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## MATERIAL TRACKING PHASES

RELEASE 8.4

## FUNCTIONAL REQUIREMENT SPECIFICATION

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Allen-Bradley • Rockwell Software

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## Introduction

This document details the requirements of the functions implemented by the phases specific to material tracking. The phases are executed in the Production Execution Client of PharmaSuite.

Each requirement is composed of a name and a unique identifier (e.g. Instruction (SR0050.8.1)). If a requirement's meaning is for requirement grouping only, the identifier is appended by a plus sign (e.g. Process parameters (SR0050.8+)). For requirements with **Framework capability** as identifier, see "Functional Requirement Specification Execution Framework" for their unique identifier, [A1] (page 45).

The revision history (page 47) lists the changes made to the document with PharmaSuite 8.3 as the comparison baseline. Changes related to a requirement are marked as "Editorial", "Update", "New", or "Deleted", changes to the additional context information are marked as "Context information-related".

## Typographical Conventions

This documentation uses typographical conventions to enhance the readability of the information it presents. The following kinds of formatting indicate specific information:

<b>Bold typeface</b>	Designates user interface texts, such as <ul style="list-style-type: none"><li>■ window and dialog titles</li><li>■ menu functions</li><li>■ panel, tab, and button names</li><li>■ box labels</li><li>■ object properties and their values (e.g. status).</li></ul>
Monospaced typeface	Designates code examples.

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## Identify Material Phase (SR0050+)

The **Identify material** phase allows an operator to identify material on subplot level for further processing.

Example use cases are:

- Identify material prior to dispensing  
The batch status of the materials must be **Released**. This material-specific requirement can be defined and corresponding violations can be tracked as exceptions.
- Identify material before mixing  
Only allocated batches are allowed to be utilized in the mixing process. An allocation check is specified in the phase. Identification of other batches can be tracked as exceptions.
- Unidentify material  
Material that has been identified is bound to an order step. As long as none of the previously identified sublots has been accounted, their identification can be revoked. This unbinds the material from the order step and makes it available for identification elsewhere.

Scanned or manually entered batches and sublots are checked against configurable settings

- status
- expiry date
- batch allocation

and built-in settings

- material is MFC-relevant
- subplot is produced for the current order step (only for intra materials)
- sublots are exclusively used by the current order.

The list of identified sublots with their quantities and material-related information is stored in the batch record, thereby becoming available for documentation purposes in the sub-report and batch report (page 6).

Anomalies that occur during processing are covered by the phase exception handling (page 14) (e.g. revoking an identification).

- batch and/or subplot identifiers
- planned quantity
- identified quantity.

Identify the materials for Tableting.

SSL00000456BX140

Material ID	Material short description	Batch ID	Sublot ID	Planned quantity	Identified quantity
D003-04	Ethanol 96 %			10.0 g	10.0 g
		BX140	SL00000456		10.0 g
D130-01	Sonolin 100 mg premix			1,000.0 g	0 g
D005-04	Talc			20.0 g	0 g

Confirm

Material ID	Material short description	Batch ID	Sublot ID	Planned quantity	Identified quantity
D005-04	Talc			20.0 g	400.0 g
		BX141	SL00000467		200.0 g
		BX141	SL00000466		200.0 g
D003-04	Ethanol 96 %			10.0 g	20.0 g
		BX140	SL00000457		10.0 g
		BX140	SL00000456		10.0 g
D130-01	Sonolin 100 mg premix			1,000.0 g	4,000.0 g
		BX142	SL00000473		2,000.0 g
		BX142	SL00000471		2,000.0 g

D005-04: Re-identify 10.0 g.  
 D003-04: Re-identify 10.0 g.  
 D130-01: Re-identify 505.0 g.

The phase provides individual layouts for its representation during execution (page 4), in the Navigator (page 6), and in the sub-report (page 6).

The representation during execution depends on the phase mode.

1. <Instruction text>  
(taken from **Instruction (SR0050.8.1)** process parameter (page 10))

2. Box for scanner input
3. List of materials available for identification (Table of materials (SR0050.1.2) (page 5))  
(taken from material input parameters (SR0050.6.1) (page 9))
4. Material-related comment to execution  
(only visible if comment is maintained for the order step input)
5. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button (disabled).

---

### Active mode (SR0050.1.1)

1. <Instruction text>  
(taken from **Instruction** (SR0050.8.1) process parameter (page 10))
2. Box for scanner input
3. List of materials available for identification (Table of materials (SR0050.1.2) (page 5))  
(taken from material input parameters (SR0050.6.1) (page 9))
4. Material-related comment to execution  
(only visible if comment is maintained for the order step input)
5. **Enable** button (unlocks the **Confirm** button).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button.

---

### Table of materials (SR0050.1.2)

Data available per subplot/batch:

- Material ID (taken from material input parameters (SR0050.6.1) (page 9))
- Material short description (taken from material input parameters (SR0050.6.1) (page 9))
- Batch ID
- Sublot ID
- Planned quantity (taken from material input parameters (SR0050.6.1) (page 9))
- Identified quantity

---

#### Completed mode (SR0050.1.4)

1. <Instruction text>  
(taken from **Instruction (SR0050.8.1)** process parameter (page 10))
2. Box for scanner input
3. List of materials available for identification (Table of materials (SR0050.1.2) (page 5))  
(taken from material input parameters (SR0050.6.1) (page 9))
4. Material-related comment to execution  
(only visible if comment is maintained for the order step input)
5. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button (completed).

