activities



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Routings Setup > Setting Up Activities

- ... > Setting Up Activities Procedure

- ... > Activities Field Reference

Defining Routing Operations

Defining Routing Operations

**Go to the Operations window to define operations.
An operation is a combination of one or more
activities performed in production batches, and the
resources used to perform those activities.**

**(N) OPM Product Development > Formula Management >
Operations**

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Formula Management User's Guide > Routings
Setup > Setting Up Operations

... > Setting Up Operations Procedure

... > Operations Field Reference

Defining Production Routings

Defining Production Routings

Go to the Routings window to set up the sequence of operations or steps used during the manufacturing process.

(N) OPM Product Development > Formula Management > Routings

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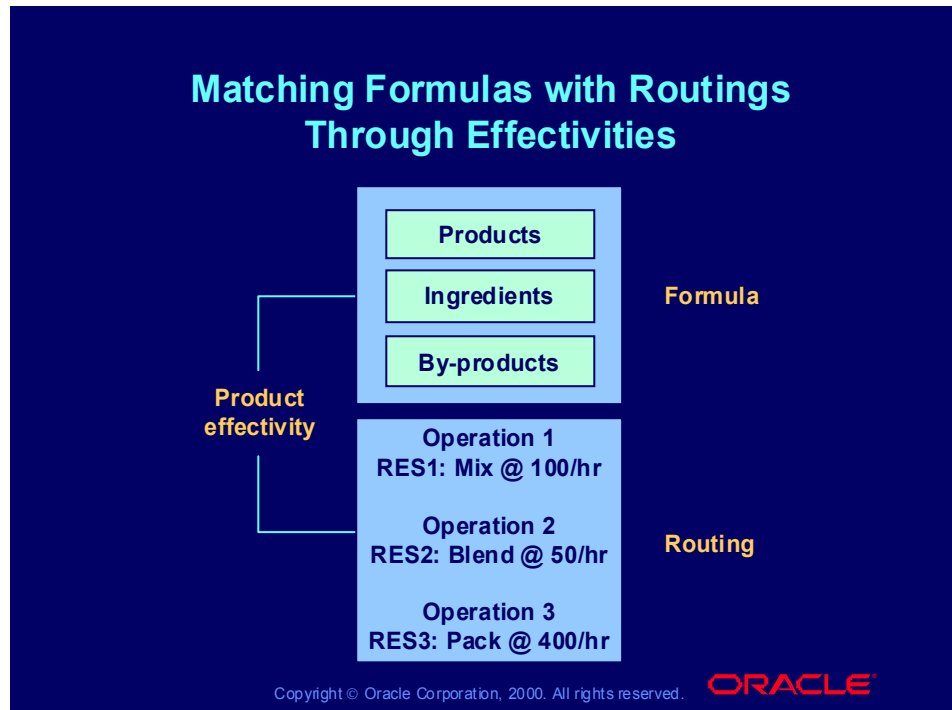
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Routings Setup > Setting Up Routings

... > Setting Up Routings Procedure

... > Routings Field Reference


Matching Formulas with Routings Through Effectivities



Practice 4-1 Overview

Practice 4-1 Overview

This practice covers defining activities, resources, and operations to create routings.



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Practice 4-1

Creating Routings

In addition to telling OPM how to process the raw materials, you must provide information about your resources (the people and equipment you have available), the sequence in which you use those resources, and in what quantity.

Define the activities, resources, operations, and routings that will be used to capture that information.

Activities

<u>Code</u>	<u>Description</u>	<u>AnCd</u>
XXACT1	Name Process 1	VAL
XXACT2	Name Process 2	VAL
XXACT3	Name Process 3	VAL
XXACT4	Name Process 4	VAL

Resources

<u>Resource Class</u>	<u>Description</u>	<u>Standard UOM</u>	<u>Cost Component</u>
XXRES1	Name Machine Resource 1	HR	From list of values
XXRES2	Name Machine Resource 1	HR	From list of values

XXRES3	Name Machine Resource 1	HR	From list of values
XXRES4	Name Machine Resource 1	HR	From list of values
XXRES5	Name Machine Resource 1	HR	From list of values
XXRES6	Name Machine Resource 1	HR	From list of values

Operations

OPERATION	<u>Operation 1</u>	<u>Operation 2</u>	<u>Operation 3</u>	<u>Operation 4</u>
Operation	XXOP1	XXOP2	XXOP3	XXOP4
Description	Operation 1	Operation 2	Operation 3	Operation 4
Process Qty (UOM)	LB	LB	LB	LB

Resource Details

Resource	XXRES1	XXRES2	XXRES3	XXRES4
Activity	XXACT1	XXACT2	XXACT3	XXACT4

Throughput

Process Quantity	100 LB	50 LB	100 LB	200 LB
Usage Quantity	1	1	1	1
UOM	HR	HR	HR	HR

Scheduling Information

Plan Type	Primary	Primary	Primary	Primary
Count	1	1	1	1
Offset	0	0	0	0
Scale Type	Linear	Linear	Linear	Linear

Routings

<u>ROUTING</u>	<u>XXINTC</u>	<u>XXFGC</u>
Routing Number	XXINTC	XXFGC
Routing Version	1	1
Description	Complex Intermediate Good Routing	Complex Finished Good Routing
Routing Quantity	100	100
UOM	LB	LB

Resource Details

Resource	XXRES5	XXRES5	XXRES5	XXRES6
Activity	XXACT1	XXACT2	XXACT3	XXACT4

Throughput

Process Quantity	100 LB	50 LB	100 LB	200 LB
Usage Quantity	1	1	1	1
UOM	HR	HR	HR	HR

Scheduling Information

Plan Type	Secondary	Secondary	Secondary	Secondary
Count	1	1	1	1
Offset	0	0	0	0
Scale Type	Linear	Linear	Linear	Linear

Routing Steps

Step	10	
Operation	XXOP1	XXOP4
Description	Operation 1	Operation 4
Step Quantity	100	100
UOM	LB	LB
Step	20	
Operation	XXOP2	
Description	Operation 2	
Step Quantity	100	
UOM	LB	
Step	30	
Operation	XXOP3	
Description	Operation 3	
Step Quantity	100	
UOM	LB	

Practice 4-1 Solutions



Practice 4-1 Solutions

Creating Routings

In addition to telling OPM how to process raw materials, you must provide information about your resources (the people and equipment you have available), the sequence in which you use those resources, and in what quantity.

Define the activities, resources, operations, and routings that will be used to capture that information.

Activities

Perform the following steps for each item:

1. Open the Activities window:
(N) Product Development>Formula Mgmt>Setup>Activities
2. Enter a code to identify this activity.
3. Enter a description of this activity.
4. Select an analysis code from the list of values.
5. Save your work.

Resources

Perform the following steps for each item:

1. Open the Resources window:
(N) Product Development>Formula Mgmt>Setup>Resources

2. Enter a code that identifies the resource.
3. Enter a description of the resource.
4. Select a valid unit of measure from the list of values.
5. (Optional) Select a resource class from the list of values.
6. Select a cost component class from the list of values.
7. Save your work.

Operations

Perform the following steps for each item:

1. Open the Operations window:
(N) Product Development>Formula Mgmt>Operations
2. Enter a code to identify this operation
3. Enter a description of this operation.
4. (Optional) Select an operation class from the list of values.
5. Enter the process quantity unit of measure.
6. Select Throughput from the drop-down list.
7. Enter a code for the resource being used.
8. Enter the activity that the resource will be performing.
9. Enter the process quantity of this resource.
10. Enter the usage quantity of this resource.
11. Enter the unit of measure for the usage quantity of the resource.
12. Select Scheduling Information from the drop-down list.
13. Select Primary or Secondary from the list of values.
14. Enter the number of resources used for this resource and activity.
15. Enter the time delay between resources.
16. Select Fixed from the Scale Type drop-down list.
17. Select Cost Information from the drop-down list to view the cost analysis code and cost component class retrieved.
18. Save your work.

Routings

Perform the following steps for each item:

1. Open the Routings window:
(N) Product Development>Formula Mgmt>Routings
2. Enter the routing number and routing version to identify this routing.
3. Enter a description of this routing.
4. (Optional) Select a routing class from the list of values.
5. Enter the process quantity and the unit of measure of this routing.

6. Enter a step number for the step.
7. Enter the operation code for the step.
8. Enter the quantity associated with this routing step.
9. Save your work.

Summary

Summary

In this lesson, you should have learned how to:

- **Describe formula routings**
- **Enter routings**

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Defining Effectivities

Chapter 5

Defining Effectivities

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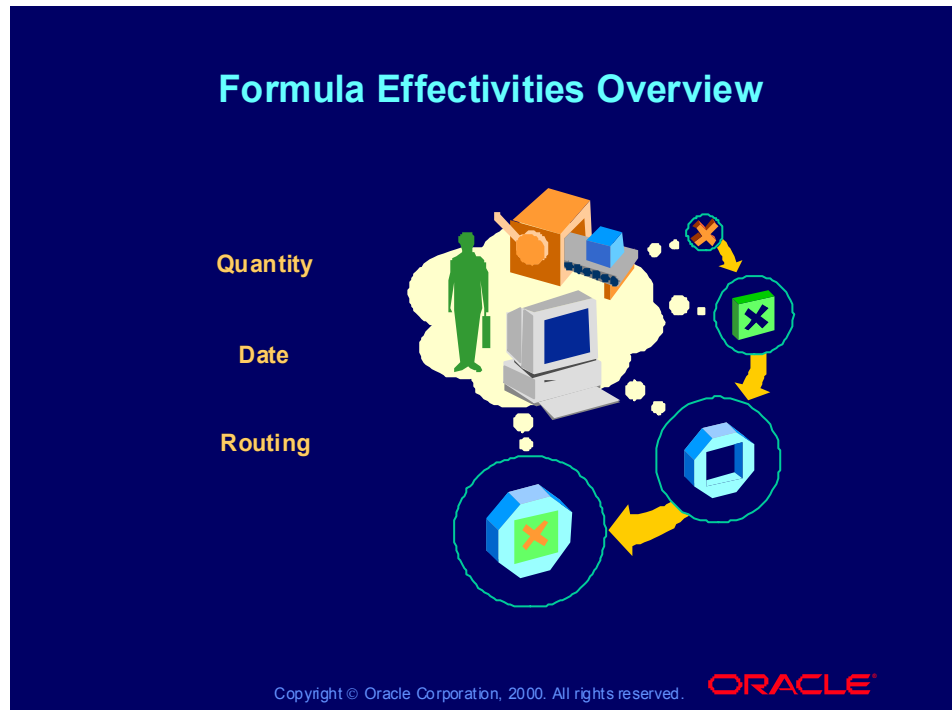
Objectives

After completing this lesson, you should be able to do the following:

- **Describe effectivities**
- **Define a formula effectivity**
- **Maintain formula effectivities**

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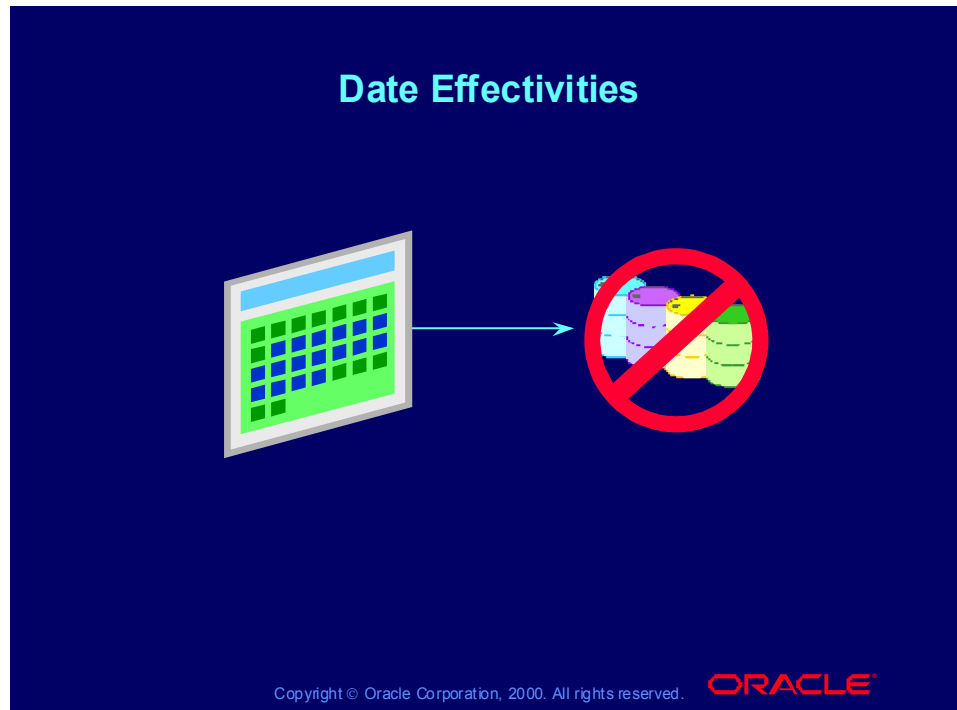
Formula Effectivities Overview



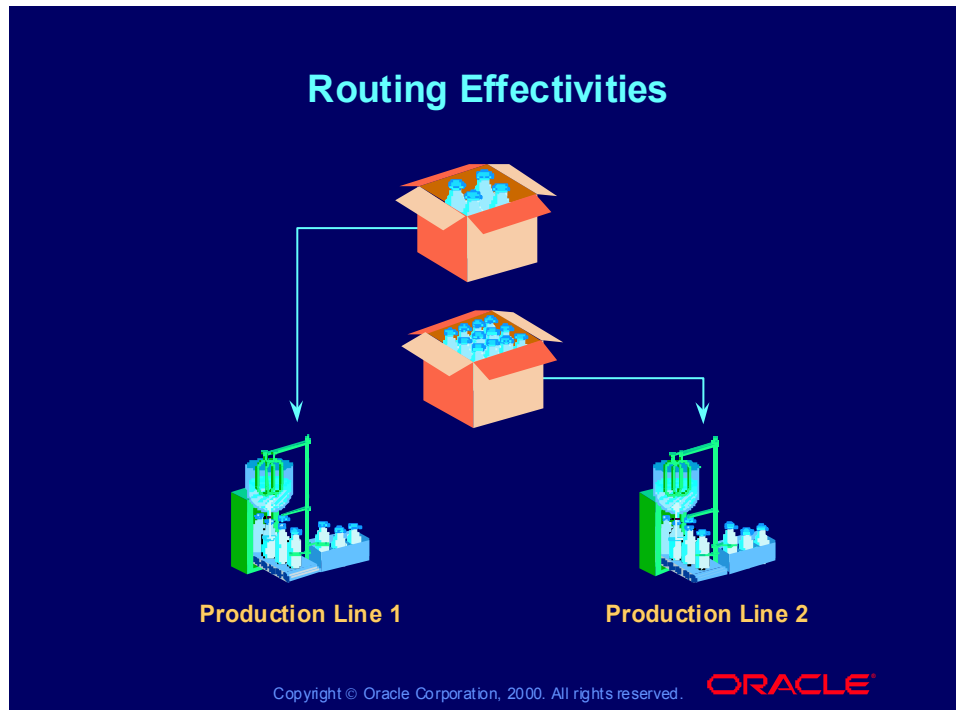
Quantity Effectivities



Date Effectivities



Routing Effectivities



Creating a Formula Effectivity

Creating a Formula Effectivity

Go to the **Select Effectivities** window to specify the item for which you want to view, add, or edit effectivities.

