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| Test ScriptSAP S/4HANA - 24-08-20 | public |
| Advanced Ingredient Replacement for Recipes (22R\_DE) |

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# Purpose

This scope item supports finding recipes based on header attributes and calculated values. You can view the result list with key attributes displayed for the user, collect items for further processing, and get an analysis that supports the decision to replace an ingredient.

This document provides a detailed procedure for testing this scope item after solution activation, reflecting the predefined scope of the solution. Each process step, report, or item is covered in its own section, providing the system interactions (test steps) in a table view. Steps that are not in scope of the process but are needed for testing are marked accordingly. Project-specific steps must be added.

# Prerequisites

This section summarizes all the prerequisites for conducting the test in terms of systems, users, master data, organizational data, other test data and business conditions.

## System Access

|  |  |
| --- | --- |
| System | Details |
| System | Accessible via SAP Fiori launchpad. Your system administrator provides you with the URL to access the various apps assigned to your role. |

## Roles

Assign the following business roles to your individual test users. Alternatively, if available, you can create business roles using the following spaces with pages and predefined apps for the SAP Fiori launchpad and assign the business roles to your individual test users.

Note These roles or spaces are examples provided by SAP. You can use them as templates to create your own roles or spaces.

For more information about business roles, refer to Assigning business roles to a user in the [Administration Guide to Implementation of SAP S/4HANA with SAP Best Practices](https://help.sap.com/viewer/S4HANA2020_AdminGuide) .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name (Role) | ID (Role) | Description (Space) | ID (Space) | Log On |
| Recipe Developer | SAP\_BR\_RECIPE\_DEVELOPER | Recipe Development | SAP\_BR\_RECIPE\_DEVELOPER |  |

## Master Data, Organizational Data, and Other Data

The organizational structure and master data of your company has been created in your system during activation. The organizational structure reflects the structure of your company. The master data represents materials, customers, and vendors, for example, depending on the operational focus of your company.

Use your own master data or the following sample data to go through the test procedure.

|  |  |  |  |
| --- | --- | --- | --- |
| Data | Sample Value | Details | Comments |
| Raw Substance | PLMPI\_INPUT2 | INPUT 2 (AGENT2) |  |
| Raw Substance | PLMPI\_INPUT3 | INPUT 3 (AGENT 3) |  |
| Raw Substance | PLMPI\_INPT13 | Green Colorant |  |
| Raw Substance | PLMPI\_INPT14 | Green Colorant 2 |  |
| Raw Substance | PLMPI\_INPT15 | Red Colorant |  |
| Raw Substance | PLMPI\_INPT16 | Red Colorant 2 |  |
| Real Substance | PLMPI\_OUTPT2 | OUTPUT 2 |  |
| Real Substance | PLMPI\_OUTPT3 | OUTPUT 3 |  |
| Real Substance | PLMPI\_OUTPT4 | OUTPUT 4 |  |
| Real Substance | PLMPI\_OUTPT5 | OUTPUT 5 |  |
| Real Substance | PLMPI\_OUTPT6 | OUTPUT 6 |  |
| Real Substance | PLMPI\_OUTPT7 | OUTPUT 7 |  |
| Real Substance | PLMPI\_OUTPT8 | OUTPUT 8 |  |
| Real Substance | PLMPI\_OUTPT9 | OUTPUT 9 |  |
| Real Substance | PLMPI\_OUTPT10 | OUTPUT 10 |  |
| Recipe | PLMPI\_OUTPT2/000/000 | Product 2(green) |  |
| Recipe | PLMPI\_OUTPT3/000/000 | Product 3(green) |  |
| Recipe | PLMPI\_OUTPT4/000/000 | Product 4(green) |  |
| Recipe | PLMPI\_OUTPT5/000/000 | Product 5(green) |  |
| Recipe | PLMPI\_OUTPUT\_6/000/000 | Product 6(green) |  |
| Recipe | PLMPI\_OUTPUT\_7/000/000 | Product 7(green) |  |
| Recipe | PLMPI\_OUTPUT\_8/000/000 | Product 8(green) |  |
| Recipe | PLMPI\_OUTPUT\_9/000/000 | Product 9(green) |  |
| Recipe | PLMPI\_OUTPUT\_10/000/000 | Product 10(green) |  |
| Recipe | PLMPI\_OUTPUT\_7/000/001 | Product 7(green) |  |
| Recipe | PLMPI\_OUTPUT\_8/000/001 | Product 8(green) |  |
| Material | RMPI013 | Input 13 (Green Color) |  |
| Pure Substance | PLMPI\_PURE11 | Pure Substance 11 (Pigment Green) |  |
| Pure Substance | PLMPI\_PURE14 | Pure substance 14 (Pigment Red) |  |