#### Representation in Navigator (SR0050.4+)

The Navigator provides the following details:

---

##### Phase column (Framework capability)

- <Phase name>
  - Example:  
Identify mixing inputs

---

##### Information column (SR0050.4.1)

- <Ratio between identified quantity and planned quantity in percent>
  - Example: 98%

---

##### Action column (SR0050.4.2)

- Identify, identify another subplot.
- Undo, revoke identification of a subplot.

#### Representation in Sub-report (SR0050.5+)

The sub-report contains the following information:

---

##### Common sub-report elements (Framework capability)

- <Start time>
- <Completion time>



- <Unit procedure> / <operation> / <phase>
- <Work center> / <station> / <device> - <phase completion user>

---

#### Sub-report elements (SR0050.5.1)

- Material: <identifier> / <short description>
- List of identified sublots per material including planned and identified quantities
- Material-related comment to execution (only visible if comment was visible during execution, i.e. was maintained for the order step input at that time)

### Business Logic (SR0050.2+)

The phase implements the following business logic.

---

#### Identify material (SR0050.2.1)

- Function: Identify pre-defined materials
- Trigger: Phase becomes active
- Postcondition: Pre-defined materials are identified

Step	#	Description
Phase activation	10	Phase displays its user interface according to the <b>Active mode (SR0050.1.1)</b> layout (page 5).
Operator scans barcode	20	The <b>Scan material barcode (SR0050.2.2)</b> function (page 8) becomes active.
Phase performs fixed checks	30	If one of the following checks is violated, phase displays an error message: <ol style="list-style-type: none"> <li>1. Identified material must be MFC-relevant, <b>MFC check failed (SR0050.3.6.1)</b> error message (page 19).</li> <li>2. Sublots must be produced for the current order (only for intra materials), <b>Wrong order (SR0050.3.6.2)</b> error message (page 20).</li> <li>3. Sublot must not be identified by another order, <b>Sublot already identified (SR0050.3.6.3)</b> error message (page 20).</li> </ol>
Minimum batch status check	40	According to <b>Batch status check configuration (SR0050.8.7)</b> process parameter (page 10), batch status is greater than or equal to the configured minimum batch status. If the check fails, phase creates the <b>Failed batch status check (SR0050.3.2.5)</b> system-triggered exception (page 15).
Batch allocation check	50	According to <b>Allocation check configuration (SR0050.8.9)</b> process parameter (page 11), batch allocation must be met. If the check fails, phase creates the <b>Failed batch allocation check (SR0050.3.2.6)</b> system-triggered exception (page 15).

Step	#	Description
Expiry date check	60	According to <b>Expiry date check configuration (SR0050.8.8)</b> process parameter (page 11), expiry date must be defined and beyond the current date plus the configured time to expire. If the check fails, phase creates the <b>Failed expiry date check (SR0050.3.2.7)</b> system-triggered exception (page 15).
	70	If all checks have passed successfully, material has been identified.

---

#### Scan material barcode (SR0050.2.2)

- Function: Scan of material barcode
- Trigger: Operator scans barcode
- Postcondition: Material barcode is scanned

Step	#	Description
Operator scans barcode	10	Phase reads scanned data.
	20	<ul style="list-style-type: none"> <li>■ If barcode reading was technically successful, phase updates background color of phase representation according to style sheet in order to confirm the reading.</li> <li>■ If barcode reading was technically not successful, phase remains in listening mode.</li> <li>■ If barcode reading was not successful, phase displays a corresponding error message.</li> </ul>

---

#### Unit procedure context (SR0050.2.5)

- Function: Define unit procedure context
- Trigger: Pre-defined materials are identified
- Postcondition: Unit procedure context is defined

Step	#	Description
Phase defines unit procedure context	10	Phase assures that identified materials are only recognized within the given unit procedure.

---

**Auto consumption (SR0050.2.6)**

- Function: Support of automatic consumption
- Trigger: Pre-defined material is identified
- Postcondition: Consumption of entire subplot quantity is recorded automatically

Step	#	Description
Automatic consumption	10	According to <b>Consumption configuration (SR0050.8.4)</b> process parameter (page 12), phase records the identified subplot as fully consumed and flags the subplot as <b>logically deleted</b> .

---

**Phase completion (SR0050.2.7)**

- Function: Completion of phase
- Trigger: Pre-defined material is identified
- Postcondition: Phase is completed

Step	#	Description
Operator confirms phase	10	In order to be completed, the phase requires all system-triggered exceptions to be recorded.

## Recipe Parameters

The phase provides material input parameters as process inputs (page 9) and process parameters (page 9).

### Process Inputs (SR0050.6+)

---

**Material input parameters (SR0050.6.1)**

The default material input parameters are available to define which materials can be identified during execution.

Quantity definitions of the material input parameters are populated to the **Table of materials (SR0050.1.2)** list (page 5) that is displayed during execution. This includes the reflection of quantity-related calculations during order explosion.

### Process Parameters (SR0050.8+)

The following process parameters define the behavior of the phase.

## BASIC PARAMETERS

### Instruction (SR0050.8.1)

➤ For recent changes, see revision history (page 47).