(N) OPM Product Development > Formula Management > Effectivities

(N) OPM Product Development > Formula Management > Formulas (M) Actions > Effectivities

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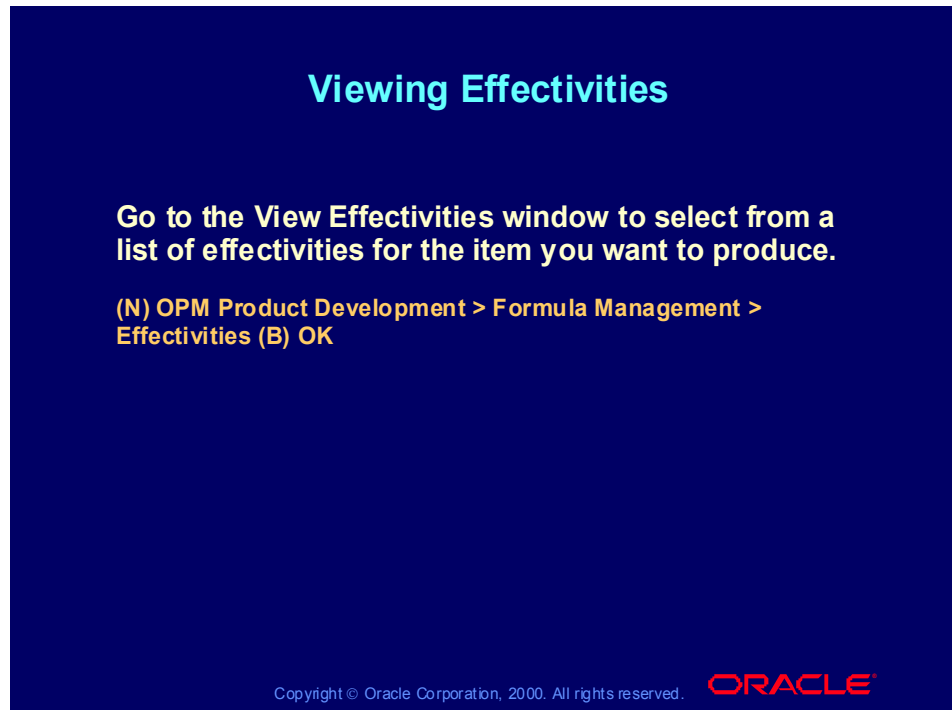
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Effectivities > Setting Up Formula Effectivities

... > Setting Up Formula Effectivities Procedure

... > Select Effectivities Field Reference

Viewing Effectivities



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Effectivities > Viewing Effectivities
... > View Effectivities Field Reference

Maintaining Formula Effectivities

Maintaining Formula Effectivities

Go to the Maintain Effectivities window to define the conditions under which a formula can be used.

(N) OPM Product Development > Formula Management > Effectivities

(N) OPM Product Development > Formula Management > Formulas > (M) Actions > Effectivities

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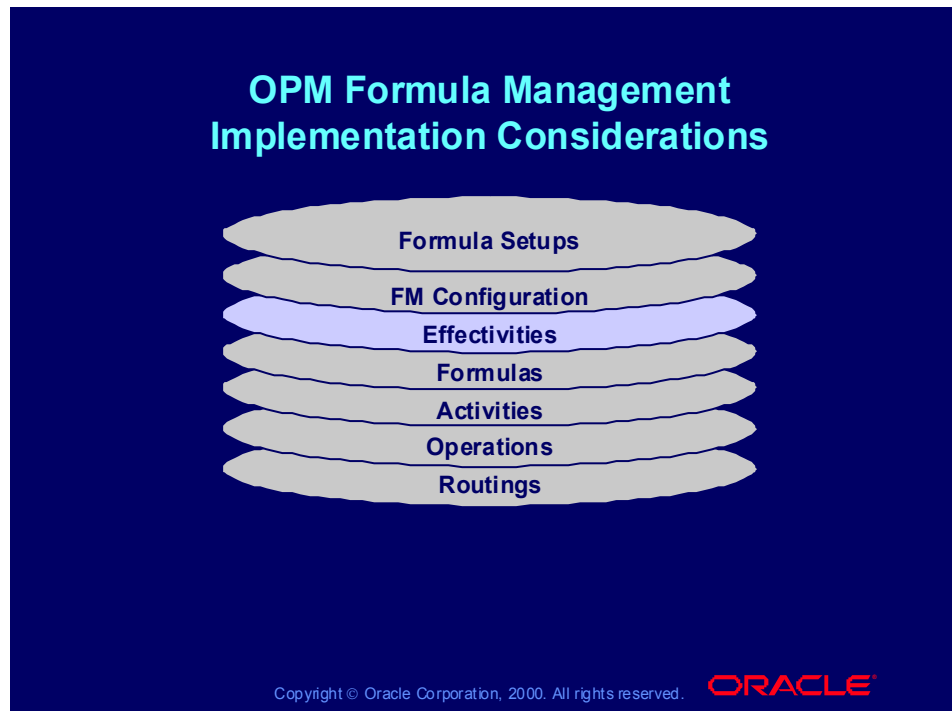
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Effectivities > Adding To or Editing Effectivities

... > Adding To or Editing Effectivities Procedure

... > Maintain Effectivities Field Reference

OPM Formula Management Implementation Considerations



Practice 5-1 Overview



Practice 5-1

Defining Effectivities

OPM requires that you specify effectivities for each produced item. Create two effectivities for *XXFGS* and one effectivity each for *XXINTC* and *XXFGC*.

<u>ITEM</u>	<u>XXFGS</u>	<u>XXFGS</u>	<u>XXINTC</u>	<u>XXFGC</u>
Formula	XXFGS	XXFGS	XXINTC	XXFGC
Version	1	1	1	1
Des.	Simple Finished	Simple Finished	Complex Interm.	ComplexFinished
	Good Formula	Good Formula	Good Formula	Good Formula
Formula Use	Production	Production	Production	Production
Product	XXFGS	XXFGS	XXINTC	XXFGC
Des.	Simple Finished	Simple Finished	Complex Interm.	ComplexFinished
	Good	Good	Good	Good
Preference	1	1	1	1
Organization	XXP1	XXP1	XXP1	XXP1
Quantities				
Standard	100	100	100	100

Minimum	0	100	0	0
Maximum	500	999999.99999	999999.99999	999999.99999

Effective Dates

From

To

Lower Region

Routing (Default) *XXINTC* *XXFGC*

Version (Default) 1 1

Customer Code (Optional)

Practice 5-1 Solutions



Practice 5-1 Solutions

Defining Effectivities

OPM requires that you specify effectivities for each produced item. Create two effectivities for XXFGS, and one effectivity each for XXINTC and XXFGC.

Perform the following steps for each item:

1. Open the Effectivities window:
 - (N) OPM Product Development>Formula Mgmt>Formulas
 - (M) Actions>Effectivities.
2. Enter the formula and version number that identify the formula to which this effectivity record applies.
3. Select an option from the Formula Use drop-down list.
4. Accept or change the product displayed in the Product field. The product description is automatically populated.
5. Enter the preference number of this effectivity.
6. Select an organization from the list of values or leave this field blank for all organizations.
7. Enter the standard processing quantity for the item produced.
8. Enter the unit of measure of the processing quantity.
9. Enter the minimum quantity that can be produced with this formula.

10. Enter the maximum quantity that can be produced with this formula.
11. Enter the effective dates of this formula.
12. (Optional) Enter the routing number and version that this formula will use.
The description is automatically populated.
13. (Optional) Select a customer code from the list of values if you wish to search formulas by a customer.
14. Save your work.

Summary

Summary

In this lesson, you should have learned how to:

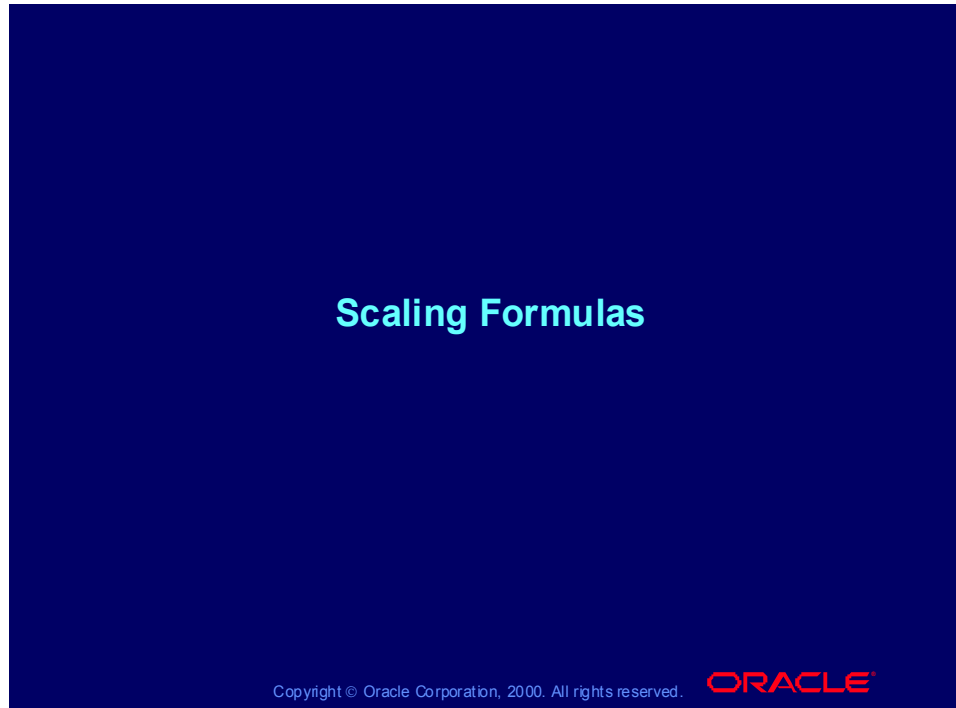
- **Explain effectivities**
- **Create formula effectivities**
- **Manage formula effectivities**

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Scaling Formulas

Chapter 6

Scaling Formulas



Objectives

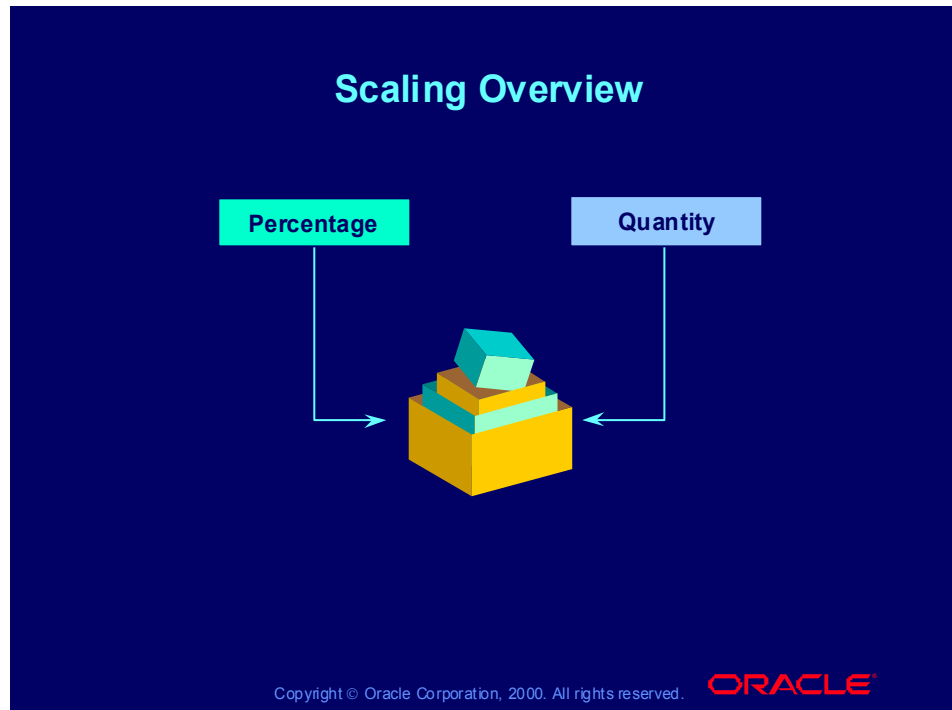
Objectives

After completing this lesson, you should be able to do the following:

- Describe scaling
- Scale formulas by:
 - Percent
 - Quantity

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Scaling Overview



Scaling Formulas by Percent or Quantity

Scaling Formulas by Percent or Quantity

Go to the Scale Formula window to increase or decrease formula ingredients, products, and by-products proportionately .

(N) OPM Product Development > Formula Management > Formulas (M) Actions > Scale

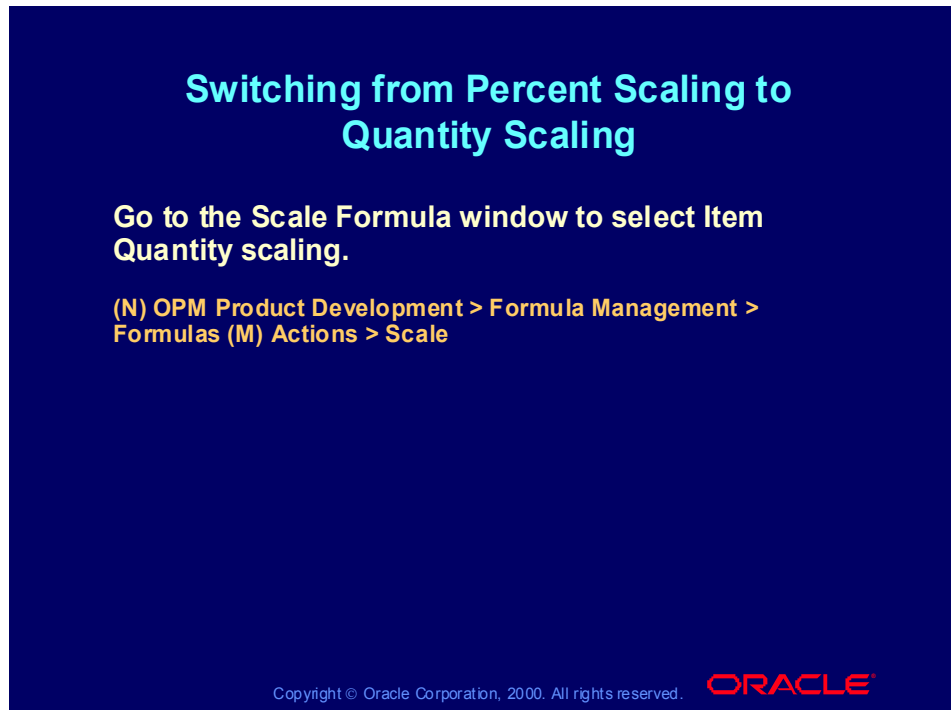
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Scaling and Theoretical Yield Calculations > Scaling Formulas

- ... > Scaling By a Percentage
- ... > Scaling By an Item Quantity
- ... > Scaling With a Fixed Quantity
- ... > Scaling Formulas Procedure
- ... > Scaling Field Reference

Switching from Percent Scaling to Quantity Scaling




Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Scaling and Theoretical Yield Calculations > Scaling Formulas

- ... > Scaling By a Percentage
- ... > Scaling By an Item Quantity
- ... > Scaling With a Fixed Quantity
- ... > Scaling Formulas Procedure
- ... > Scaling Field Reference

Practice 6-1 Overview

Practice 6-1 Overview

This practice covers scaling a formula.



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Practice 6-1

Formula Scaling

1. How many methods of scaling are there?
2. Name the different methods.
3. Where do you tell the system to allow scaling?
4. What is the navigation path for entering scaling information?
5. Use your *XXFGC* formula to perform the following calculations:
 - a. If you scale by percent and you enter 100 in the box, what will the other item quantities be?
 - b. If you scale by percent and you enter -25 in the box, what will the other item quantities be?
 - c. If you scale Ingredient 1 (by item quantity) from 100 to 150, what will the other item quantities be?

Practice 6-1 Solutions



Practice 6-1 Solutions

1. How many methods of scaling are there?
Two.
2. Name the different methods.
Scale by percent and by item quantity.
3. Where do you tell the system to allow scaling?
The Scaling Allowed option in the Formulas window.
4. What is the navigation path to enter scaling information?
(N) OPM Product Development>Formula Mgmt>Formulas
(M) Special>Scale.
5. Use your XXFGC formula to perform the following calculations:
 - a. If you scale by percent and you enter 100 in the box, what will the other item quantities be?

Item	Before Scaling	After Scaling
XXFGC	100 LB	200 LB
XXINTC	100 LB	200 LB
XXPKG	4 EA	8 EA

- b. If you scale by percent and you enter -25 in the box, what will the other item quantities be?

Item	Before Scaling	After Scaling
XXFGC	100 LB	75 LB
XXINTC	100 LB	75LB
XXPKGK	4 EA	3 EA

c. If you scale Ingredient 1 (by item quantity) from 100 to 150, what will the other item quantities be?