When you re-run the test scripts, create new recipes by copying the existing recipes listed in the master data. For details, see the test script 1QC: Formulation - Recipe Development

For all the Recipes, restore the following entries to their initial values as mentioned in this example and then create new recipes by copying this recipe

Example For the recipe PLMPI\_OUTPT2/000/000, maintain the following initial values:

* Valid To: 12/31/9999
* Maintain these default values in the Formula tab:

|  |  |  |
| --- | --- | --- |
| Item Number | Item Type | Specification |
| 1 | Primary Output | PLMPI\_OUTPT2 |
| 10 | Input | PLMPI\_INPUT1 |
| 20 | Input | PLMPI\_INPUT2 |
| 30 | Input | PLMPI\_INPT13 |

## Business Conditions

Before this scope item can be tested, the following business conditions must be met.

|  |  |
| --- | --- |
| Scope Item ID | Business Condition |
| 1QA – Specification Management for Recipes | Title Specifications should be created in 1QA before executing 22R |

## Preliminary Steps

### Check All Recipe Statuses and Set the Recipes Status to Released

Before executing this test script, check all the recipes statuses listed in the section Master Data, Organizational Data and other data of this document.

All the recipes should be in 300 - Released status. If not, set the recipes status to 300 - Released .

To modify the Recipe Statuses , do the following:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori Launchpad as a Recipe Developer. |  |  |
| 2 | Access App | Open the Manage Recipes (F2210) app. | The Manage Recipes screen appears. |  |
| 3 | Enter Recipe ID | On the Manage Recipes screen, make the following entries:Example: Recipe ID:PLMPI\_OUTPT2/000/000 |  |  |
| 4 | Choose Go | On the Manage Recipes screen, choose Go. | The recipe is displayed in the Recipes list |  |
| 5 | Select the Recipe ID and choose Display Recipe. | Select the Recipe ID and in the dialog box, choose Display Recipe. | The Display Recipe screen appears. |  |
| 6 | Navigate to General Data tab | Choose the General Data tab. | General Data and Header Data are displayed. |  |
| 7 | Check Recipe Status | If the Status is already 300 - released , no action is required. Repeat the same steps above for all recipes listed in the section Master Data, Organizational Data and other data of this document. If the recipes status is 100 - In Work, proceed with the following steps |  |  |
| 8 | Choose Edit | Choose Edit. | The Recipe can be edited now. |  |
| 9 | Set Status to “For Release” | On the Change Recipe screen, make the following entries:Status: 200 | The Status is changed to For Release |  |
| 10 | Set Status to Released | On the Change Recipe screen, make the following entries:Status: 300 | The Status is changed to Released. |  |
| 11 | Save your entries | Save your entries. | A message confirming that the changes have been saved is displayed. Recipe is released |  |
| 12 |  | Note Continue and re-execute the steps mentioned for all the recipes which are mentioned in section Master Data, Organizational Data and other data. |  |  |

# Overview Table

This scope item consists of several process steps provided in the following table.

If your system administrator has enabled spaces and pages on the SAP Fiori launchpad, the homepage will only contain the essential apps for performing the typical tasks of a business role.

You can find all other apps not included on the homepage using the search bar.

If you want to personalize the homepage and include the hidden apps, navigate to your user profile and choose Settings > App Finder .