Attribute	Type	Comment
Column 1	HTML text	Instruction text to be displayed. <b>Restriction:</b> Maximum length is 2000 characters (including HTML tags).
Column 2	HTML text	Not used.
Column 3	HTML text	

## CONFIGURATION OF SYSTEM-TRIGGERED EXCEPTIONS

### Batch status check configuration (SR0050.8.7)

Attribute	Type	Comment
Enabled	Flag	Controls if a check is performed. If so, ensure that the <b>Minimum batch status</b> attribute of the <b>Batch check definition (SR0050.8.3)</b> process parameter (page 12) is set.
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Failed batch status check (SR0050.3.2.5)** system-triggered exception (page 15).

**Expiry date check configuration (SR0050.8.8)**

Attribute	Type	Comment
Enabled	Flag	Controls if a check is performed. If so, ensure that the <b>Minimum time to expire</b> attribute of the <b>Batch check definition (SR0050.8.3)</b> process parameter (page 12) is set.
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Failed expiry date check (SR0050.3.2.7)** system-triggered exception (page 15).

**Allocation check configuration (SR0050.8.9)**

Attribute	Type	Comment
Enabled	Flag	Controls if a check is performed. If so, the check is only performed if there are allocation requirements.
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Failed batch allocation check (SR0050.3.2.6)** system-triggered exception (page 15).

### Batch check definition (SR0050.8.3)

Attribute	Type	Comment
Minimum batch status	Choice list	Defines the minimum batch status required for material identification. Default setting: <b>Released</b> .
Minimum time to expire	Numeric	Defines the number of days allowed between the actual identification date and expiry date.

## PROCESSING PARAMETER

### Consumption configuration (SR0050.8.4)

Attribute	Type	Comment
Auto consume	Flag	Controls if the identified subplot is registered as fully consumed when the phase is completed with the <b>Confirm</b> button. If you have more than one phase sharing the same material within one operation, all sublots will be consumed even if the flag is set only for one of the phases.

## CONFIGURATION OF USER-TRIGGERED EXCEPTIONS

### Identify manually (SR0050.8.10)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .

Attribute	Type	Comment
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Identify manually (SR0050.3.1.1)** user-triggered exception (page 16).

### Undo identification (SR0050.8.11)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Undo identification (SR0050.3.1.2)** user-triggered exception (page 16).

## CONFIGURATION OF POST-COMPLETION EXCEPTIONS

### Post - Identify additionally (SR0050.8.12)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .

Attribute	Type	Comment
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Identify additionally (SR0050.3.3.1)** post-completion exception (page 17).

### Post - Undo identification (SR0050.8.13)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Undo identification (SR0050.3.3.2)** post-completion exception (page 18).

## Exceptions (SR0050.3+)

The phase supports user-defined, user-triggered (page 16), system-triggered (page 14), and post-completion exceptions (page 17) and their configuration by means of process parameters (page 9).

User-defined exceptions cannot be configured by process parameters since they are provided by the framework and independent of phases.

### System-triggered Exceptions (SR0050.3.2+)

➤ For recent changes, see revision history (page 47).

A system-triggered exception is represented in a message dialog along with an **Exception** button, in the Exception Window as the read-only description of the exception, and in the batch report.

The following system-triggered exceptions are available.



---

### Failed batch status check (SR0050.3.2.5)

Representation of the exception:

- <Exception text>  
(taken from **Batch status check configuration (SR0050.8.7)** process parameter (page 10))  
Batch: <batch identifier>,  
Expected value: <status>  
Actual value: <status>
- Example:  
The current status of the batch is not appropriate.  
Batch: BX127  
Expected value: Released  
Actual value: Quarantined

---

### Failed batch allocation check (SR0050.3.2.6)

Representation during exception handling:

- <Exception text>  
(taken from **Allocation check configuration (SR0050.8.9)** process parameter (page 11))  
Batch: <batch identifier>
- Example:  
The current batch has not been allocated.  
Batch: BX127

---

### Failed expiry date check (SR0050.3.2.7)

Representation of the exception:

- <Exception text>  
(taken from **Expiry date check configuration (SR0050.8.8)** process parameter (page 11))  
Batch: <batch identifier>  
Expected value: <number of days>  
Actual value: <date>
- Example:  
The current expiry date is not sufficient anymore.  
Batch: BX127  
Expected value: 720 days  
Actual value: 10/12/2011

---

### Multiple exceptions (SR0050.3.2.3)

In case multiple system-triggered exceptions occur, only one combined exception (system-triggered exception) is recorded including information about all exceptions. The highest risk assessment of all related exceptions and its related signature privilege apply.

### User-triggered Exceptions (SR0050.3.1+)

A user-triggered exception is represented in the list of available user-triggered exceptions in the Exception Window, as the description of the exception, and in the batch report.

The following user-triggered exceptions are available.

---

#### Identify manually (SR0050.3.1.1)

The **Identify manually** exception allows an operator to identify material manually.

Representation during exception handling:

- Instruction:  
 To identify manually, enter the subplot identifier.  
 Box for barcode input.  
**Confirm** button.
- Exception text:  
 <Exception text>  
 (taken from **Identify manually (SR0050.8.10)** process parameter (page 12))  
 Identified subplot: < subplot identifier>
- Example:  
 Manual identification  
 Identified subplot: SL00005678

Step	#	Description
Operator confirms exception	10	Phase executes the checks of step 30 to 60 of the <b>Identify material (SR0050.2.1)</b> function (page 7).
	20	If all checks have passed successfully, phase records exception according to <b>Identify manually (SR0050.8.10)</b> process parameter (page 12).
	30	Material is identified.