Item	Before Scaling	After Scaling
XXFGC	100 LB	150 LB
XXINTC	100 LB	150 LB
XXPKGK	4 EA	6 EA

Summary

Summary

In this lesson, you should have learned how to:

- **Explain scaling**
- **Assign scale factors by:**
 - **Percent**
 - **Quantity**

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Formula Theoretical Yield

Chapter 7

Formula Theoretical Yield

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Objectives

Objectives

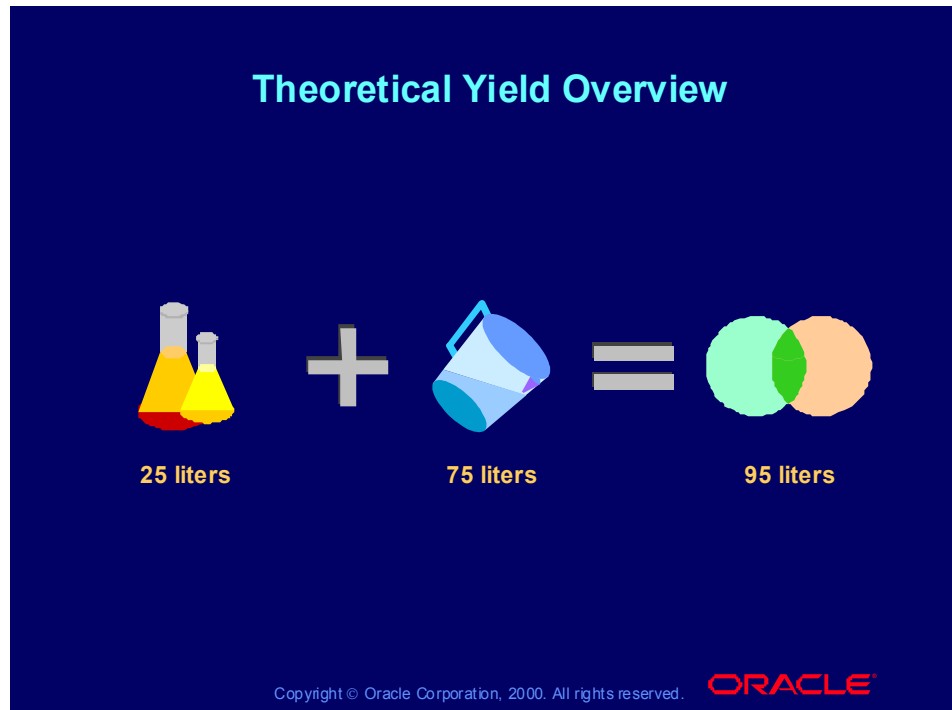
After completing this lesson, you should be able to do the following:

- **Describe theoretical yield**
- **Attach theoretical yield to a formula**
- **Explain how theoretical yield is calculated**

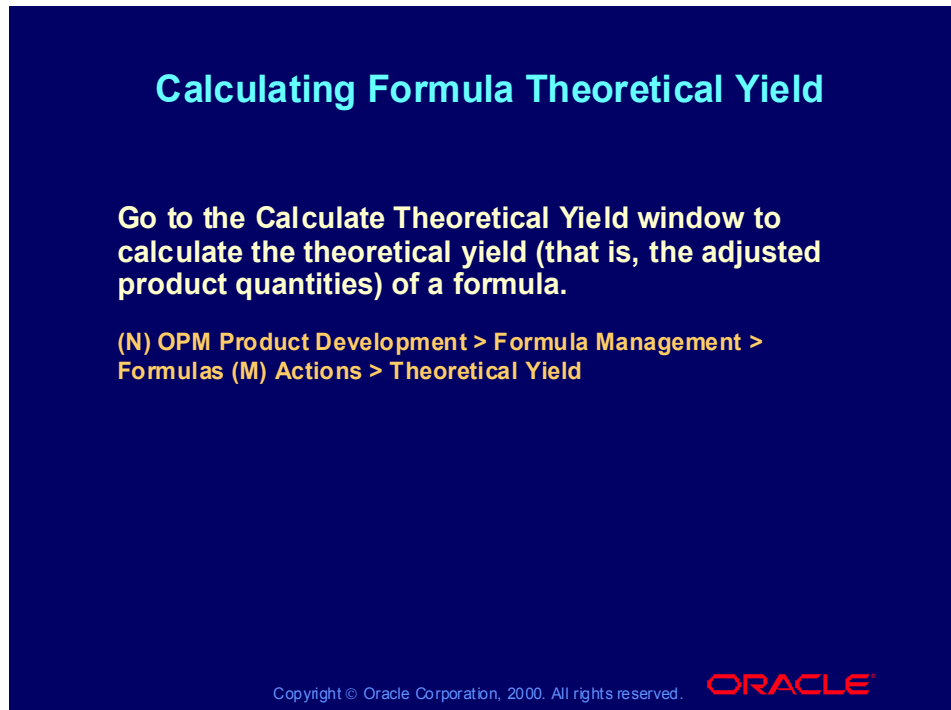
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Theoretical Yield Overview



Calculating Formula Theoretical Yield



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Scaling and Theoretical Yield > Calculating Theoretical Yield
... > Calculating Theoretical Yield Procedure
... > Calculating Theoretical Yield Field Reference

Practice 7-1 Overview

Practice 7-1 Overview

This practice covers assigning theoretical yield to a formula product.



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Practice 7-1


Calculating Theoretical Yield

During batch processing, there is a 5% loss of your *XXINTC* due to evaporation. Assign the theoretical yield percentage to your product.

Practice 7-1 Solutions

Practice 7-1 Solutions

This practice covers assigning theoretical yield to a formula product.



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Practice 7-1 Solutions

Calculating Theoretical Yield

During batch processing, there is a 5% loss of your XXINTC due to evaporation. Assign the theoretical yield percentage to your product.

1. Open the Formulas window:
(N) OPM Product Development>Formula Mgmt>Formulas
2. Query and find your XXINTC formula.
3. Select Theoretical Yield from the Special menu.
4. Type 95 in the percent box.
5. View the quantity change of your product in the Formula window.
- 6 Save your work.

Summary

Summary

In this lesson, you should have learned how to:

- **Explain theoretical yield**
- **Assign theoretical yield to a formula**
- **Explain how theoretical yield is calculated**

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Online Inquiries and Reports

Chapter 8

Online Inquiries and Reports

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Objectives

After completing this lesson, you should be able to do the following:

- **Describe the Report dialog box**
- **Define criteria for the Ingredient Where Used report**
- **Define Indented Formulas (Bill of Materials) report criteria**
- **Define selection criteria for the online Formula Inquiry report**
- **View the Intermediate FM Inquiry Summary**
- **Search formulas by using the Ingredient Search and Replace inquiry**

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Online Inquiries and Reports

The existing online inquiries and reports are:

- Ingredient Used inquiry
- Indented Formulas (Bill of Materials) report
- Formula Inquiry
 - Intermediate FM Inquiry Summary
 - Formula View
 - Intermediate Formula View
 - Expanded Formula
- Item Search/Replace



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Ingredient Used Inquiry



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Inquiries and Reports > Ingredient Used Inquiry

- ... > Ingredient Used Inquiry Procedure
- ... > Ingredient Search List Field Reference
- ... > Using the Ingredient - Where Used Window
- ... > Ingredient Used Field Reference

Indented Bill of Materials Report

Indented Bill of Materials Report

Go to the Indented Bill of Materials Report window to display all of the ingredients and ingredient quantities that are used to produce an item.

**(N) OPM Product Development > Formula Management > Reports
> Indented Formulas**

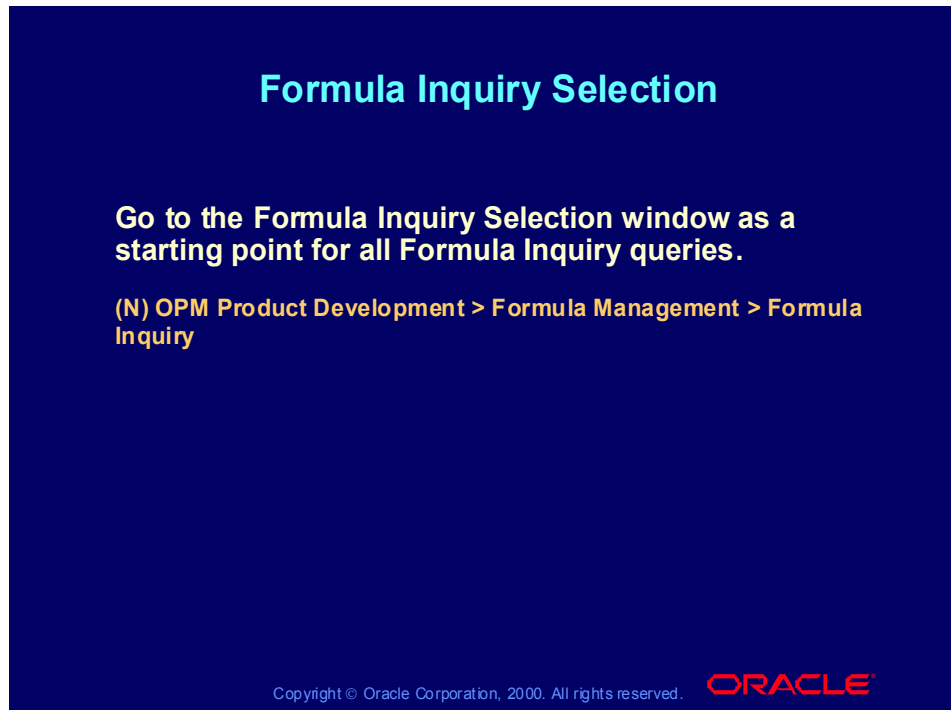
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Formula Management User's Guide > Formula
Inquiries and Reports > Running the Indented Formulas Report

- ... > Submitting the Report
- ... > Viewing the Indented Formulas Report Online
- ... > Selected Report Parameters
- ... > Selected Report Output

Formula Inquiry Selection

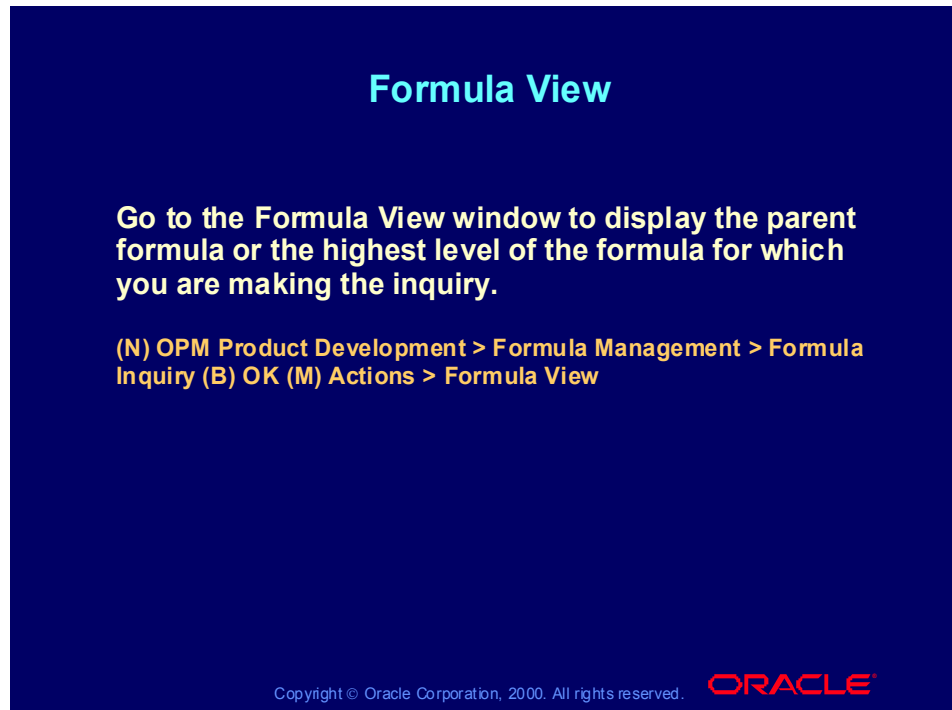


Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Inquiries and Reports > Using the Formula Inquiry Selection

... > Using Formula Inquiry Selection Procedure

... > Formula Inquiry Selection Field Reference

Formula View



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Inquiries and Reports > Viewing the Formula Queried

- ... > Formula View Field Reference

- ... > Formula View - Additional Setup in Formula Management

Intermediate FM Inquiry Summary

Intermediate FM Inquiry Summary

Go to the Intermediate Formula Inquiry Summary View window to select the formula that you want to expand or view at a lower level (the intermediate formula on a separate window).

(N) OPM Product Development > Formula Management > Formula Inquiry (B) OK (M) Actions > Formula View > Select ingredient marked with plus sign (+)

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Inquiries and Reports > Viewing Formula Intermediates

- ... > Viewing Formula Intermediates Procedure
- ... > Intermediate Formula Inquiry Summary Field Reference
- ... > Viewing an Intermediate Formula

Item Search and Replace

Item Search and Replace

Go to the Ingredients Search and Replace window to change an ingredient in one, all, or a range of formulas.

(N) OPM Product Development > Formula Management > Item Search/Replace

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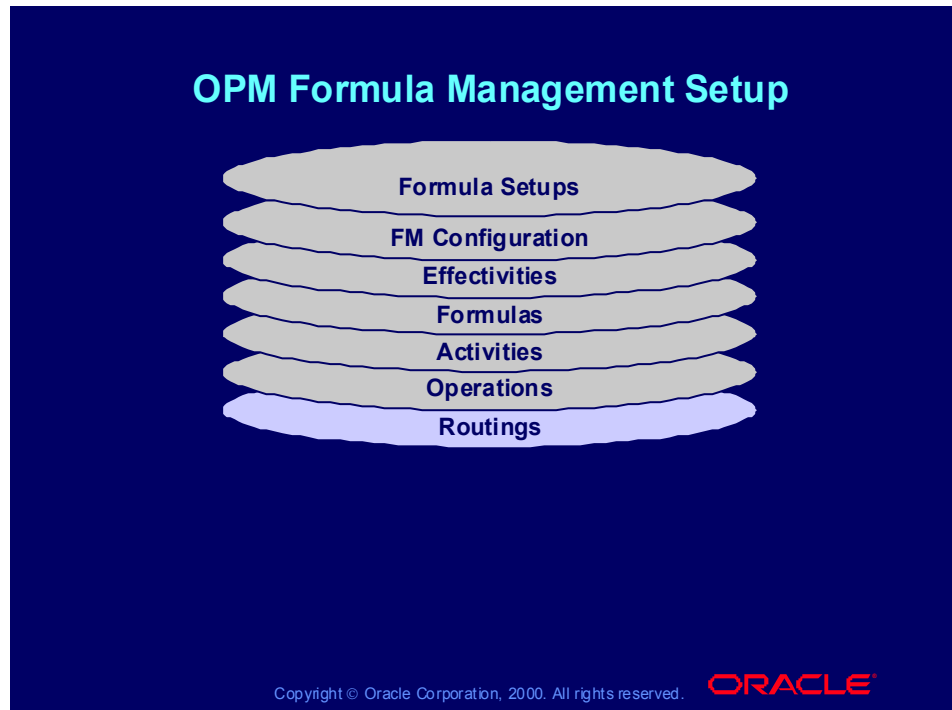
Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Formula Setup > Searching For and Replacing Ingredients

... > Searching for and Replacing Ingredients Procedure

... > Ingredient Search and Replace Field Reference - First Window

... > Ingredient Search and Replace Field Reference - Second Window

OPM Formula Management Setup



Practice 8-1 Overview

Practice 8-1 Overview

This practice covers using existing online inquiries and reports within the Formula Management responsibility.



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Practice 8-1

Using Online Inquiries and Reports

Run the following reports as instructed:

1. In the Ingredient Used Inquiry, search for all formulas that use your complex intermediate item.
2. In the Indented Formulas (Bill of Materials) report, run a report on your complex finished good item.
3. In the Formula Inquiry, expand your complex finished good item.

Practice 8-1 Solutions

Practice 8-1 Solutions

This practice covers using existing online inquiries and reports within the Formula Management responsibility.



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Practice 8-1 Solutions

Using Online Inquiries and Reports

Run the following reports as instructed:

1. In the Ingredient Used Inquiry, search for all formulas that use your complex intermediate item.
 - a. Open the Ingredient Used Inquiry:
(N) OPM Product Development>Formula Mgmt>Ingredient Used
 - b. Enter the item code for the search.
 - c. Click the Find button.
2. In the Indented Formulas (Bill of Materials) report, run a report on your complex finished good item.
 - a. Open the Indented Formulas (Bill of Materials) Report:
(N) OPM Product Development>Formula Mgmt>Reports>Indented Formulas
 - b. Select the Interactive check box to select from the formula effectivities.
 - c. Select the Re-Explode check box to have the system check

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for other reports that have already been run for the same criteria.