|  |  |  |  |
| --- | --- | --- | --- |
| Process Step | Business Role | App/Transaction | Expected Results |
| Recipe Analysis by Material |  |  |  |
| [Determine Usage of Material in Recipes](#unique_10) [page ] 11 | Recipe Developer | Recipe Finder (F0576A) | Usage of material is determined. |
| [Export Selection to Excel (Optional)](#unique_11) [page ] 12 | Recipe Developer | Recipe Finder (F0576A) | Excel is imported |
| [Analyze Search Result List](#unique_12) [page ] 14 | Recipe Developer | Recipe Finder (F0576A) | Recipe is selected. |
| [Decide for Ingredient to Replace](#unique_13) [page ] 16 | Recipe Developer | Manage Recipes (F2210) | Manual step. |
| Recipe Analysis by Standard Composition |  |  |  |
| [Determine Usage of Pure Substance in Recipes](#unique_14) [page ] 17 | Recipe Developer | Recipe Finder (F0576A) | Usage of material is determined |
| [Export Selection to Excel (Optional)](#unique_15) [page ] 19 | Recipe Developer | Recipe Finder (F0576A) | Excel is imported. |
| [Analyze Search Result List](#unique_16) [page ] 20 | Recipe Developer | Recipe Finder (F0576A) | Recipe is selected. |
| [Decide for Ingredient to Replace](#unique_17) [page ] 23 | Recipe Developer | Manage Recipes (F2210) | Manual step |
| Ingredient Replacement |  |  |  |
| [Determine Usage of an Ingredient in Recipes](#unique_18) [page ] 24 | Recipe Developer | Recipe Finder (F0576A) | Usage of material is determined. |
| [Export Selection to Excel (Optional)](#unique_19) [page ] 25 | Recipe Developer | Recipe Finder (F0576A) | Excel is imported. |
| [Analyze Search Result List](#unique_20) [page ] 27 | Recipe Developer | Recipe Finder (F0576A) | Recipe is selected. |
| [Decide for Ingredient to Replace](#unique_21) [page ] 29 | Recipe Developer | Manage Recipes (F2210) | Recipe where ingredient is getting replaced is displayed. |
| [Create New Versions for Impacted Recipes](#unique_22) [page ] 30 | Recipe Developer | Manage Recipes (F2210) | New recipe version is created. |
| [Release New Recipe Version](#unique_23) [page ] 32 | Recipe Developer | Manage Recipes (F2210) | New recipe version is released. |
| [Check Validity of Versions](#unique_24) [page ] 34 | Recipe Developer | Manage Recipes (F2210) | Ingredient Calculation is performed. |

# Test Procedures

This section describes test procedures for each process step that belongs to this scope item.

## Recipe Analysis by Material

### Determine Usage of Material in Recipes

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can determine whether the material is a direct or an indirect input in a recipe.

Note Ingredients in Recipe Development can have multiple materials assigned to them. They all share the same physical, chemical and nutritional properties. However, they can be purchased from different suppliers. It is upto the Recipe Developers to select which material they want to use in production. Some users remember material numbers rather than ingredient IDs, or only the material which is affected due to the change in supplier.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori Launchpad as a Recipe Developer. |  |  |
| 2 | Access App | Open the Recipe Finder (F0576A) app. | The Recipe Finder screen appears. |  |
| 3 | Enter Material | On the Recipe Finder screen, choose the Material value help icon. The Select: Material screen appears. Make the following entry, and choose Go.Description: Input 13 (Green Color) |  |  |
| 4 | Select the Material | Select material RMPI013 and choose OK to close the Select: Material value help screen. | The Select: Material value help screen is closed. |  |
| 5 | Choose Go | On the Recipe Finder screen, choose Go. | All the recipes where material RMPI013 is used in its formula or in an ingredient recipe’s formula, are listed. A dynamic column RMPI013 (Input 13 (Green color)) shows whether the material is a Direct or an Indirect or Direct + Indirect in the recipes listed in the search result. |  |

### Export Selection to Excel (Optional)

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can select a recipe to replace an ingredient based on the values exported to the Excel.

Procedure

|  |  |  |  |
| --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result |
| 1 | Note | Continue from the test procedure [Determine Usage of Material in Recipes](#unique_10) [page ] 11App: Recipe Finder (F0576A)Role: Recipe Developer |  |
| 2 | Export to spreadsheet | Choose the Export to Spreadsheet icon. | Details listed in the table are exported to an MS Excel file and the Excel file is saved in the download folder. |
| 3 | Analyze List to Find a Recipe for Ingredient Replacement | Open the downloaded Excel file and sort the recipe list by the column RMPI013 (Input 13 (Green Color)).Choose the PLMPI\_OUTPT2/000/000 recipe, where the ingredient RMPI013 is used as a direct input. You can mark the Recipe ID for further reference, in case you want to continue your work later.You can access Recipes directly from the Manage Recipes (F2210) app if you already have the ID. | Note down the Recipe ID. |