---

#### Undo identification (SR0050.3.1.2)

The **Undo identification** exception allows an operator to revoke the identification of a subplot as long as the subplot has not been accounted.

Representation during exception handling:

- **Instruction:**  
To undo the identification, enter the identifier of the affected subplot.  
Box for barcode input.  
**Confirm** button.
- **Exception text:**  
<Exception text>  
(taken from **Undo identification (SR0050.8.11)** process parameter (page 13))  
Unidentified subplot: <subplot identifier>
- **Example:**  
Undo identification  
Unidentified subplot: SL00005678

Step	#	Description
Operator confirms exception	10	If the subplot has been accounted, phase records exception according to <b>Undo identification (SR0050.8.11)</b> process parameter (page 13).
	20	Sublot is no longer identified

### Multiple exceptions (SR0050.3.1.3)

In case an **Identify manually (SR0050.3.1.1)** user-triggered exception (page 16) coincides with system-triggered exceptions (page 14), only one combined exception (user-triggered exception) is recorded including information about all related exceptions. The highest risk assessment of all related exceptions and its related signature privilege apply.

### Post-completion Exceptions (SR0050.3.3+)

A post-completion exception is accessible via the Navigator and represented in the list of available post-completion exceptions in the Exception Window, as the description of the exception, and in the batch report.

The following post-completion exceptions are available.

#### Identify additionally (SR0050.3.3.1)

The **Identify additionally** exception allows an operator to manually identify an additional subplot from the Navigator after the completion of the phase.

Representation of the exception:

- **Instruction:**  
To identify an additional subplot, enter the subplot identifier.

Box for barcode input.

**Confirm** button.

- <Exception text>  
(taken from **Post - Identify additionally (SR0050.8.12)** process parameter (page 13))  
Additionally identified subplot: <subplot identifier>
- Example:  
Post additional identification  
Additionally identified subplot: SL00005678

Step	#	Description
Operator triggers action	10	Phase displays Exception Window.
	20	Operator enters barcode.
	30	Phase executes the checks of step 30 to 60 of the <b>Identify material (SR0050.2.1)</b> function (page 7).
	40	If all checks have passed successfully, phase records exception according to <b>Post - Identify additionally (SR0050.8.12)</b> process parameter (page 13).
	50	Material is identified.

---

### Undo identification (SR0050.3.3.2)

The **Undo identification** exception allows an operator to revoke the identification of a subplot as long as the subplot has not been accounted from the Navigator after the completion of the phase.

Representation during exception handling:

- Instruction:  
To undo the identification, enter the identifier of the affected subplot.  
Box for barcode input.  
**Confirm** button.
- Exception text:  
<Exception text>  
(taken from **Post - Undo identification (SR0050.8.13)** process parameter (page 14))  
Unidentified subplot: <subplot identifier>
- Example:  
Undo identification  
Unidentified subplot: SL00005678

Step	#	Description
Operator triggers action	10	If the subplot has not been accounted, phase records exception according to <b>Post - Undo identification (SR0050.8.13)</b> process parameter (page 14).
	20	Sublot is no longer identified

---

### Multiple exceptions (SR0050.3.3.3)

In case an **Identify additionally (SR0050.3.3.1)** post-completion exception (page 17) coincides with system-triggered exceptions (page 14), only one combined exception (post-completion exception) is recorded including information about all related exceptions. The highest risk assessment of all related exceptions and its related signature privilege apply.

### Information Messages

There are no information messages available.

### Questions

There are no questions available.

### Decisions

There are no decisions available.

### Error Messages (SR0050.3.6+)

Error messages are represented in an error message dialog containing a message type-specific icon, the error message, and an **OK** button.

The following error messages are available to inform the operator about error conditions.

---

### MFC check failed (SR0050.3.6.1)

UI text	Comment
Cannot identify the material, since it does not correspond to the required material input. Select a suitable material input, if available.	<p>Message pack: PhaseProductIdentifyMaterial&lt;version&gt;</p> <p>Message ID: CannotIdentifySublotMaterial</p> <p>Potential error cause: The identified material is not MFC-relevant for this order. It cannot be used at this point.</p>

---

#### Wrong order (SR0050.3.6.2)

UI text	Comment
The subplot (<subplot ID>) has not been produced for this order step. Select another subplot.	Message pack: srv_inventory.checks Message ID: CheckMaterialForIntermediateOSI_0 Potential error cause: The identified material (intra material subplot) has not been produced for the current order. It cannot be used at this point.

---

#### Sublot already identified (SR0050.3.6.3)

UI text	Comment
Cannot identify the subplot (<subplot ID>), since it has already been identified for another order step. Select another subplot.	Message pack: srv_inventory.checks Message ID: CheckSublotBlockedByProcessing_0 Potential error cause: The identified material has already been identified for another order. It cannot be used at this point.

## Output Variables

The following output variables are available to reference the phase's output.