- d. Select the Single Formula option button and enter the formula name and version of your complex finished good formula (XXFGC Version 1).
- e. Accept all other defaults in the window.
- f. Click the OK button.
- g. A Submission History window appears with the name of the report and a request ID number; click the OK button to submit your request.
- h. Select View My Requests from the Help menu.
- i. Complete the Find Requests window or click the Find button to view all your submitted requests.
- j. In the Requests window, highlight the request ID for the request on which you are reporting, and click the View Output button when the Phase column reads Completed and the Status column reads Normal.

3. In the Formula Inquiry, expand your complex finished good item.

- a. Open the Formula Inquiry:
(N) OPM Product Development> Formula Mgmt>Formula Inquiry
The Formula Inquiry Selection window opens.
- b. Select Active from the Formula Status drop-down list.
- c. Select Defined from the Effectivity drop-down list.
- d. Select production in the Formula Used In region.
- e. Specify your complex finished good formula and version number in the Selection Range region.
- f. Click the OK button.
- g. In the Formula Inquiry Summary View window, select the formula you want to view.
- h. In the Formula View window, select Expand or Lower Level from the Special menu to view additional details on an ingredient with a plus sign (+) in the column next to the Type column.

Summary

Summary

In this lesson, you should have learned how to:

- **Enter criteria in the Report dialog box**
- **Use the Ingredient Used inquiry**
- **Use the Indented Formulas (Bill of Materials) report**
- **View formulas by using the Formula Inquiry**
- **Create new versions of formulas by using the Item Search/Replace**

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Defining and Entering OPM Lab Management Setup

Chapter 9

Defining and Entering OPM Lab Management Setup

Defining and Entering OPM Lab Management Setup

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Objectives

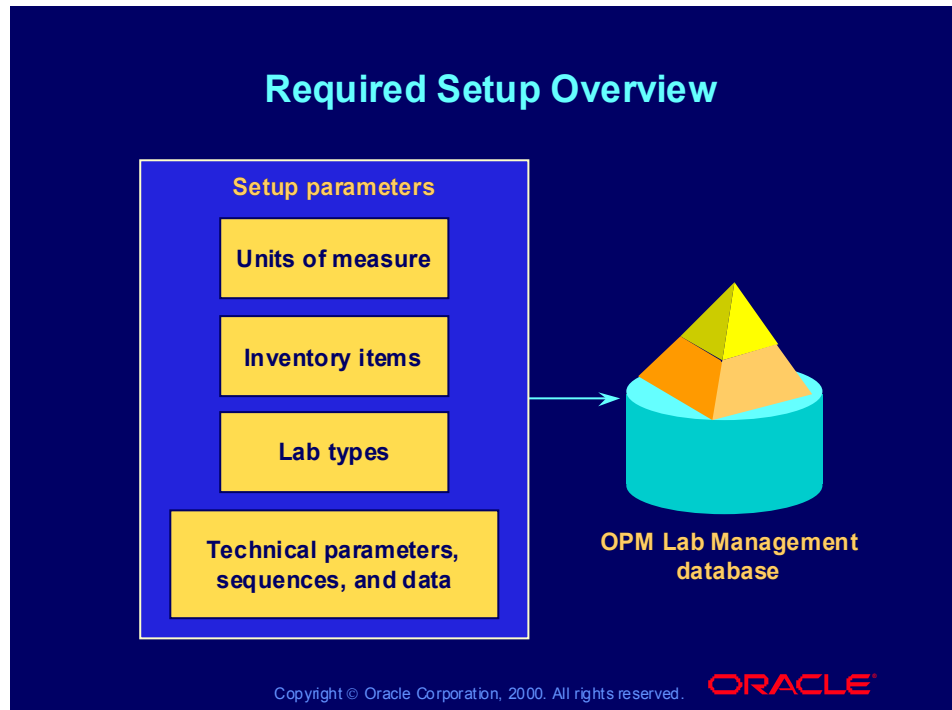
After completing this lesson, you should be able to do the following:

- **Define unit-of-measure types and units of measure**
- **Define inventory items**
- **Define and enter lab types**
- **Define and enter technical parameters, sequences, and data**

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Required Setup Overview



Defining Unit-of-Measure Types

Defining Unit-of-Measure Types

Go to the Unit of Measure Types Window to classify UOM groups that measure particular physical characteristics.

**(N) OPM System Administration > OPM System Setup
> Unit of Measure Types**

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Systems > OPM System Administration User's Guide > OPM System Setup > Editing Unit of Measure Types

... > UOM Type Procedure

... > UOM Type Field Reference

Defining Units of Measure

Defining Units of Measure

Go to the Units of Measure Window to add and maintain Units of Measure definitions.

(N) OPM System Administration > OPM System Setup
> Units of Measure

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Systems > OPM System Administration User's Guide > OPM System Setup > Editing Units of Measure

... > Units of Measure Procedure

... > Units of Measure Field Reference

Defining Inventory Items

Defining Inventory Items

Go to the Items window to create an item on the item master.

(N) OPM Inventory > OPM Inventory Control > Setup > Item Master

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Inventory > OPM Inventory Management User's Guide > Inventory Items > Creating Inventory Items

- ... > Before Creating Inventory Items
- ... > Creating Inventory Items Procedure
- ... > Items Field Reference
- ... > Items - Additional Setup in Inventory Control

Defining Quality UOMs

Defining Quality UOMs

Go to the Units window to define the units in which to measure QC tests.

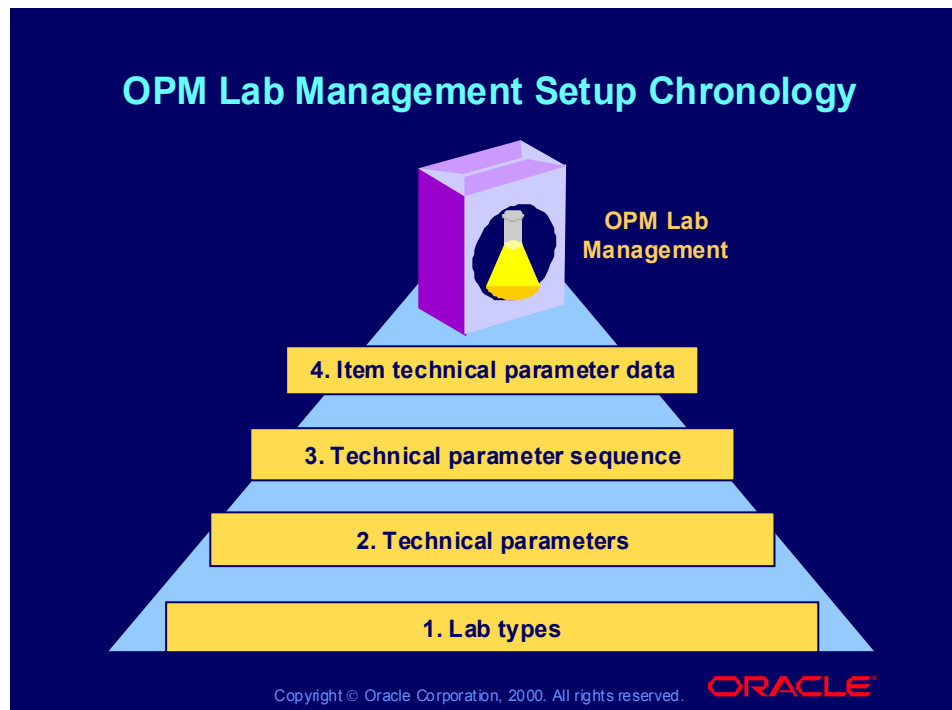
(N) OPM Product Development > Quality Control > Setup > Units

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Quality Management User's Guide > Test
Specifications Setup > Setting Up QC Assay Units of Measure
... > Setting Up QC Assay Units of Measure Procedure
... > Units Field Reference

OPM Lab Management Setup Chronology



Defining Lab Types

Defining Lab Types

Go to the **Laboratory Types** window to define laboratory types that are used to group technical parameters (those properties of items that will be studied and calculated).

(N) OPM Product Development > Laboratory Management > Setup > Laboratory Types

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Management Setup > Defining Laboratory Types
... > Defining Laboratory Types Procedure
... > Laboratory Types Field Reference

Practice 9-1 Overview

Practice 9-1 Overview

This hands-on practice covers defining and setting up lab types.



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Practice 9-1


Defining Lab Types

Set up a lab type that represents your student number as *XX-1*.

Practice 9-1 Solution

Practice 9-1 Solution

This hands-on practice covers defining and setting up lab types.



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Practice 9-1 Solution

Defining Lab Types

Set up a lab type that represents your student number as *XX-1*.

1. Open the Laboratory Types window:
(N) OPM Product Development > Lab Management > Setup > Laboratory Types
2. Enter a lab type that represents your student number, *XX-1*, and enter a description.
3. Save your work.

Defining Technical Parameters

Defining Technical Parameters

Go to the Technical Parameters window to define characteristics of items that you want to measure and calculate.

(N) OPM Product Development > Laboratory Management > Setup > Technical Parameters

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Management Setup > Setting Up Technical Parameters
... > Setting Up Technical Parameters Procedure
... > Technical Parameters Field Reference

Supported Functions for Defining Expressions and Operators

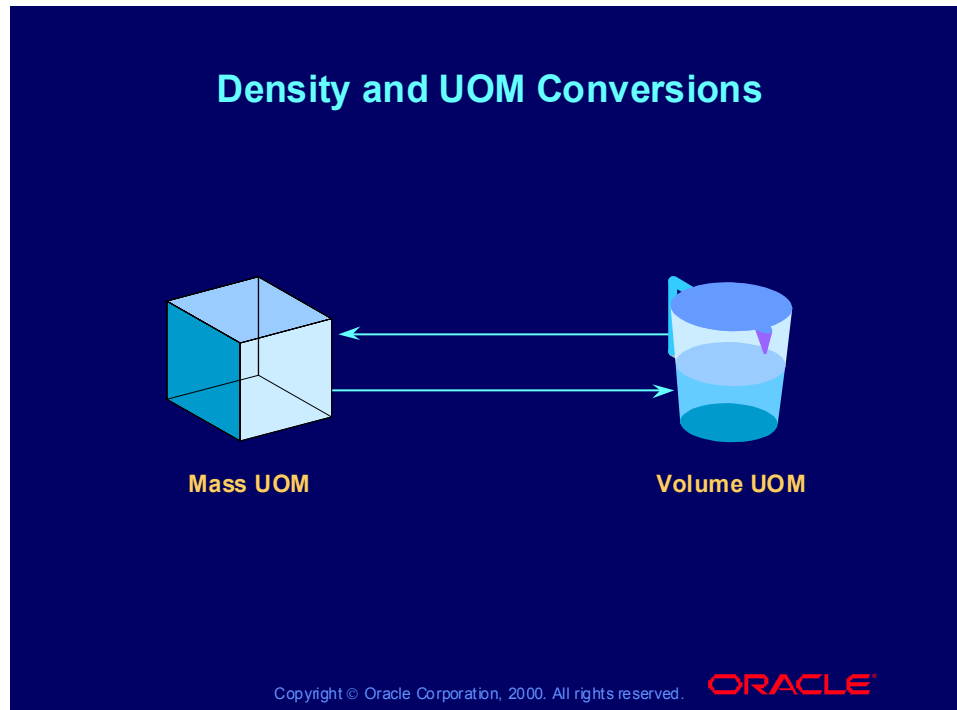
Supported Functions for Defining Expressions and Operators

- Addition+
- Subtraction-
- Multiplication*
- Division\
- Exponentiation^
- Square root (SQRT)
- Common logarithm (LOG)
- Natural logarithm (LN)

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Density and UOM Conversions



Entering the Technical Parameter Sequence

Entering the Technical Parameter Sequence

Go to the Technical Parameters Sequences window to specify the order in which technical parameters are displayed in other windows.

**(N) OPM Product Development > Laboratory
Management > Setup > Technical Parameter Seq**

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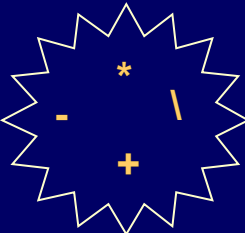
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Management Setup > Setting Up Technical Parameter Sequences
... > Setting Up Technical Parameter Sequences Procedure
... > Technical Parameter Sequences Field Reference

Practice 9-2 Overview

Practice 9-2 Overview

This hands-on practice covers defining and setting up technical parameters and sequences.



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Practice 9-2

Defining Technical Parameters and Sequences

Now that you have defined your laboratory type number, you can define parameters and sequences. For your laboratory type, set up two parameters (XXPARAM1 and XXPARAM2) with the following attributes:

- XXPARAM1 uses hue assay for ice cream, CCB-XX.
- XXPARAM2 uses Volume % data type, and UNIT as unit with a numeric range of 80 to 100.

The technical parameters sequencing will be in the following hierarchy:

- DENSITY
- XXPARAM1
- XXPARAM2

Practice 9-2 Solutions



Practice 9-2 Solutions

Defining Technical Parameters and Sequences

Now that you have defined your laboratory type number, you can define parameters and sequences. For your laboratory type, set up two parameters (*XXPARAM1* and *XXPARAM2*) with the following attributes:

- *XXPARAM1* uses hue assay for ice cream, CCB-XX.
- *XXPARAM2* uses Volume % data type, and UNIT as unit with a numeric range of 80 to 100.

The technical parameters sequencing will be in the following hierarchy:

- DENSITY
- *XXPARAM1*
- *XXPARAM2*

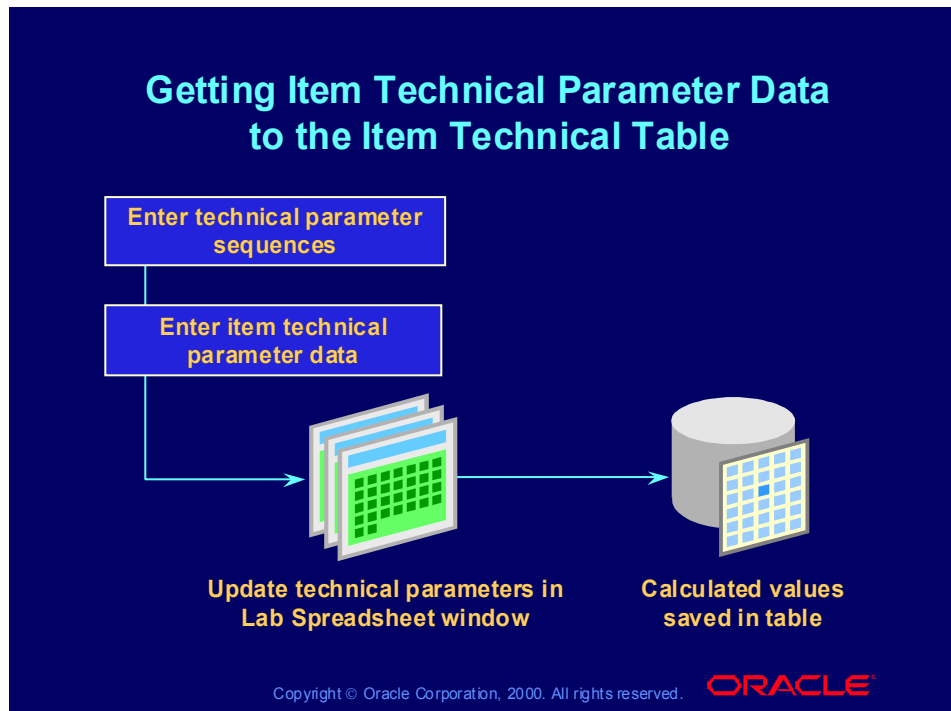
1. Open the Technical Parameters window:
(N) OPM Product Development>Lab Management>Setup>Technical Parameters
2. Select your laboratory type from the list of values.
3. Enter a parameter name as *XXPARAM1*, and a description.
4. Select the organization from the LOV that has your hue assay for ice cream.
5. Select the assay CCB-XX from the assay list of values.

6. Select Save>Continue from the toolbar Action drop-down menu.
7. Using your laboratory lab type again, enter a second parameter, XXPARM2, and a description.
8. In the Data Type field, select Volume% from the list of values.
9. In the Unit field, select UNIT from the list of values.
10. In the Numeric Range, enter 80 and 100.
11. Save your work.