### Analyze Search Result List

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can select a recipe for further analysis.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure ([Determine Usage of Material in Recipes](#unique_10) [page ] 11)App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Inspect Result List | Notice that there are multiple recipes that match the search criteria.Always start replacing a material in a recipe in the following order:1. Where material is used directly
2. Where material is used as direct indirect input
3. Where material is used as an indirect input
 | The recipe where the material is to be replaced is selected for further analysis. |  |
| 3 | Customize Results Table | Choose Settings (a cogwheel icon at the top right corner of the results table) to open the settings dialog. |  |  |
| 4 | Display Validity Dates | On the Columns tab, make sure that Valid To and Valid From are selected, then choose OK.Note Some recipes have future validity dates. These recipes must also be dealt with, but it is not very urgent. |  |  |
| 5 | Analyze Recipes | Choose Analyze Results | The Analysis Parameters popup screen appears |  |
| 6 | Select Recipe Source Analysis | Select By Source on the Analysis Parameters pop-up screen and make sure that the current date is selected as the Calculation Date. Choose OK.Note Calculation Date is always required for calculation based analysis, even if you used Any Date as Search Date. This is because it is possible that you get different values for the same recipe at different points in time. This should usually be avoided, and if this happens, then an issue is shown next to the recipe in Recipe Finder. | The Recipe Analysis - By Source screen appears |  |
| 7 | Customize Results Table | Choose Settings (a cogwheel icon at the top right corner of the results table) to open the settings dialog. | The Settings dialog screen appears. |  |
| 8 | Group Table | Select the Group tab.Select Search Item Description from the dropdown list. Choose +(Add Grouping Criterion) to select Source Recipe from the dropdown list in the second row.Note You can always undo your changes to the table layout by opening this dialog and choosing Restore. | The Recipes Result table will be grouped into Search Item and Recipe ID as the grouping parameters. |  |
| 9 | Count Recipes in Each Group | Select the Columns tab and check if Number of Recipes is selected from the list. If not, select it, then choose OK to close the Settings dialog and return to the main screen. | Recipes are grouped by the colorant that they contain and also the source of the colorant. The number of recipes in each group is also shown. |  |
| 10 | Count which colorant is used more | Expand the group of Input 13 (Green Color).Note The first level of grouping indicates how many recipes contain each colorant. Since both are contained in 5 recipes in the standard SET content, this information alone is not enough to find out where to start. |  |  |
| 11 | Count which source recipe has the highest impact | Expand the group of PLMPI\_OUTPUT\_2/000/000.Note The second level of grouping indicates which are the recipes where the colorant is used directly, and how many recipes are affected by each of these source recipes. PLMPI\_OUTPUT\_2/000/000 has 2 other recipes where its Primary Output is reused, so it is an ideal candidate to replace PLMPI\_INPUT13 (Green Colorant) first. |  |  |
| 12 | Display a Recipe | In the Recipe ID column, select the recipe PLMPI\_OUTPT2/000/000 and choose Display Recipe, where the material RMPI013 is used as a direct input. | The Display Recipe PLMPI\_OUTPT2/000/000 screen is displayed. |  |
| 13 | Note | Note The Recipe Developer analyzes the result recipe’s ingredient list. | Manual step.The ingredients containing the material are determined by analyzing the material assignments. |  |

### Decide for Ingredient to Replace

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can decide the ingredient to be replaced.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Note Recipe Developer decides which ingredients to replace. | Manual step. |  |

## Recipe Analysis by Standard Composition

### Determine Usage of Pure Substance in Recipes

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can determine whether the component item is in a recipe directly or indirectly.