---

#### Instance count (Framework capability)

- Data type: Long
- Usage: The output variable provides the count of the number of instances the phase has been processed, for example in a loop. The count is also increased when the phase is skipped from an operator's perspective, since the phase is still executed, but as a hidden phase.  
The count variable of a phase that has not been executed provides 0 as output value.

---

#### Start time (Framework capability)

- Data type: Timestamp
- Usage: The output variable provides the start time of the phase.

---

#### Completion time (Framework capability)

- Data type: Timestamp
- Usage: The output variable provides the completion time of the phase.



---

### Identifier (Framework capability)

- Data type: String
- Usage: The output variable provides the identifier of the phase.

- 
- 
- Rockwell Software PharmaSuite® 8.4 - Functional Requirement Specification Material Tracking Phases
- 
-



## Account Material Phase (SR0070+)

The **Account material** phase allows an operator to account identified sublots in terms of consumed, wasted, sampled, and returned quantities.

Example use cases are:

- Consume partial sublots  
For sublots that were not completely used up during processing, the actual amount of material that has been utilized can be declared as consumed and the remainder can be declared as to be returned.
- Consume sublots completely  
If several sublots of one material have been identified and consumed completely, the consumption can be declared per material at once.
- Account samples  
A processing step requires to create samples. The quantity that was used for sampling purposes can be declared separately.
- Account unused sublots  
One of the identified sublots was not used at all during processing. The entire subplot can be returned.



The number of accounted sublots and their material identifiers are stored in the batch record, thereby becoming available for documentation purposes in the sub-report and batch report (page [27](#)).

After completion the phase displays the accounted material with the following data in the Execution Window:

- batch and/or subplot identifiers
- identified quantity
- consumed quantity
- waster quantity
- sampled quantity
- returned quantity.

The Navigator displays the ratio between accounted quantity and the identified quantity in percent.

Account the tableted materials.

Refresh  Account 

Material ID	Material short description	Batch ID	Sublot ID	Identified	Consumed	Wasted	Sampled	Returned
D003-04	Ethanol 96 %			10.0 g	10.0 g	0 g	0 g	0.0 g
		BX10						
			SL00000391	10.0 g	10.0 g	0 g	0 g	0.0 g
D005-04	Talc			100.0 g				
		BX34						
			SL00000393	100.0 g				
D130-01	Sonolin 100 mg premix			2,020.0 g				
		BX30						
			SL00000399	2,020.0 g				



 Confirm 

Figure 3: Account material during execution

## Layout

The phase provides individual layouts for its representation during execution (page 24), in the Navigator (page 26), and in the sub-report (page 27).

### Representation during Execution (SR0070.1+)

The representation during execution depends on the phase mode.

---

#### Preview mode (SR0070.1.4)

1. <Instruction text>  
(taken from Instruction (SR0070.8.1) process parameter (page 29))
2. **Refresh** button (disabled).
3. **Account** button (disabled).
4. List of materials available for accounting (Table of materials (SR0070.1.2) (page 25))  
(taken from material input parameters (SR0070.6.1) (page 29))
5. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button (disabled).

---

#### Active mode (SR0070.1.1)

1. <Instruction text>  
(taken from Instruction (SR0070.8.1) process parameter (page 29))
2. **Refresh** button.
3. **Account** button.

4. List of materials available for accounting (Table of materials (SR0070.1.2) (page 25))  
(taken from material input parameters (SR0070.6.1) (page 29))
5. **Enable** button (unlocks the **Confirm** button).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button.

---

#### Table of materials (SR0070.1.2)

Data available per subplot/batch:

- Material ID (taken from material input parameters (SR0070.6.1) (page 29))
- Material short description (taken from material input parameters (SR0070.6.1) (page 29))
- Batch ID
- Sublot ID
- Identified quantity
- Consumed quantity
- Wasted quantity
- Sampled quantity
- Returned quantity

---

#### Accounting dialog (SR0070.1.3)

Data available per accounting step:

- **Identified** quantity and **UoM** toggle button (both read-only)
- **Consumed** quantity and **UoM** toggle button
- **Wasted** quantity and **UoM** toggle button (accessible according to **Calculation configuration (SR0070.8.3)** process parameter (page 30))
- **Sampled** quantity and **UoM** toggle button
- **Returned** quantity and **UoM** toggle button (accessible according to **Calculation configuration (SR0070.8.3)** process parameter (page 30))
- **Account** button
- **Cancel** button

---

### Accounting dialog - Single subplot (SR0070.1.3.1)

If, in the Table of materials (SR0070.1.2) (page 25), a single subplot has been selected for accounting, the following data can be provided:

- **Consumed** quantity
- **Sampled** quantity
- **Wasted** quantity or **Returned** quantity (depends on **Calculation configuration (SR0070.8.3)** process parameter (page 30))

---

### Accounting dialog - Consume all (SR0070.1.3.2)

If, in the Table of materials (SR0070.1.2) (page 25), a single batch, material item, or multiple subplots have been selected for accounting, the dialog opens in a **Consume all** mode. The **Identified** quantities are taken over as **Consumed** quantities. No quantities can be entered manually.

---

### Completed mode (SR0070.1.5)

1. <Instruction text>  
(taken from Instruction (**SR0070.8.1**) process parameter (page 29))
2. **Refresh** button (completed).
3. **Account** button (completed).
4. List of materials available for accounting (Table of materials (SR0070.1.2) (page 25))  
(taken from material input parameters (SR0070.6.1) (page 29))
5. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
6. **Confirm** button (completed).