Designating the Technical Parameters Sequence

1. Open the Technical Parameters Sequences window:
(N) OPM Product Development>Lab Management>Setup>Technical
Parameter Sequences
2. Verify that your laboratory type defaults in the Laboratory Type field.
3. In the Sort field of the Parameter Sequence region, enter sequence numbers allowing for space in the sequence.

Getting Item Technical Parameter Data to the Item Technical Table



Item Technical Parameter Data Details

Item Technical Parameter Data Details

You can enter a technical parameter data value if the technical parameter value is not calculated by an OPM application and does not come from a Quality Control assay.

Maximum value
Minimum value
Number of significant figures

Data value constraints

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Practice 9-3 Overview

Practice 9-3 Overview

This hands-on practice covers defining and setting up item technical data details.



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Practice 9-3


Defining Item Technical Data

Now that you have specified your sequence, you can enter the technical data for your items, which are the values of your technical parameters. For your lab type, set up item technical data for the ingredient Secret Blend (9410).

Practice 9-3 Solutions

Practice 9-3 Solutions

This hands-on practice covers defining and setting up item technical data details.



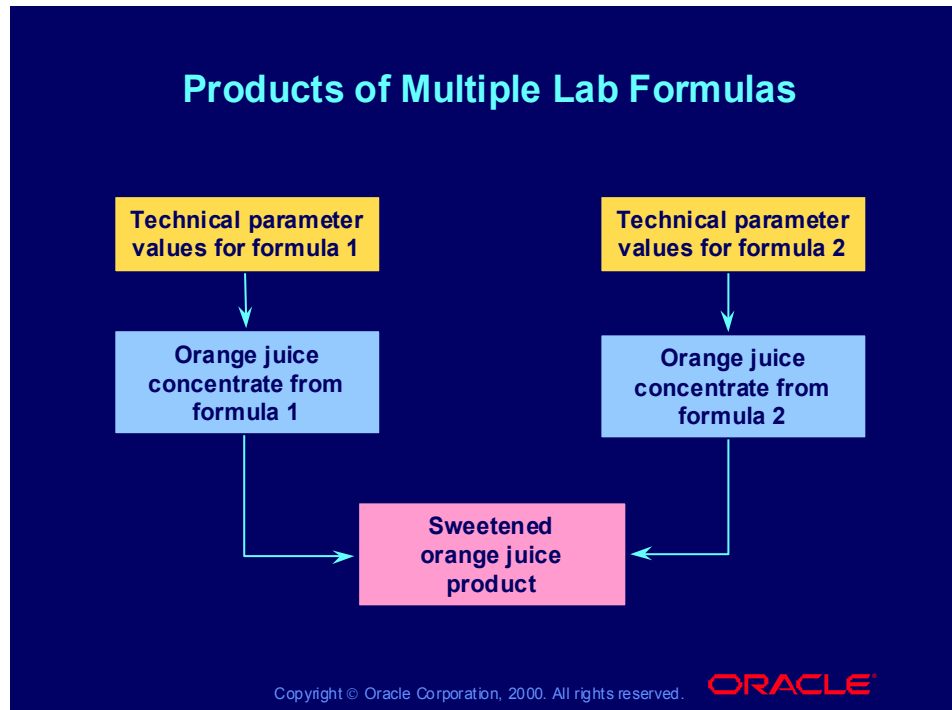
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Practice 9-3 Solutions

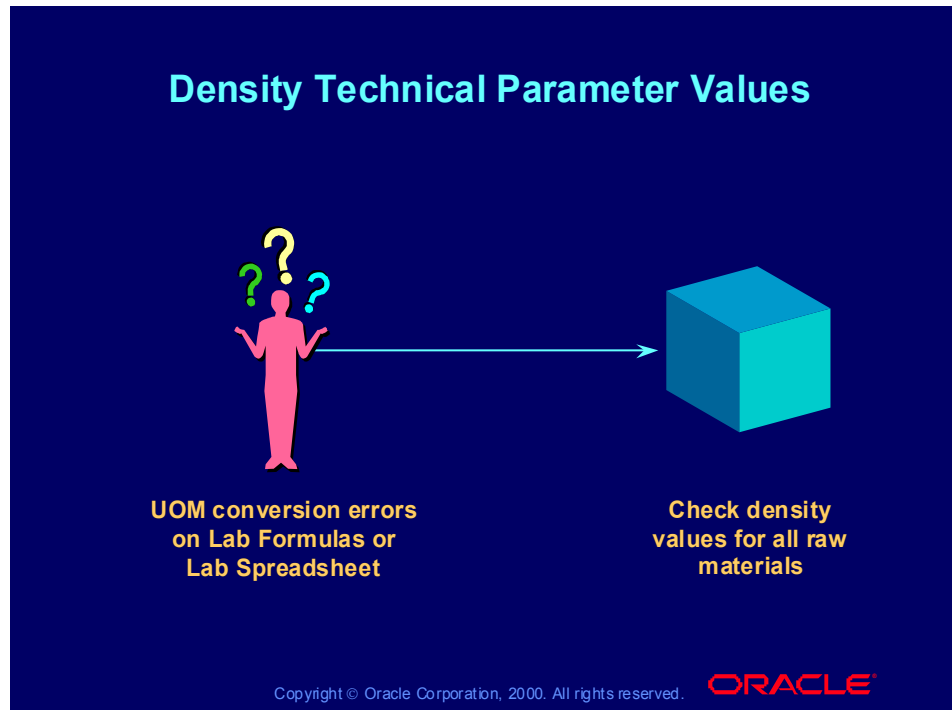
Defining Item Technical Data

1. Open the Item Technical Data window:
(N) OPM Product Development>Lab Management>Setup>Item Technical Data
2. Enter your lab type XX1
3. Enter the item 9410, Secret Blend. Press [Tab] to populate all the fields excluding the Value field in the Details region.
4. Enter values for the DENSITY and XXPARM2 parameters.
5. Save your work.

Products of Multiple Lab Formulas



Density Technical Parameter Values



Practice 9-4 Overview

Practice 9-4 Overview

This essay practice covers setting up multiple lab types.



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Practice 9-4

Scenario Discussion Question for Defining Lab Types

A resin manufacturer makes preblends as the first step in production. The preblend formulation can be occasionally reworked based on lab analysis for lower cost ingredient substitutions.

Three people in the QC Lab department are solely responsible for preblend formula definition. Another group in the QC Lab department is responsible for in-process and finished product development and analysis.

How could the group be structured to have separate lab data and separate working environments for preblends versus in-process/finished goods in OPM Lab Management?

True or False Questions on Multiple Lab Types

Multiple lab types can be defined for a single shared lab type, but a shared lab type may not be owned by another shared lab type. True or false?

Practice 9-4 Solutions

Practice 9-4 Solutions

This essay practice covers setting up multiple lab types.



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Practice 9-4 Solutions

Scenario Discussion Question for Defining Lab Types

A resin manufacturer makes preblends as the first step in production. The preblend formulation can be occasionally reworked based on lab analysis for lower cost ingredient substitutions.

Three people in the QC Lab department are solely responsible for preblend formula definition. Another group in the QC Lab department is responsible for in-process and finished product development and analysis.

How could the group be structured to have separate lab data and separate working environments for preblends versus in-process/finished goods in OPM Lab Management?

Answer: You can define two separate lab types for preblend and finished goods, and enter the appropriate lab type in the default lab field on each individual's operator code.

True or False Questions on Multiple Lab Types

Multiple lab types can be defined for a single shared lab type, but a shared lab type may not be owned by another shared lab type. True or false?

Answer: True. Lab type and shared lab types cannot be nested. Only one level of the relationship is permitted. A lab type hierarchy cannot be defined.

Summary

Summary

In this lesson, you should have learned how to:

- **Define unit-of-measure types and units of measure**
- **Define inventory items**
- **Define and enter lab types**
- **Define and enter technical parameters, sequences, and data**

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Working with Existing Formulas

Chapter 10

Working with Existing Formulas

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Objectives

Objectives

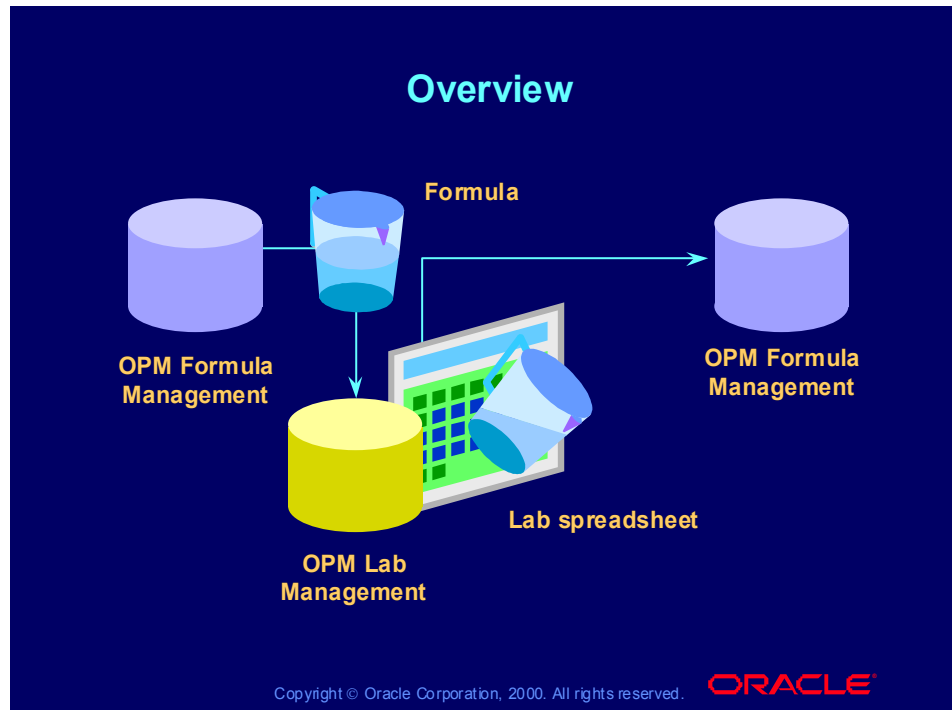
After completing this lesson, you should be able to do the following:

- **Download production formulas to OPM Lab Management**
- **Display ingredient and product technical parameters**
- **Set the item technical data selection**
- **Change and save lab spreadsheet data**
- **View, calculate errors, and save lab spreadsheet data**
- **Upload formulas to OPM Production**

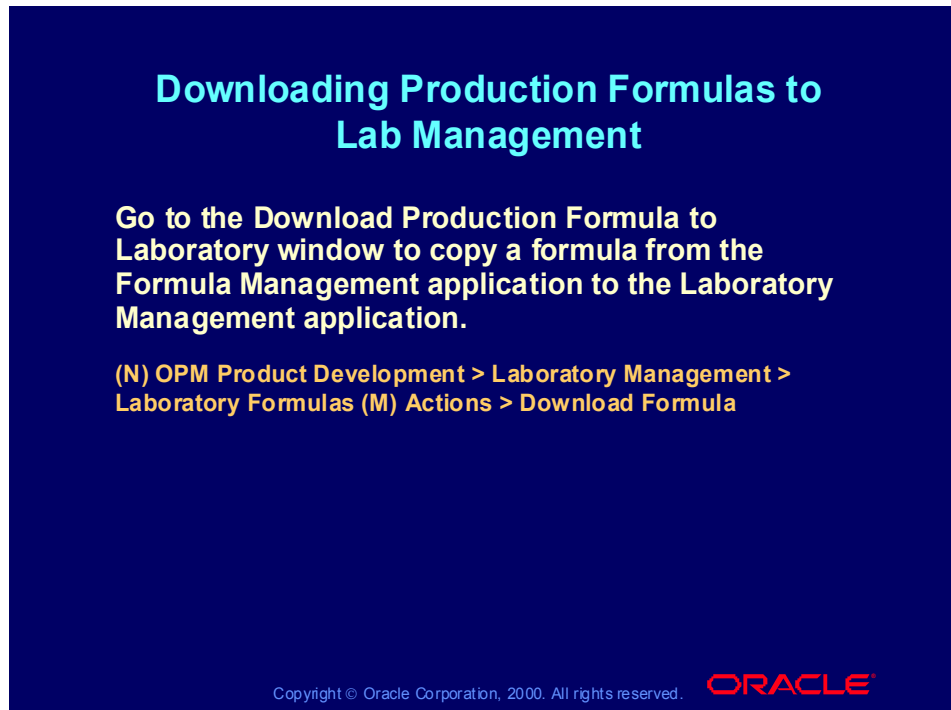
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Overview



Downloading Production Formulas to Lab Management



**Downloading Production Formulas to
Lab Management**

**Go to the Download Production Formula to
Laboratory window to copy a formula from the
Formula Management application to the Laboratory
Management application.**

**(N) OPM Product Development > Laboratory Management >
Laboratory Formulas (M) Actions > Download Formula**

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Formulas > Downloading a Production Formula
... > Downloading a Production Formula Procedure
... > Download Production Formula to Laboratory Field
Reference

Displaying Ingredient Technical Parameter Values

Displaying Ingredient Technical Parameter Values

Go to the Ingredient Technical Parameters window to display the values of the technical parameters for the highlighted ingredient.

**(N) OPM Product Development > Laboratory Management >
Laboratory Formulas (B) Ingredients > (M) Actions > Ingredient
Technical Parameters**

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Formulas > Displaying Ingredient Technical Parameters
... > Displaying Ingredient Technical Parameters Procedure
... > Ingredient Technical Parameters Field Reference

Displaying Product Technical Parameter Value

Displaying Product Technical Parameter Value

Go to the Product Technical Parameters window to display the technical parameter values for a formula product while you are working with a formula.

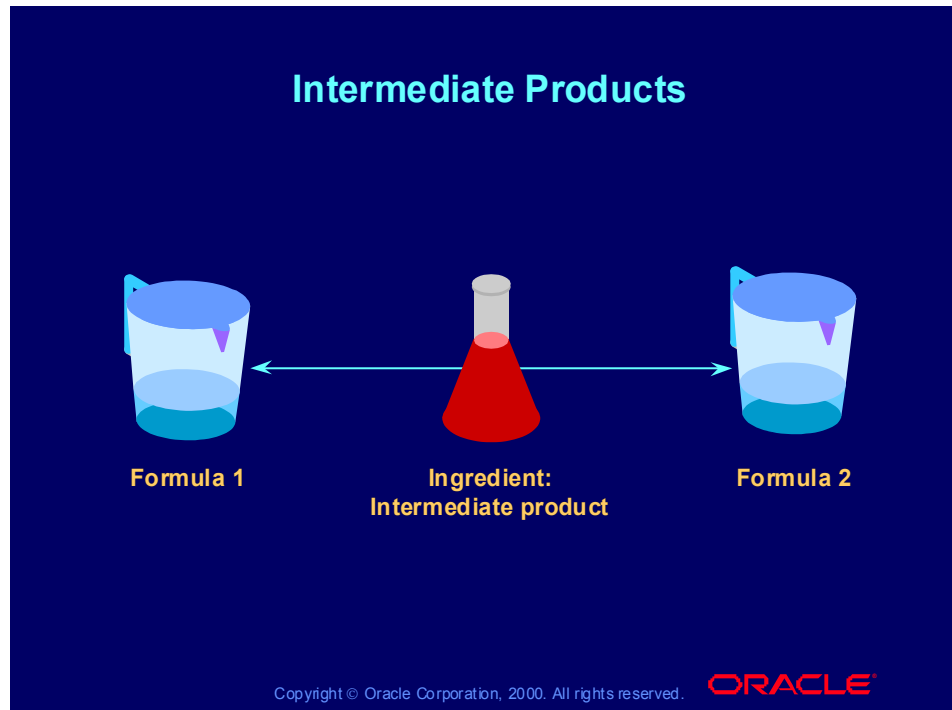
(N) OPM Product Development > Laboratory Management > Laboratory Formulas (B) Ingredients > (M) Actions > Product Technical Parameters