Note The standard composition of a real substance usually consists of pure substances. However, there are cases, when the calculation does not go deeper into a real, raw or stream substance. The cause is an explosion stop on the component type of the formula item, or missing authorization. (A typical example is fragrances.) In these cases, the standard composition can also contain other types of substances. Recipe Finder enables users to find real, raw or stream substances as part of Standard Composition.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori Launchpad as a Recipe Developer. |  |  |
| 2 | Access App | Open the Recipe Finder (F0576A) app. | The Recipe Finder screen appears. |  |
| 3 | Enter Component Item | On the Recipe Finder screen, choose the Component Item value help icon. The Select: Component Item screen appears. Make the following entry, and choose Go.Description: \*Pigment\* |  |  |
| 4 | Select the Component Item | Select pure substance PLMPI\_PURE11 and PLMPI\_PURE14 and choose OK to close the Select: Component Item value help screen. | The Select: Component Item value help screen is closed. |  |
| 5 | Choose Go | On the Recipe Finder screen, choose Go. | All the recipes, where pure substances PLMPI\_PURE11 or PLMPI\_PURE14 are used in the ingredient’s standard composition table as a component, are listed. Two dynamic columns PLMPI\_PURE11 (Pure substance 11 (Pigment Green)) and PLMPI\_PURE14 Pure substance 14 (Pigment Red) show whether a component is a Direct or an Indirect or Direct + Indirect in the recipes listed in the search result. |  |

### Export Selection to Excel (Optional)

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can select a recipe to replace ingredient based on the values exported to the Excel.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure. [Determine Usage of Pure Substance in Recipes](#unique_14) [page ] 17App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Choose Export to spreadsheet | Choose the Export to Spreadsheet icon | Details listed in the table are exported to an MS Excel file and the Excel file is saved in the download folder. |  |
| 3 | Analyze List to Find a Recipe for Ingredient Replacement | Open the downloaded MS Excel File and sort the recipe list by the column PLMPI\_PURE11 in ExcelChoose the PLMPI\_OUTPT2/000/000 recipe, where the ingredient PLMPI\_PURE11 is used as a direct input. You can mark the Recipe ID for further reference, in case you want to continue your work later.Note You can access Recipes directly from the Manage Recipes (F2210) app if you already have the ID. | The Recipe ID is noted. |  |

### Analyze Search Result List

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you select a recipe for further analysis.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure [Determine Usage of Pure Substance in Recipes](#unique_14) [page ] 17App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Inspect Result List | Notice that there are multiple recipes that match the search criteria. |  |  |
| 3 | Customize Results Table | Choose Settings (a cogwheel icon at the top right corner of the results table) to open the Settings dialog box. |  |  |
| 4 | Display Validity Dates | On the Columns tab, make sure that Valid To and Valid From are selected, then choose OK.Note Some recipes have future validity dates. These recipes must also be dealt with, but it is not very urgent. |  |  |
| 5 | Analyze Recipes | Choose Analyze Results | The Analysis Parameters pop-up screen appears |  |
| 6 | Select Recipe Source Analysis | Select By Source on the Analysis Parameters pop-up screen and make sure that the current date is selected as the Calculation Date. Click OK.Note Calculation Date is always required for calculation based analysis, even if you used Any Date as Search Date. This is because it is possible that you get different values for the same recipe at different points in time. This should usually be avoided, and if this happens, then an issue is shown next to the recipe in Recipe Finder. | The Recipe Analysis - By Source screen appears |  |
| 7 | Customize Results Table | Choose Settings(a cogwheel icon at the top right corner of the results table) to open the settings dialog. | The settings dialog screen appears. |  |
| 8 | Group Table | Select the Group tab.Select Search Item Description from the dropdown list. Click +(Add Grouping Criterion) to select Source Recipe from the dropdown list in the second row.Note You can always undo your changes to the table layout by opening this dialog and clicking Restore. | The Recipes Result table will be grouped into Search Item and Recipe ID as the grouping parameters. |  |
| 9 | Count Recipes in Each Group | Select the Columns tab and check if Number of Recipes is selected from the list. If not, select it, then click OK to close the Settings dialog and return to the main screen. | Recipes are grouped by the colorant that they contain and also the source of the colorant. The number of recipes in each group is also shown. |  |
| 10 | Count which colorant is used more | Expand the group of Pure substance 11 (Pigment Green)Note The first level of grouping indicates how many recipes contain each colorant. Since both are contained in 5 recipes in the standard SET content, this information alone is not enough to find out where to start. |  |  |
| 11 | Count which source recipe has the highest impact | Expand the group of PLMPI\_OUTPT2/000/000Note The second level of grouping indicates which are the recipes where the colorant is used directly, and how many recipes are affected by each of these source recipes. PLMPI\_OUTPT2/000/000 has two other recipes where its Primary Output is reused, so it is an ideal candidate to replace PLMPI\_INPUT13 (Green Colorant) first. |  |  |
| 12 | Display a Recipe | In the Recipe ID column, select the recipe PLMPI\_OUTPT2/000/000, where the Standard Composition Pure substance 11 (Pigment Green) is used as a direct input. | The Display Recipe PLMPI\_OUTPT2/000/000 screen is displayed. |  |
| 13 | Note | Note The Recipe Developer analyzes the result recipe’s ingredient list. | Manual step.The ingredients containing the pure substance (component item) are determined by analyzing the standard composition. |  |