### Representation in Navigator (SR0070.4+)

The Navigator provides the following details:

---

### Phase column (Framework capability)

- <Phase name>
  - Example:  
Account materials

**Information column (SR0070.4.1)**

- <Ratio between accounted quantity and identified quantity in percent>
- Example: 98%

**Action column**

- There are no actions available.

**Representation in Sub-report (SR0070.5+)**

The sub-report contains the following information:

**Common sub-report elements (Framework capability)**

- <Start time>
- <Completion time>
- <Unit procedure> / <operation> / <phase>
- <Work center> / <station> / <device> - <phase completion user>

**Sub-report elements (SR0070.5.1)**

- Material: <identifier> / <short description>
- Number of accounted sublots per material

**Business Logic (SR0070.2+)**

The phase implements the following business logic.

**Account material (SR0070.2.1)**

- Function: Account pre-defined materials
- Trigger: Phase becomes active
- Postcondition: Pre-defined materials are accounted

Step	#	Description
Phase activation	10	Phase displays its user interface according to the <b>Active mode (SR0070.1.1)</b> layout (page 24).
Operator starts accounting	20	Phase displays <b>Accounting dialog (SR0070.1.3)</b> form (page 25) to declare consumed, wasted, sampled, and returned quantities.

---

### Detect unaccounted materials (SR0070.2.2)

- Function: Detect if there are unaccounted materials
- Trigger: Operator confirms phase
- Postcondition: Unaccounted materials are recorded as exception

Step	#	Description
Operator confirms phase	10	According to <b>Accounting configuration (SR0070.8.2)</b> process parameter (page 29), phase checks if there are no unaccounted materials left. If the check fails, phase creates the <b>Unaccounted material (SR0070.3.2.1)</b> system-triggered exception (page 30).

---

### Unit procedure context (SR0070.2.3)

- Function: Define unit procedure context
- Trigger: Materials have been accounted
- Postcondition: Unit procedure context is defined

Step	#	Description
Phase defines unit procedure context	10	Phase assures that accounted materials are only recognized within the given unit procedure.

---

### Phase completion (SR0070.2.4)

- Function: Completion of phase
- Trigger: Complete material accounting
- Postcondition: Phase is completed

Step	#	Description
Operator confirms phase	10	In order to be completed, the phase requires all system-triggered exceptions to be recorded.

## Recipe Parameters

The phase provides material input parameters as process inputs (page 29) and process parameters (page 29).

## Process Inputs (SR0070.6+)

### Material input parameters (SR00570.6.1)

The default material input parameters are available to define which materials can be accounted during execution.

## Process Parameters (SR0070.8+)

The following process parameters define the behavior of the phase.

### BASIC PARAMETERS

#### Instruction (SR0070.8.1)

➤ For recent changes, see revision history (page 47).

Attribute	Type	Comment
Column 1	HTML text	Instruction text to be displayed. <b>Restriction:</b> Maximum length is 2000 characters (including HTML tags).
Column 2	HTML text	Not used.
Column 3	HTML text	

### CONFIGURATION OF SYSTEM-TRIGGERED EXCEPTIONS

#### Accounting configuration (SR0070.8.2)

Attribute	Type	Comment
Enabled	Flag	Controls if a check is performed.
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Unaccounted material (SR0070.3.2.1)** system-triggered exception (page 30).

## PROCESSING PARAMETER

### Calculation configuration (SR0070.8.3)

Attribute	Type	Comment
Result	Choice list	Defines whether the returned quantity or the wasted quantity is calculated. <b>Return(ed) qty</b> = Identified qty - Consumed qty - Sampled qty - Wasted qty <b>Waste(d) qty</b> = Identified qty - Consumed qty - Sampled qty - Returned qty Default setting: <b>Return</b> .

### Exceptions (SR0070.3+)

The phase supports user-defined, user-triggered (page 31), system-triggered (page 30), and post-completion exceptions (page 31) and their configuration by means of process parameters (page 29).

User-defined exceptions cannot be configured by process parameters since they are provided by the framework and independent of phases.

#### System-triggered Exceptions (SR0070.3.2+)

➤ For recent changes, see revision history (page 47).

A system-triggered exception is represented in a message dialog along with an **Exception** button, in the Exception Window as the read-only description of the exception, and in the batch report.

The following system-triggered exceptions are available.

#### Unaccounted material (SR0070.3.2.1)

Representation during exception handling:

- <Exception text>  
(taken from **Accounting configuration (SR0070.8.2)** process parameter (page 29))  
<Number> sublots have not been accounted yet.
- Example:  
Unaccounted materials.  
2 sublots have not been accounted yet.



Step	#	Description
Operator triggers exception	10	Phase records exception.

### User-triggered Exceptions

There are no user-triggered exceptions available.

### Post-completion Exceptions

There are no post-completion exceptions available.

### Information Messages

There are no information messages available.

### Questions

There are no questions available.

### Decisions

There are no decisions available.

### Error Messages

There are no error messages available.

### Output Variables

The following output variables are available to reference the phase's output.