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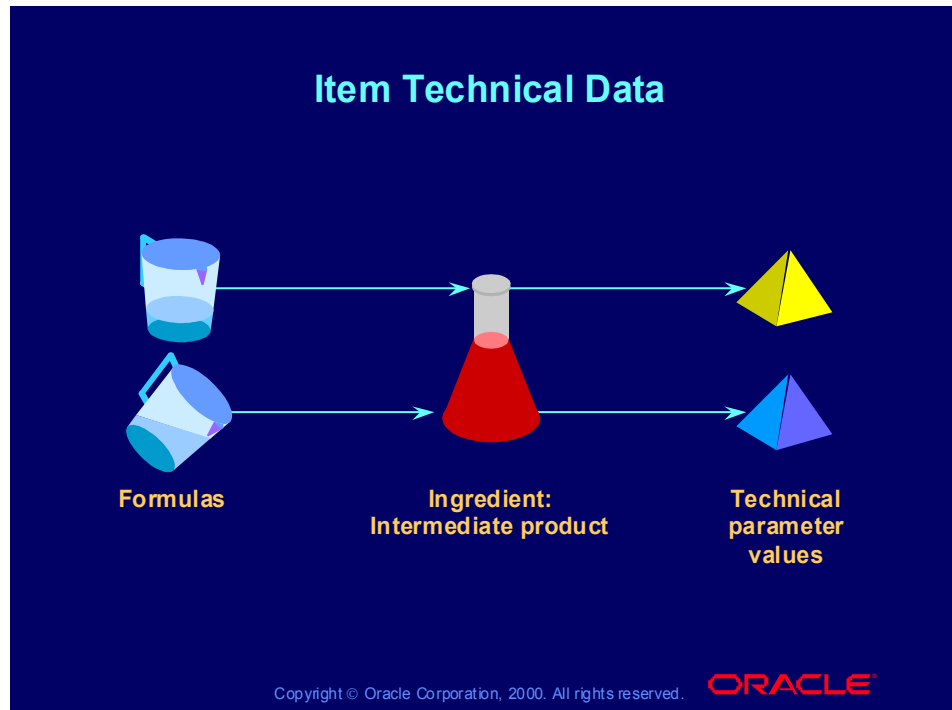
ORACLE

Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Formulas > Displaying Product Technical Parameters
... > Displaying Product Technical Parameters Procedure
... > Product Technical Parameters Field Reference

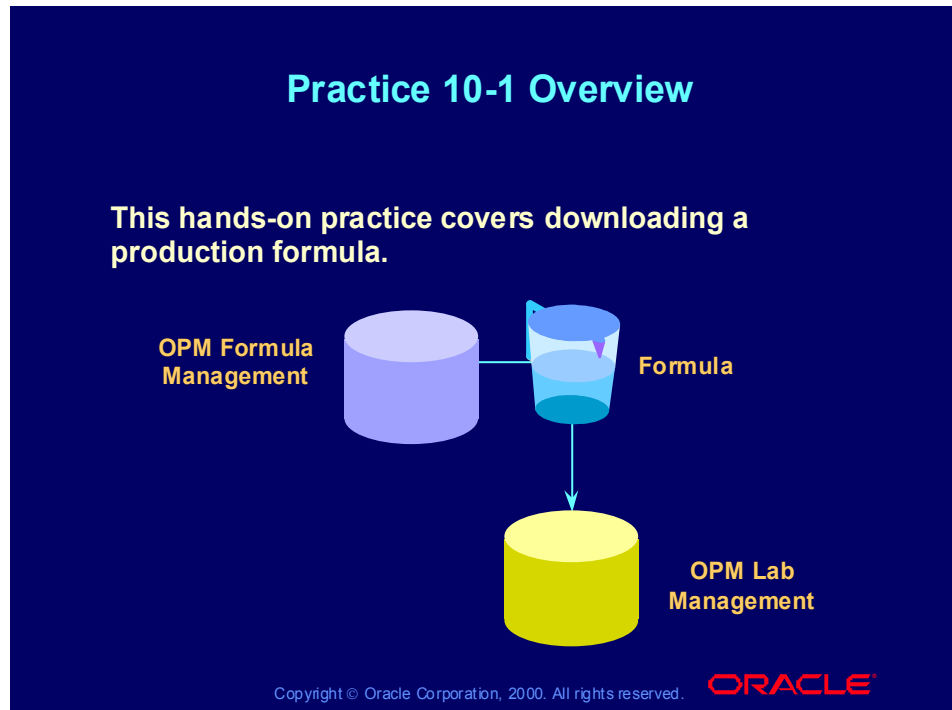
Intermediate Products



Item Technical Data



Practice 10-1 Overview

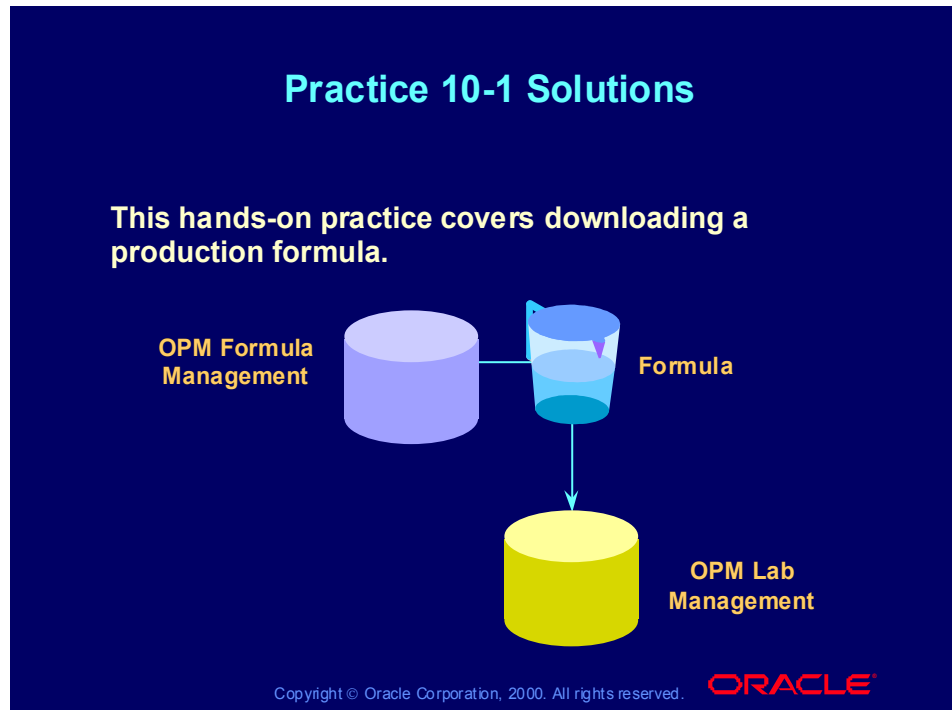


Practice 10-1

Downloading a Production Formula

Download production formula 9250, and give it a name for laboratory management of *XX*-9250, where *XX* is your student number.

Practice 10-1 Solutions



Practice 10-1 Solutions

Downloading a Production Formula

Download production formula 9250, and give it a name for laboratory management of *XX*-9250, where *XX* is your student number.

1. Open the Download Production Formula to Laboratory window:
(N) OPM Product Development>Laboratory Management>Laboratory Formulas (M) Actions>Download Formula
2. Select the formula 9250 from the production formula list of values.
3. Assign a formula name for the lab management formula of *XX*-9410 where *XX* is your student number.
4. Click OK to record your formula and to open the Laboratory Formulas window. Query your new formula.

The Laboratory Spreadsheet

The Laboratory Spreadsheet

Go to the Laboratory Spreadsheet window to display each ingredient, product, and by-product in a formula, and the quantity and technical parameter values for each.

(N) OPM Product Development > Laboratory Management > Spreadsheet

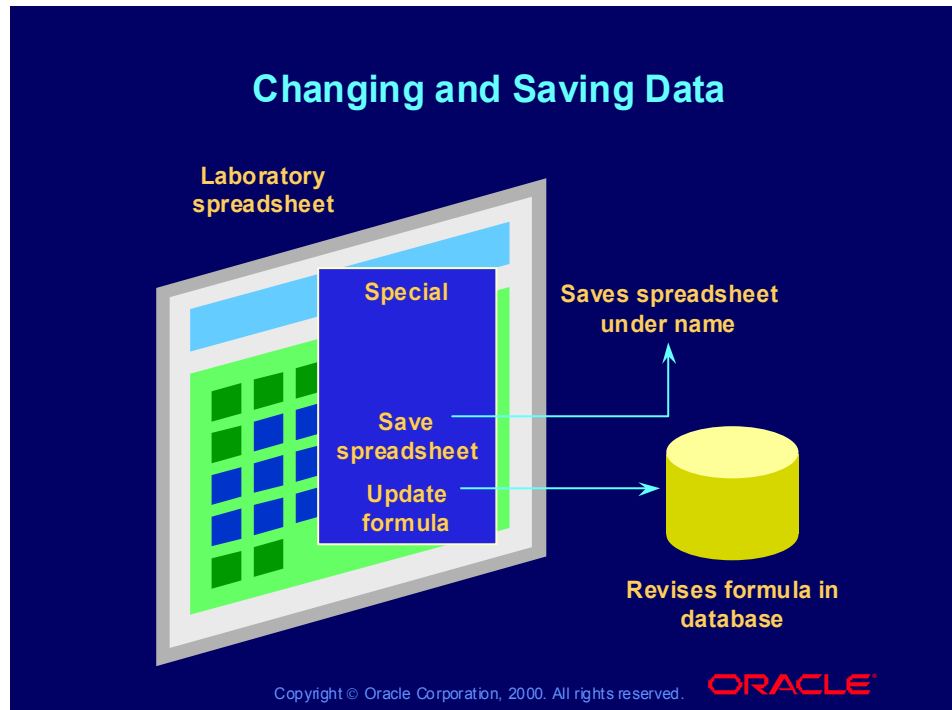
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Spreadsheet > Using the Laboratory Spreadsheet Window

- ... > Using the Laboratory Spreadsheet Window Procedure
- ... > Laboratory Spreadsheet Field Reference
- ... > Laboratory Spreadsheet - Additional Setup in Laboratory Management

Changing and Saving Data



Viewing Calculation Errors

Viewing Calculation Errors

Go to the Display Calculation Errors window to display information about any errors which OPM encountered in performing calculations on the Laboratory Spreadsheet.

(N) OPM Product Development > Laboratory Management > Spreadsheet > (M) Actions > Calculation Errors

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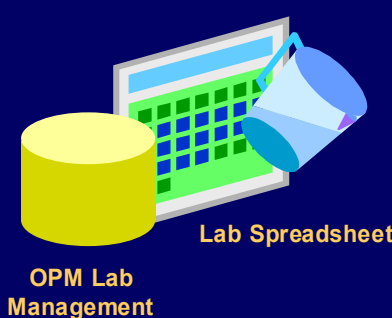
ORACLE

Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Spreadsheet > Displaying Calculation Errors
... > Displaying Calculation Errors Procedure
... > Display Calculation Errors Field Reference

Practice 10-2 Overview

Practice 10-2 Overview

This hands-on practice covers creating a new laboratory formula using the Lab Spreadsheet.



OPM Lab Management

Lab Spreadsheet

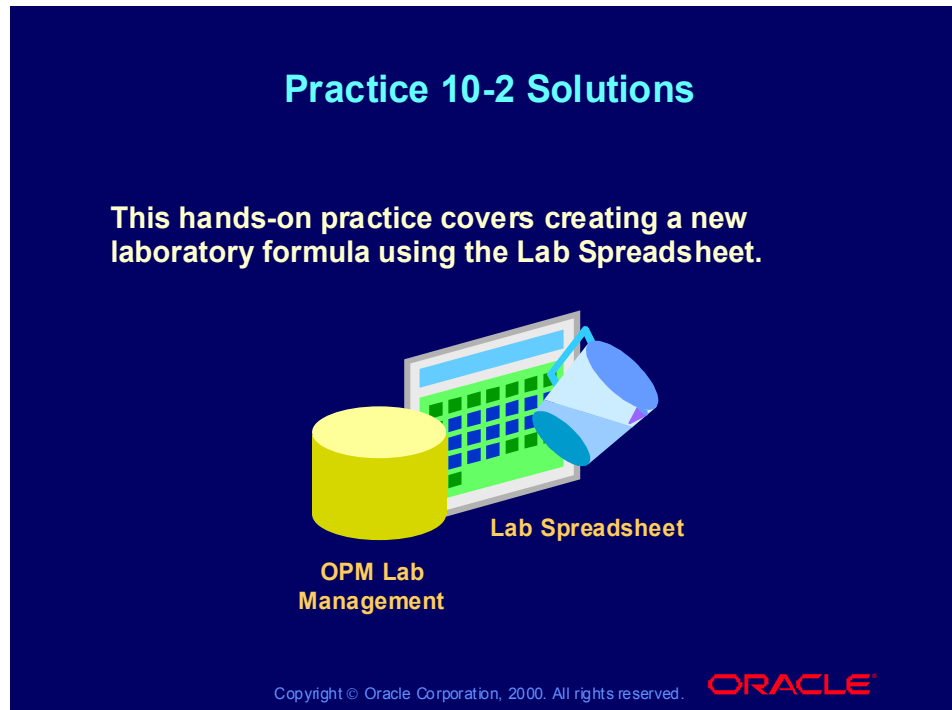
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Practice 10-2

Experimenting with the Laboratory Spreadsheet Window

Now that you have created your own lab formula, you can experiment with different items, quantities, and so on. Open the Laboratory Spreadsheet window and experiment with ingredients for your *XX-9250* formula.

Practice 10-2 Solutions



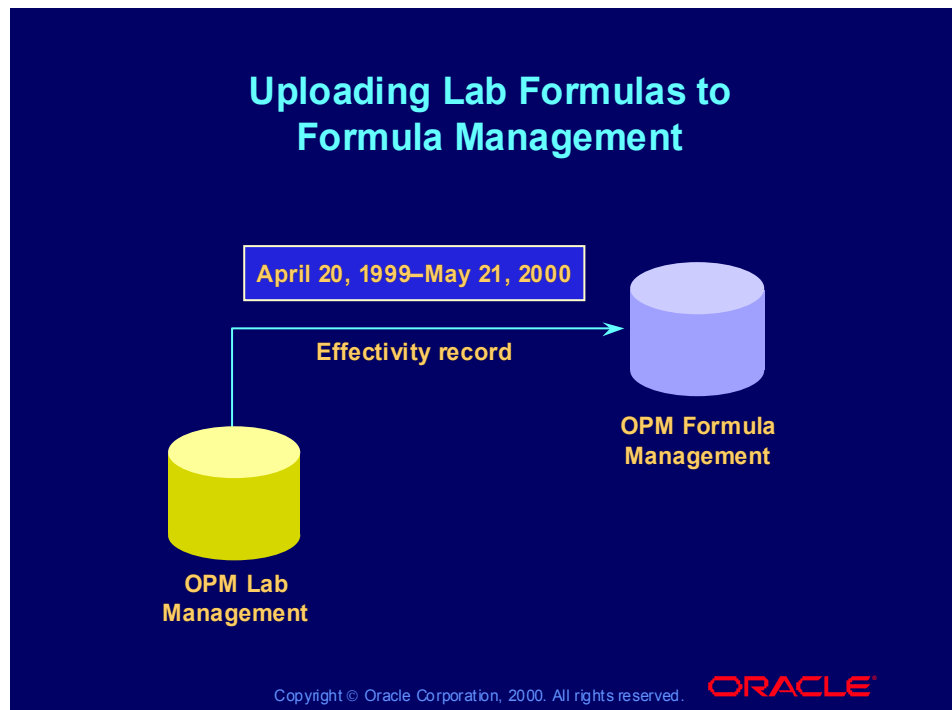
Practice 10-2 Solutions

Experimenting with the Laboratory Spreadsheet Window

Now that you have created your own lab formula, you can experiment with different items, quantities, and so on. Open the Laboratory Spreadsheet window and experiment with ingredients for your *XX-9250* formula.

1. Open the Laboratory Spreadsheet window:
(N) OPM Product Development > Lab Management>Spreadsheet
2. Query your lab formula, *XX-9250*.
3. Perform various changes and input to the items, quantities, and units.
4. Write notes to discuss during class time.
5. Save a new version.

Uploading Lab Formulas to Formula Management



Uploading Formulas to Formula Management

Uploading Formulas to Formula Management

Go to the Upload Laboratory Formula to Production window to copy a formula from the Laboratory Management application to the Formula Management application.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas > (M) Actions > Upload Laboratory Formula

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Uploading a Laboratory Formula to Production
... > Uploading a Laboratory Formula to Production Procedure
... > Upload Laboratory Formula to Production Field
Reference

Maintaining Effectivities

Maintaining Effectivities

Go to the Maintain Effectivities window to enter and save the effectivity record so that the formula can be used in OPM Formula Management and OPM Production Management.