### Decide for Ingredient to Replace

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can decide the ingredient to replace.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Note The Developer decides the ingredients to be replaced. | Manual step |  |

## Ingredient Replacement

### Determine Usage of an Ingredient in Recipes

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can determine whether the ingredient is a direct or indirect input in a recipe.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori Launchpad as a Recipe Developer. | The SAP Fiori Launchpad appears. |  |
| 2 | Access App | Open the Recipe Finder (F0576A) app. | The Recipe Finder screen appears. |  |
| 3 | Enter Ingredient | On the Recipe Finder screen, choose the Ingredient value help icon. The Select: Ingredient screen opens. Make the following entry, and choose Go.Description: \*Colorant\* |  |  |
| 4 | Select the Ingredient | Select PLMPI\_INPUT13 (Green Colorant) and PLMPI\_INPUT15 (Red Colorant), then choose OK to close the Select: Ingredient value help icon screen |  |  |
| 5 | Select the Search Date | Select Any Date from the Search Date dropdown list.Note This option enables you to search the ingredients regardless of the validity dates of recipes that contain them. | The Recipe Finder runs where-used calculations in all time periods. |  |
| 6 | Choose Go | On the Recipe Finder screen, choose Go. | All the recipes, where PLMPI\_INPT13(Green Colorant) or PLMPI\_INPT15 (Red Colorant) are used as ingredients get listed. Two dynamic columns PLMPI\_INPT13 (Green Colorant) and PLMPI\_INPT15 (Red Colorant) show whether an ingredient is a Direct or an Indirect or Direct + Indirect in the recipes listed in the search result. |  |

### Export Selection to Excel (Optional)

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can select a recipe to replace ingredient based on the values exported to the Excel.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure [Determine Usage of an Ingredient in Recipes](#unique_18) [page ] 24.App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Choose Export to spreadsheet | Choose the Export to Spreadsheet icon. | Details listed in the table are exported to an MS Excel file and the Excel file is saved in the download folder. |  |
| 3 | Analyze List to Find a Recipe for Ingredient Replacement | Open the downloaded Excel File and sort the recipe list by the column PLMPI\_INPT13 (Green Colorant) in ExcelChoose the PLMPI\_OUTPT2/000/000 recipe, where the ingredient PLMPI\_INPT13 (Green Colorant) is used as a direct input. You can mark the Recipe ID for further reference, in case you want to continue your work later.Note Always start replacing an ingredient in a recipe where it is used directly, and then, update the ingredient in a recipe where it is used indirectly.You can access Recipes directly from the Manage Recipes apps if you already have the ID. | Recipe where the ingredient PLMPI\_INPT13 (Green Colorant) is to be replaced is determined. |  |