---

#### Instance count (Framework capability)

- Data type: Long
- Usage: The output variable provides the count of the number of instances the phase has been processed, for example in a loop. The count is also increased when the phase is skipped from an operator's perspective, since the phase is still executed, but as a hidden phase.  
The count variable of a phase that has not been executed provides 0 as output value.

---

**Start time (Framework capability)**

- Data type: Timestamp
- Usage: The output variable provides the start time of the phase.

---

**Completion time (Framework capability)**

- Data type: Timestamp
- Usage: The output variable provides the completion time of the phase.

---

**Identifier (Framework capability)**

- Data type: String
- Usage: The output variable provides the identifier of the phase.

## Produce Material Phase (SR0060+)

The **Produce material** phase allows an operator to produce intra materials or the final product during recipe execution.

Example use cases are:

- Produce intra materials  
The intra materials produced in a processing step will be used in a subsequent processing step. Create the sublots of the intra materials and print their labels. Now, the intra materials are prepared for identification in the next processing step.
- Produce intra materials with defined quality status  
The quality status of the intra materials must be **Released**. This requirement can be defined and will be assigned to the produced sublots.
- Produce final product  
For final products, the quantity can be declared and labels printed per subplot. Then, the product can be delivered to the warehouse.
- Reprint a subplot label  
If there was a problem during label printing that renders the printed labels unusable, the required labels can be printed again.

The number of produced sublots and their material identifiers are stored in the batch record, thereby becoming available for documentation purposes in the sub-report and batch report (page 36).

Anomalies that occur during processing are covered by the phase exception handling (page 41) (e.g. label reprint).

After completion the phase displays the produced material with the following data in the Execution Window:

- batch and/or subplot identifiers
- planned quantity
- produced quantity.

The Navigator displays the overall produced quantity and provides access to the post-completion exception.

Move verified output material to one or more sublots.

Number of sublots

Quantity per subplot

g

kg

Produce

Material ID	Material short description	Batch ID	Sublot ID	Planned quantity	Produced quantity
D130-01	Sonolin 100 mg premix	BX143		1,010.0 g	1,010.0 g
		BX143	SL00000476		505.0 g
		BX143	SL00000477		505.0 g

Confirm

Figure 4: Produce material during execution

Move verified output material to one or more sublots.

Number of sublots

Quantity per subplot

g

kg

Produce

Material ID	Material short description	Batch ID	Sublot ID	Planned quantity	Produced quantity
D130-01	Sonolin 100 mg premix	BX143		1,010.0 g	1,515.0 g
		BX143	SL00000476		505.0 g
		BX143	SL00000477		505.0 g
		BX143	SL00000478		505.0 g

D130-01: SL00000476 contaminated, re-produce 505.0 g.

Confirm

Figure 5: Reactivated Produce material during execution with Comment to execution

Layout

The phase provides individual layouts for its representation during execution (page 34), in the Navigator (page 36), and in the sub-report (page 36).

Representation during Execution (SR0060.1+)

The representation during execution depends on the phase mode.

Preview mode (SR0060.1.3)

1. <Instruction text>  
(taken from **Instruction (SR0060.8.1)** process parameter (page 39))
2. Text box for the number of sublots (disabled).
3. Text box for the quantity per subplot (disabled).
4. **UoM** button (disabled).
5. **Produce** button (disabled).

6. List of materials available for production (Table of materials (SR0060.1.2) (page 35))  
(taken from material output parameters (SR0060.7.1) (page 39))
7. Material-related comment to execution  
(only visible if comment is maintained for the order step output)
8. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
9. **Confirm** button (disabled).

---

#### Active mode (SR0060.1.1)

1. <Instruction text>  
(taken from **Instruction (SR0060.8.1)** process parameter (page 39))
2. Text box for the number of sublots
3. Text box for the quantity per subplot
4. **UoM** toggle button
5. **Produce** button
6. List of materials available for production (Table of materials (SR0060.1.2) (page 35))  
(taken from material output parameters (SR0060.7.1) (page 39))
7. Material-related comment to execution  
(only visible if comment is maintained for the order step output)
8. **Enable** button (unlocks the **Confirm** button).  
The button is not visible in case a phase completion signature was configured during authoring.
9. **Confirm** button.

---

#### Table of materials (SR0060.1.2)

Data available per subplot:

- Material ID (taken from material output parameters (SR0060.7.1) (page 39))
- Material short description (taken from material output parameters (SR0060.7.1) (page 39))
- Batch ID of material to be produced
- Sublot ID of produced sublots
- Planned quantity (taken from material output parameters (SR0060.7.1) (page 39))

- Produced quantity (total and per subplot)

---

#### Completed mode (SR0060.1.4)

1. <Instruction text>  
(taken from **Instruction (SR0060.8.1)** process parameter (page 39))
2. Text box for the number of sublots (disabled).
3. Text box for the quantity per subplot (disabled).
4. **UoM** button (disabled).
5. **Produce** button (completed).
6. List of materials available for production (Table of materials (SR0060.1.2) (page 35))  
(taken from material output parameters (SR0060.7.1) (page 39))
7. Material-related comment to execution  
(only visible if comment is maintained for the order step output)
8. **Enable** button (disabled).  
The button is not visible in case a phase completion signature was configured during authoring.
9. **Confirm** button (completed).