**(N) OPM Product Development > Laboratory Management > Laboratory Formulas > (M) Actions > Upload Laboratory Formula
(B) OK**

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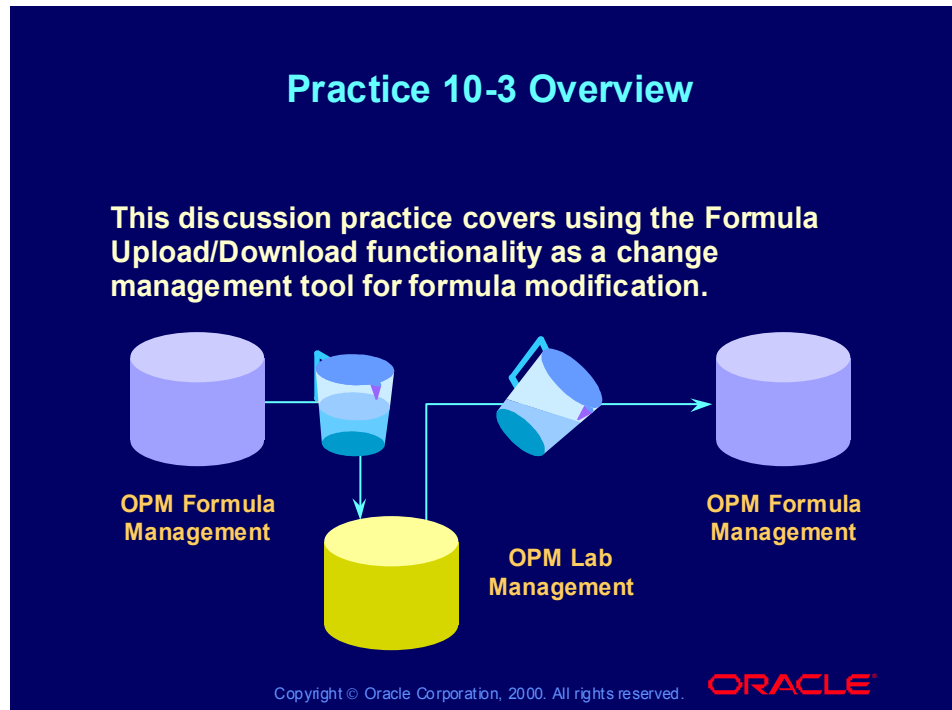
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Formula Management User's Guide > Effectivities > Adding To or Editing Effectivities

... > Adding To or Editing Effectivities Procedure

... > Maintain Effectivities Field Reference

Practice 10-3 Overview

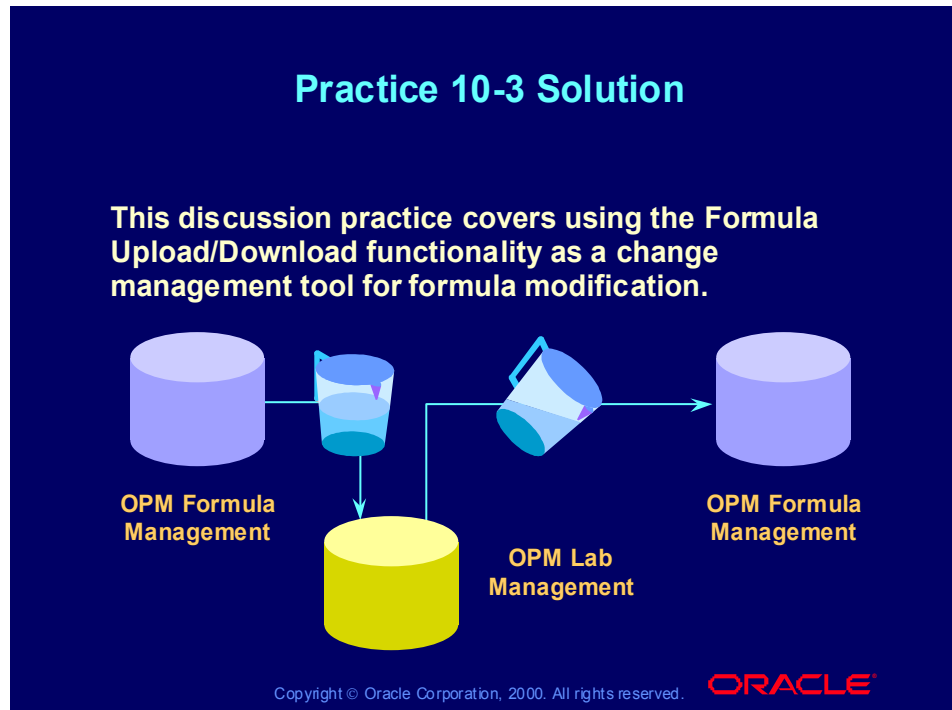


Practice 10-3

Discussion on Upload/Download Functionality

Discuss briefly how the OPM Lab Management Upload/Download formula functionality can be used as a Change Management tool for formula modification.

Practice 10-3 Solution



Practice 10-3 Solutions

Discussion on Upload/Download Functionality

1. In OPM Lab Management, use the download formula option to copy an OPM Production formula into the lab environment for modification. During the lab modification time, there is no effect on the production formula.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > Download Formula

Use the upload formula option to copy the modified formula into OPM Production and create a new version of the formula signifying a change.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > Upload Formula

2. In addition, the effectivity can be defined for a future start date to be used in production for the modified formula.

Summary

Summary

In this lesson, you should have learned how to:

- **Download production formulas to OPM Lab Management**
- **Display ingredient and product technical parameters**
- **Set the item technical data selection**
- **Change and save lab spreadsheet data**
- **View, calculate errors, and save lab spreadsheet data**
- **Upload formulas to OPM Production**

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Creating Lab Formulas

Chapter 11

Creating Lab Formulas

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Objectives

Objectives

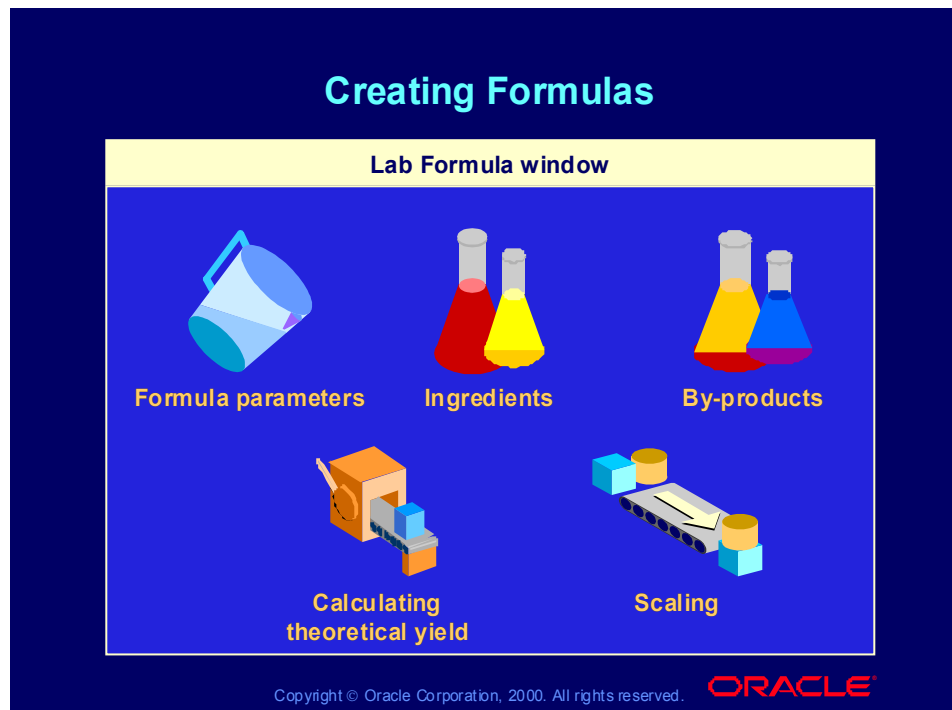
After completing this lesson, you should be able to do the following:

- Enter lab formula parameters
- Specify lab formula ingredients and by-products
- Enter additional information
- List experimental items
- Scale ingredients and products
- Calculate theoretical yield for formulas

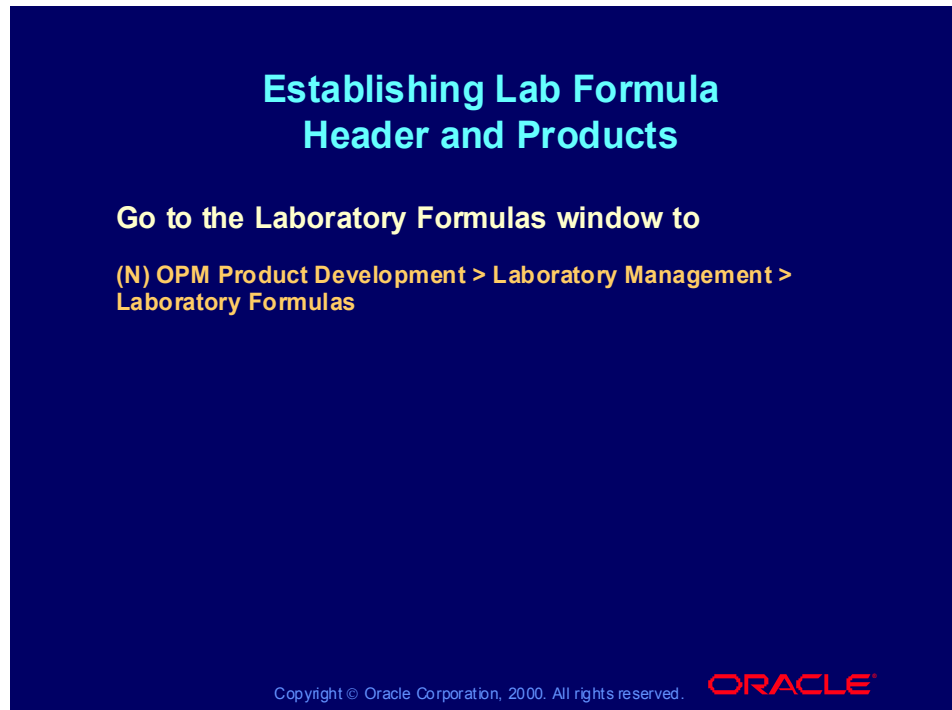
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Creating Formulas



Establishing Lab Formula Header and Products



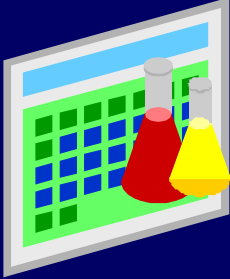
Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Formulas > Entering Laboratory Formula Information

- ... > Entering Laboratory Formula Information Procedure
- ... > Laboratory Formulas Field Reference
- ... > Laboratory Formulas - Additional Setup in Laboratory Management

Practice 11-1 Overview

Practice 11-1 Overview

This hands-on practice covers creating a lab formula.



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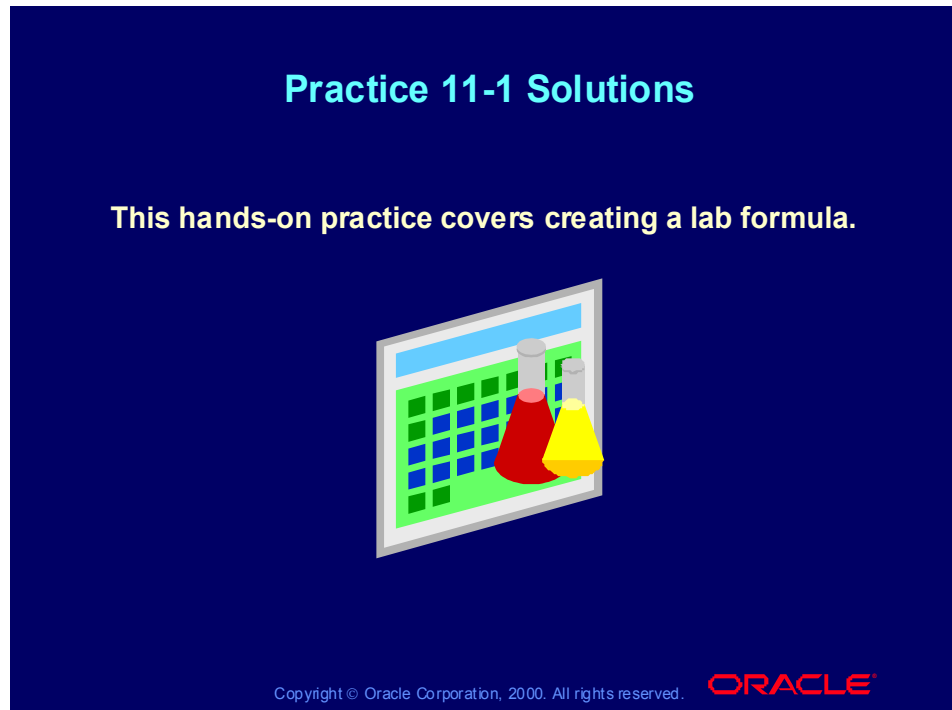
Practice 11-1

Creating a Lab Formula

You want to test a new ice cream flavor, Fish and Chips, to be test-marketed in Melbourne, Australia. For the lab formula, you will need two test ingredient items, and one product items, as follows:

- *XX-FISH*: Chocolate gold fish crackers
- *XX-RAIN CHIPS*: Rainbow chips candy
- *XX-FC ICECREAM*: Fish & Chips Ice Cream
- For your formula name use *XX-F&C ICE CREAM*, where *XX* is your student number.

Practice 11-1 Solutions



Practice 11-1 Solutions

Creating a Lab Formula

You want to test a new ice cream flavor, Fish and Chips, to be test-marketed in Melbourne, Australia. For the lab formula, you will need two test ingredient items, and one product items, as follows:

- *XX-FISH*: Chocolate gold fish crackers
- *XX-RAIN CHIPS*: Rainbow chips candy
- *XX-FC ICECREAM*: Fish & Chips Ice Cream
- For your formula name use *XX-F&C ICE CREAM*, where *XX* is your student number.

1. Create three experimental items: two as ingredients, one as a product. Be sure to select the Experimental check box for all items.
(N) OPM Inventory>Inventory Control>Setup>Item Master
2. Open the Laboratory Formulas window under your default organization:
(N) OPM Product Development>Lab Management>Laboratory Formulas
3. Enter a formula name *XX-F&C ICE CREAM*, where *XX* is your student number.
4. Enter other descriptive fields.
5. In the Products region, enter your product experimental item in the Item

field.

6. Click the Ingredients button to open the Formula Ingredients window.
7. Enter your experimental ingredients, and ingredient 9310 (Ice Cream) and ingredient quantities.
8. Click the Products button to navigate back the Laboratory Formulas window. Save your work.

Establishing Formula Ingredients

Establishing Formula Ingredients

Go to the Formula Ingredients window to enter ingredients and ingredient quantities for a lab formula.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (B) Ingredients

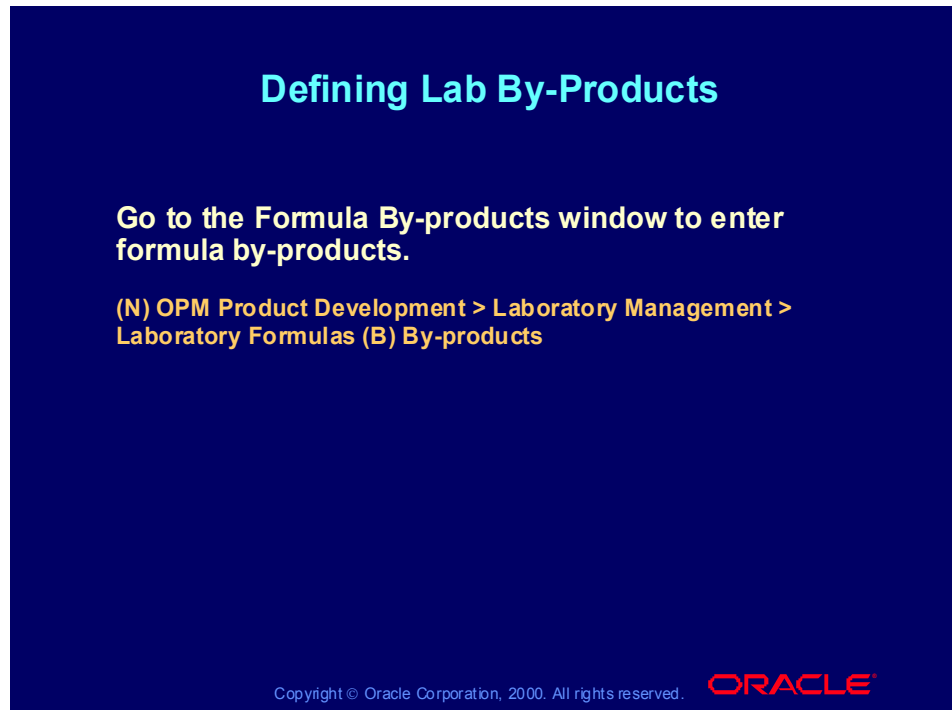
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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Entering Formula Ingredients

- ... > Entering Formula Ingredients Procedure
- ... > Formula Ingredients Field Reference
- ... > Formula Ingredients - Additional Setup in Laboratory Management

Defining Lab By-Products



Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Entering Formula By-products

- ... > Entering Formula By-products Procedure
- ... > Formula By-products Field Reference
- ... > Formula By-products - Additional Setup in Laboratory Management

Lab Formula Additional Information

Lab Formula Additional Information

Go to the Additional Information window to view and add additional information for any line in the lab formula.