### Analyze Search Result List

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can select a recipe to replace an ingredient.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure [Determine Usage of an Ingredient in Recipes](#unique_18) [page ] 24.App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Inspect Result List | Notice that there are multiple recipes that match the search criteria.Note Always start replacing an ingredient in a recipe where it is used directly, and then, update the recipe where ingredient is used as direct + indirect and then on the recipe where the ingredient is used as an indirect input. |  |  |
| 3 | Customize Results Table | Choose Settings (a cogwheel icon at the top right corner of the results table) to open the settings dialog. |  |  |
| 4 | Display Validity Dates | On the Columns tab, make sure that Valid To and Valid From are selected, then choose OK.Note Some recipes have future validity dates. These recipes must also be dealt with, but it is not very urgent. |  |  |
| 5 | Analyze Recipes | Choose Analyze Results | The Analysis Parameters popup screen appears |  |
| 6 | Select Recipe Source Analysis | Choose By Source on the Analysis Parameters pop-up screen and make sure that the current date is selected as the Calculation Date. Choose OK.Note Calculation Date is always required for calculation based analysis, even if you used Any Date as Search Date. This is because it is possible that you get different values for the same recipe at different points in time. This should usually be avoided, and if this happens, then an issue is shown next to the recipe in Recipe Finder (F0576A). | The Recipe Analysis - By Source screen appears |  |
| 7 | Customize Results Table | Choose Settings (a cogwheel icon at the top right corner of the results table) to open the settings dialog. | The settings dialog screen appears |  |
| 8 | Group Table | Choose the Group tab.Select Search Item Description from the dropdown list. Click +(Add Grouping Criterion) to select Source Recipe from the dropdown list in the second row.Note You can always undo your changes to the table layout by opening this dialog and clicking Restore. | The Recipes Result table will be grouped into Search Item and Recipe ID as the grouping parameters. |  |
| 9 | Count Recipes in Each Group | Choose the Columns tab and check if Number of Recipes is selected from the list. If not, select it, then choose OK to close the Settings dialog and return to the main screen. | Recipes are grouped by the colorant that they contain and also the source of the colorant. The number of recipes in each group is also shown. |  |
| 10 | Count which colorant is used more | Expand the group of (Green Colorant)Note The first level of grouping indicates how many recipes contain each colorant. Since both are contained in 5 recipes in the standard SET content, this information alone is not enough to find out where to start. |  |  |
| 11 | Count which source recipe has the highest impact | Expand the group of PLMPI\_OUTPT2/000/000Note The second level of grouping indicates which are the recipes where the colorant is used directly, and how many recipes are affected by each of these source recipes. PLMPI\_OUTPT2/000/000 has two other recipes where its Primary Output is reused, so it is an ideal candidate to replace PLMPI\_INPT13 (Green Colorant) first. |  |  |

### Decide for Ingredient to Replace

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can display a recipe where the ingredient to be replaced is used as a direct input.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the test procedure [Analyze Search Result List](#unique_20) [page ] 27App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Display a Recipe | In the Recipe ID column, select the recipe PLMPI\_OUTPT2/000/000, where the ingredient is used as a direct input. Choose Display Recipe.Note:Note Always start replacing an ingredient in a recipe where it is used directly, and then, update the ingredient in a recipe where it is used indirectly. | The Display Recipe PLMPI\_OUTPT2/000/000 screen is displayed. |  |

#### Create New Versions for Impacted Recipes

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can create a new recipe version.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure [Decide for Ingredient to Replace](#unique_21) [page ] 29App: Recipe Finder (F0576A)Role: Recipe Developer |  |  |
| 2 | Copy to New Recipe | On the Display Recipe PLMPI\_OUTPT2/000/000 screen, choose You Can Also, and select Copy to New Recipe Version. | The Create Recipe screen appears. |  |
| 3 | Choose Continue | On the Create Recipe screen, keep the default values, and choose Continue. | The Create Recipe screen appears. |  |
| 4 | Save your entries | On the Create Recipe screen, choose Save. | A system message confirming that the recipe is created appears and a new recipe PLMPI\_OUTPT2/000/001 is created. |  |
| 5 | Note | Note You can also access the newly created Recipe by opening the Manage Recipes app and searching for PLMPI\_OUTPT2/000/XXX, where XXX is the version of the Recipe created in the previous step |  |  |
| 6 | Navigate to the Formula tab. | Navigate to the Formula tab. | The Input and Output list is displayed. |  |
| 7 | Change the view | In the Show dropdown, select All Columns | The table view is changed. |  |
| 8 | Replace ingredient | Choose the value help in the specification column corresponding to PLMPI\_INPT13. | The Select: Specification screen appears. |  |
| 9 | Enter Search Term | In the Select: Specification dialog, make the following entry:Search Term: PLMPI\_INPT14Note Remove the material value from the Material field. | Search term is entered. |  |
| 10 | Choose Go | Choose Go. | Search results are displayed in the table. |  |
| 11 | Select the row | Select the row corresponding to PLMPI\_INPT14 | Specification is updated to PLMPI\_INPT14 and the ingredient is replaced. |  |
| 12 | Choose Save | Choose Save. | Recipe is saved. |  |

#### Release New Recipe Version

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you release the new recipe version created.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Note | Continue from the previous test procedure [Create New Versions for Impacted Recipes](#unique_22) [page ] 30 |  |  |
| 2 | Navigate to the General Data tab | Choose the General Data tab. | General Data and Header Data are displayed. |  |
| 3 | Change the Validity date | In the Validity section of the screen, change the Valid From date by the date picker. The new date must be a date in the future.Note Remember this date to use it later. | The validity date is changed. |  |
| 4 | Check Validity of Other Versions | Open the Show Validity of Versions dialog box and check that the validity of the newly created version and the validity of an existing recipe overlap. | The Recipe Versions dialog box is displayed. |  |
| 5 | Change the Validity of the Previous Version | Click on the Recipe ID of the conflicting recipe version to open it. Set the Valid To date of that version one day prior to the latest recipe version’s Valid From date and choose Save.Note Repeat the same for other overlapped recipes as well. The logic behind is that system should not have more than one valid released recipe versions at the given date. | The validity date is changed. |  |
| 6 | Check Validity of Other Versions Again | Go back to the new recipe version. The Recipe Versions dialog will still be open. Choose Refresh. There is no overlap now. | There is no overlap in the validity of recipe versions.. |  |
| 7 | Set Status to “For Release” | On the Change Recipe screen, make the following entries:Status: 200 | The Status is changed to For Release |  |
| 8 | Set Status to Released | On the Change Recipe screen, make the following entries:Status: 300Note Recipes can only be released (Status 300) after being reviewed in For Release status (200). It is best to do this by different users, but we do it in one step here for the sake of simplicity. | The Status is changed to Released. |  |
| 9 | Save Your Entries | Choose Save | A system messageconfirming that the changes have been saved appears.Recipe is released. |  |

#### Check Validity of Versions

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

In this process step you can perform ingredient calculation for recipes containing recipes where an ingredient was replaced in the previous steps (that is, for recipes where replaced ingredient was used as indirect input).

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori Launchpad as a Recipe Developer if you are not yet logged on. In case you are logged on, click on the Home icon to access the SAP Fiori Launchpad. |  |  |
| 2 | Access App | Open the Recipe Finder (F0576A) app. | The Recipe Finder screen appears. |  |
| 3 | Enter Ingredient | On the Recipe Finder screen, choose the Ingredient value help icon. The Select: Ingredient screen opens. Make the following entry, and choose Go.Description: Green Colorant |  |  |
| 4 | Select the Ingredient | Select PLMPI\_INPT13 and choose OK to close the Select: Ingredient value help screen. | Select: Ingredient value help screen is closed. |  |
| 5 | Choose Go | On the Recipe Finder screen, choose Go. | All the recipes where PLMPI\_INPT13 is used as an ingredient are listed. A dynamic column PLMPI\_INPUT2 (green colorant) shows whether the ingredient is a Direct or an Indirect or Direct + Indirect ingredient in the recipes listed in the search result. |  |
| 6 | Change the Search Date | Choose the Search Date parameter and set it to the specific date and mention the date that you have used in the previous chapters as the Valid From value of the new recipe versions. | The Search Date is changed. |  |
| 7 | Re-execute Search with the New Date | Choose Go to re-execute the search with the new dateNote Notice that you do not get any results. The reason is that you have successfully replaced PLMPI\_INPT13 and there are no valid recipes using it at the specified date. | No recipes are returned. |  |

# Appendix

## Process Integration

The process to be tested in this test script is part of a chain of integrated processes.

### Preceding Processes

You may first have completed the following processes and conditions before you start with the test steps:

|  |  |
| --- | --- |
| Process | Business Condition |
| Specification Management for Recipes (1QA) | Several specifications have been created to be used in the recipe. |

### Succeeding Processes

After completing the activities in this test script, you can continue testing the following business processes:

|  |  |
| --- | --- |
| Process | Business Condition |
| Recipe Handover to Manufacturing – BOM (1QG) | The released recipe created as part of process Recipe Handover to Manufacturing – BOM (1QG) can be used for further processing in the Recipe Handover to Manufacturing – BOM (1QG) process. You can hand over the recipe to production by creating a bill of material (BOM) out of the recipe. |

Typographic Conventions

|  |  |
| --- | --- |
| Type Style | Description |
| Example | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.Textual cross-references to other documents. |
| Example | Emphasized words or expressions. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| Example | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| Example | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| <Example> | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| EXAMPLE | Keys on the keyboard, for example, F2 or ENTER. |

|  |
| --- |
|  |
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