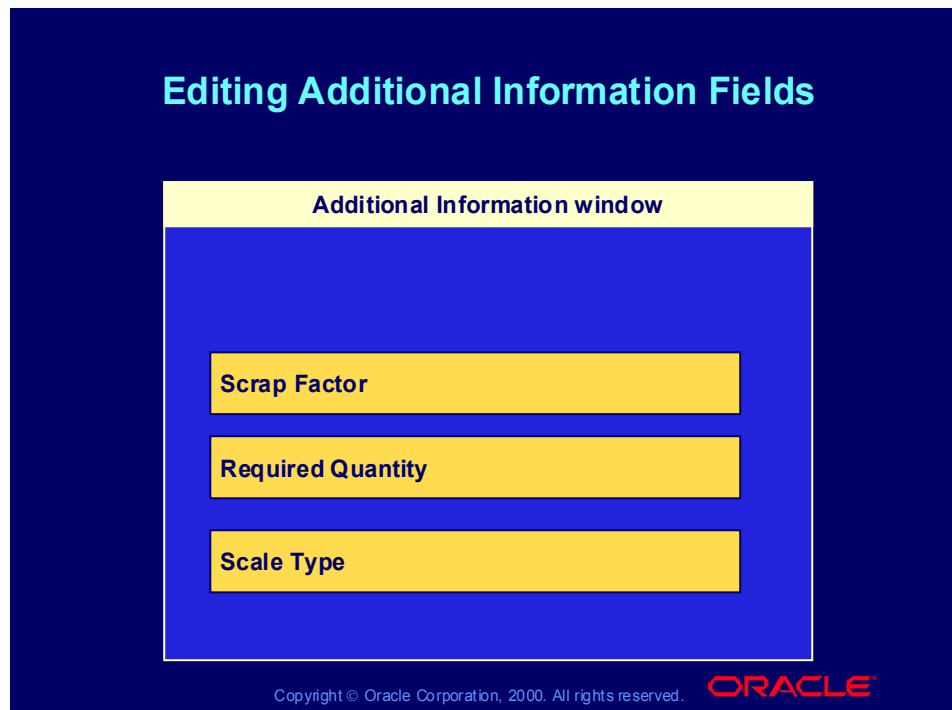
(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > Additional Information

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Entering Additional Formula Information
... > Entering Additional Formula Information Procedure
... > Additional Information Field Reference

Editing Additional Information Fields



Editing Additional Information Fields

Editing Additional Information Fields

Additional Information window

Release Type

Phantom Type

Rework Type

Cost Allocation

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Listing Experimental Items

Listing Experimental Items

Go to the List Experimental Items window to list all of the items in a lab formula that are marked as experimental in the Items window.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > List Experimental Items

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Listing Experimental Items

... > Listing Experimental Items Procedure

... > List Experimental Items Field Reference

Scaling Ingredients and Products

Scaling Ingredients and Products

Go to the Scale Formula window to proportionately increase or decrease the ingredient, product, and by-product quantities in a formula.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > Scale

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM
Product Development > OPM Laboratory Management User's Guide >
Laboratory Formulas > Scaling Ingredient and Product Quantities
... > Scaling Ingredient and Product Quantities Procedure
... > Scale Formula Field Reference

Calculating a Theoretical Laboratory Yield

Calculating a Theoretical Laboratory Yield

Go to the Calculate Theoretical Yield window to enter the percent yield for the lab formula.

(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > Theoretical Yield

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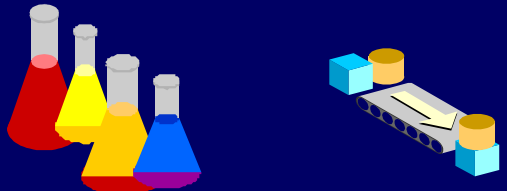
Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Laboratory Formulas > Calculating Theoretical Yield

- ... > Calculating Theoretical Yield Procedure
- ... > Calculate Theoretical Yield Field Reference

Practice 11-2 Overview

Practice 11-2 Overview

This hands-on practice covers creating experimental items and allowing for scaling.



Experimental items

Scaling

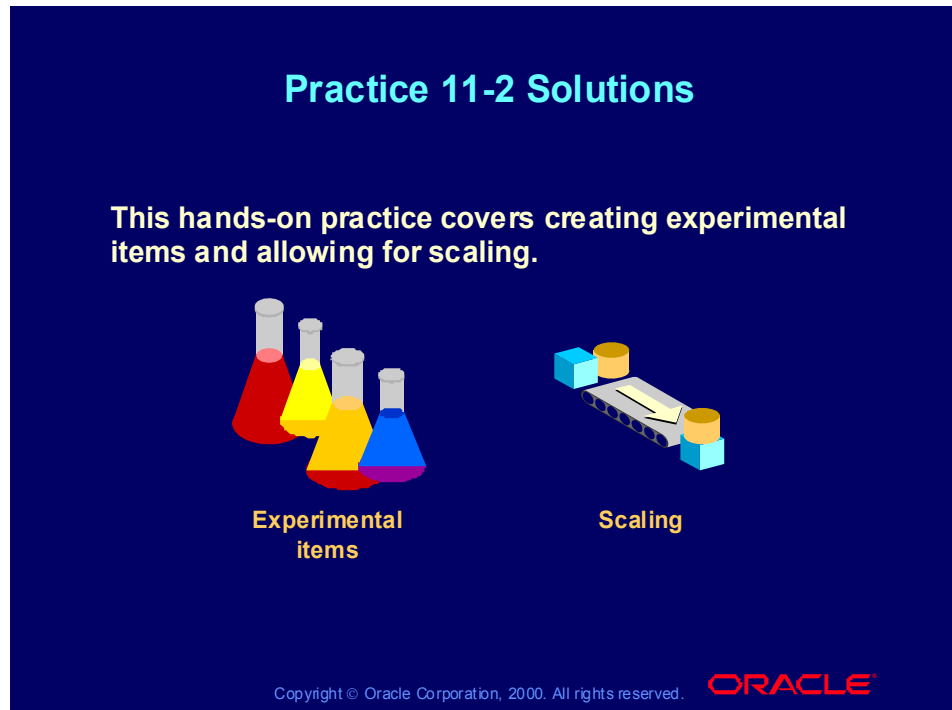
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Practice 11-2

Scaling Product

Scale your experiment product by 5%.

Practice 11-2 Solutions



Practice 11-2 Solutions

Scaling Product

Scale your experiment product by 5%.

1. Open the List Experimental Items window:
(N) OPM Product Development > Laboratory Management > Laboratory Formulas (M) Actions > List Experimental Items
2. Query your lab formula *XX-F&C ICE CREAM*.
3. Open the Scale Formula window.
(N) OPM Product Development>Lab Management>Laboratory Formulas (M) Actions>Scale
4. In the Factor% field, enter 5.
5. Click OK.
6. Verify that the scaling occurred by referencing the Quantity field in the Products region of the Laboratory Formulas window, and in the Ingredients region of the Formula Ingredients window.

Summary

Summary

In this lesson, you should have learned how to:

- **Enter lab formula parameters**
- **Specify lab formula ingredients and by-products**
- **Enter additional information**
- **List experimental items**
- **Scale ingredients and products**
- **Calculate theoretical yield for formulas**

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Using Lab Ingredient Search and Replace

Chapter 12

Using Lab Ingredient Search and Replace

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Objectives

Objectives

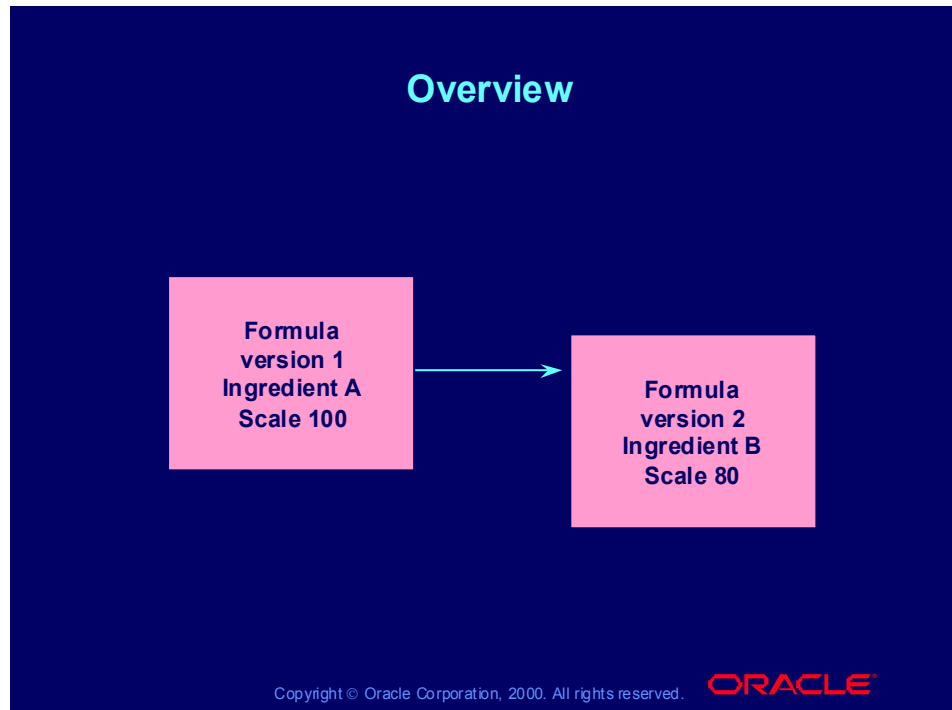
After completing this lesson, you should be able to do the following:

- **Establish ingredient search and replace parameters**
- **Select ingredient replacement**

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Overview



Ingredient Search and Replace Parameters

Ingredient Search and Replace Parameters

Go to the Ingredient Search and Replace window to specify the old ingredient that is to be replaced, the new ingredient, and a scale factor.

(N) OPM Product Development > Laboratory Management > Item Search/Replace

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Help: Oracle Manufacturing Applications > Oracle Process Applications > OPM Product Development > OPM Laboratory Management User's Guide > Ingredient Management > Replacing Ingredients in a Formula

- ... > Replacing Ingredients in a Formula Procedure
- ... > Ingredient Search and Replace Field Reference
- ... > Ingredient Search and Replace - Additional Setup in Laboratory Management

Summary

Summary

In this lesson, you should have learned how to:

- **Establish ingredient search and replace parameters**
- **Select ingredient replacement**

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Course Summary

Chapter 13

Course Summary



Course Summary

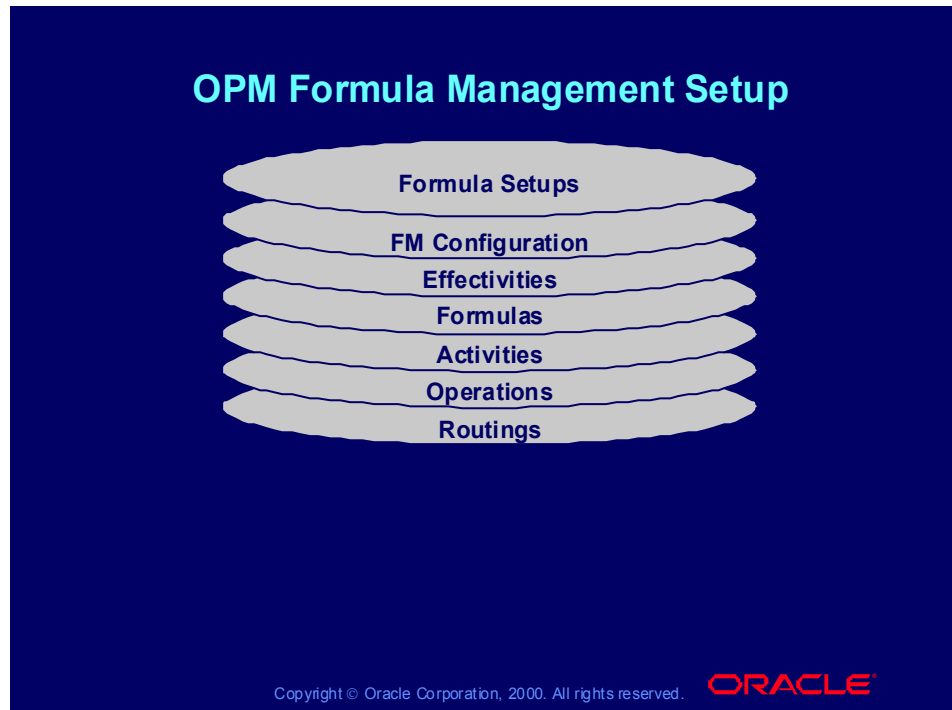
In this course, you should have learned how to:

- **Describe the concepts and flows that drive Oracle Process Manufacturing (OPM) Lab and Formula Management**
- **Navigate through the Lab and Formula Management responsibilities**
- **Perform required setups.**
- **Create formulas, routings, and effectivities**
- **Define formula modifications**
- **Use Formula Management online inquiries and reports**

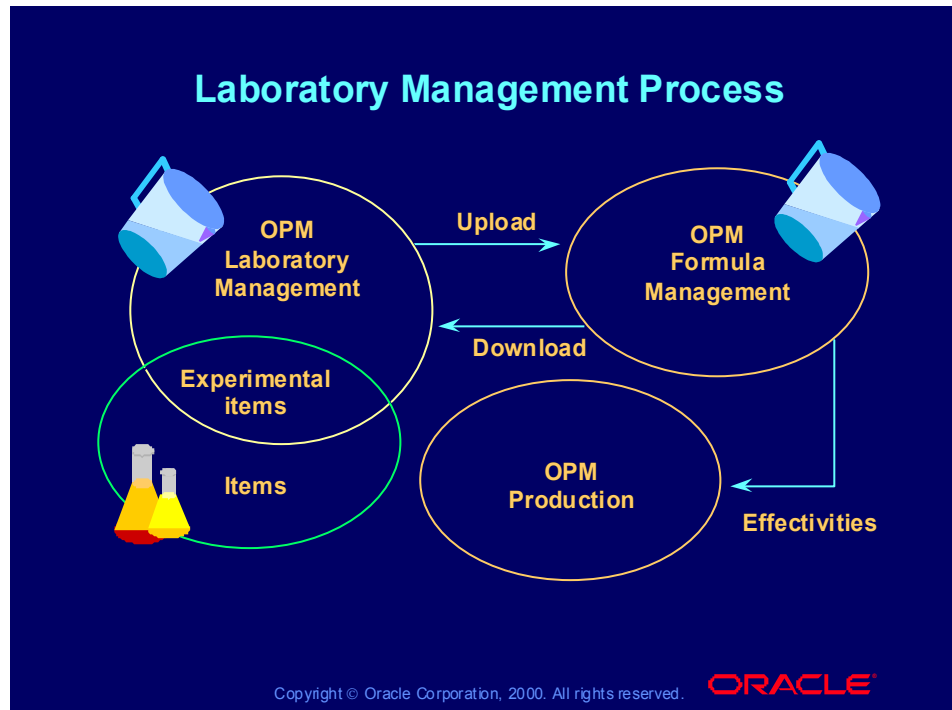
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OPM Formula Management Setup



Laboratory Management Process



Additional Information:

Additional Information:

**For more information, please refer to the
OPMFormula and Laboratory Management Release
11i User's Guide**

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