#### Representation in Navigator (SR0060.4+)

The Navigator provides the following details:

---

##### Phase column (Framework capability)

- <Phase name>
  - Example:  
Verify coating output

---

##### Information column (SR0060.4.1)

- <Overall produced quantity>
  - Example: 980 kg

---

##### Action column (SR0060.4.2)

- Reprint, reprints a subplot label.

#### Representation in Sub-report (SR0060.5+)

The sub-report contains the following information:

---

**Common sub-report elements (Framework capability)**

- <Start time>
- <Completion time>
- <Unit procedure> / <operation> / <phase>
- <Work center> / <station> / <device> - <phase completion user>

---

**Sub-report elements (SR0060.5.1)**

- Material: <identifier> / <short description>
- List of produced sublots including planned and produced quantities
- Material-related comment to execution (only visible if comment was visible during execution, i.e. was maintained for the order step output at that time)

**Business Logic (SR0060.2+)**

The phase implements the following business logic.

---

**Produce material (SR0060.2.1)**

- Function: Produce pre-defined material
- Trigger: Phase becomes active
- Postcondition: Pre-defined material is produced

Step	#	Description
Phase activation	10	Phase displays its user interface according to the <b>Active mode (SR0060.1.1)</b> layout (page 35).
Operator starts producing	20	The <b>Create subplot (SR0060.2.2)</b> function (page 37) becomes active.
	30	The <b>Assign storage location (SR0060.2.3)</b> function (page 38) becomes active.
	40	The <b>Assign batch status (SR0060.2.5)</b> function (page 38) becomes active.

---

**Create subplot (SR0060.2.2)**

- Function: Creation of sublots
- Trigger: Operator starts producing
- Postcondition: Sublots are created

Step	#	Description
Operator provides data and starts producing	10	Phase creates sublots and prints a label for each produced subplot.

---

#### Assign storage location (SR0060.2.3)

- Function: Assignment of storage location
- Trigger: New subplot has been created
- Postcondition: Storage location is assigned

Step	#	Description
Sublots have been created	10	Phase assigns the pre-defined storage location to each subplot, per configuration on work center level.

---

#### Assign batch status (SR0060.2.5)

- Function: Assignment of batch status
- Trigger: New batch has been created
- Precondition: No order-related batch exists yet for the product material
- Postcondition: Batch status is assigned

Step	#	Description
Unit procedure context has been defined	10	According to <b>Batch definition (SR0060.8.2)</b> process parameter (page 40), phase assigns a pre-defined batch status to the newly created batch. (Does not apply to already existing batches that have been defined on order level.)
	20	If no status is pre-defined, <b>Quarantined</b> is assigned as the default status.

---

#### Unit procedure context (SR0060.2.4)

- Function: Define unit procedure context
- Trigger: A new subplot is created
- Postcondition: Unit procedure context is defined



Step	#	Description
Phase defines unit procedure context	10	Phase assures that produced materials are only recognized within the given unit procedure.

## Recipe Parameters

The phase provides material output parameters as process outputs (page 39) and process parameters (page 39).

### Process Outputs (SR0060.7+)

#### Material output parameters (SR0060.7.1)

The default material output parameters are available to define which material can be produced during execution.

Quantity definitions of the material output parameters are populated to the **Table of materials (SR0060.1.2)** list (page 35) that is displayed during execution. This includes the reflection of quantity-related calculations during order explosion.

### Process Parameters (SR0060.8+)

The following process parameters define the behavior of the phase.

#### BASIC PARAMETERS

#### Instruction (SR0060.8.1)

➤ For recent changes, see revision history (page 47).

Attribute	Type	Comment
Column 1	HTML text	Instruction text to be displayed. <b>Restriction:</b> Maximum length is 2000 characters (including HTML tags).
Column 2	HTML text	Not used.
Column 3	HTML text	

## PROCESSING PARAMETER

### Batch definition (SR0060.8.2)

Attribute	Type	Comment
Batch status	Choice list	Defines the batch status of the newly created batch. Default setting: <b>Quarantined</b> . <b>Important:</b> The batch status setting only applies to newly created batches, but not to already existing batches.

## CONFIGURATION OF USER-TRIGGERED EXCEPTIONS

### Reprint (SR0060.8.3)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> . Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also Reprint label (SR0600.3.1.1) user-triggered exception (page 41).

## CONFIGURATION OF POST-COMPLETION EXCEPTIONS

### Post - Reprint (SR0060.8.4)

Attribute	Type	Comment
Risk assessment	Choice list	Defines the risk level of the exception and thus controls the related signature privilege. Available settings: <b>None</b> , <b>Low</b> , <b>Low (mandatory comment)</b> , <b>Medium</b> , <b>Medium (mandatory comment)</b> , <b>High</b> , <b>High (mandatory comment)</b> .

Attribute	Type	Comment
		Default setting: <b>High</b> .
Exception text	Text	Defines the exception description used during exception handling and within the batch record. Maximum length is 2000 characters.

See also **Reprint label (SR0060.3.3.1)** post-completion exception (page 42).

## Exceptions (SR0060.3+)

The phase supports user-defined, user-triggered (page 41), system-triggered (page 41), and post-completion exceptions (page 42) and their configuration by means of process parameters (page 39).

User-defined exceptions cannot be configured by process parameters since they are provided by the framework and independent of phases.

### System-triggered Exceptions

There are no system-triggered exceptions available.

### User-triggered Exceptions (SR0060.3.1+)

A user-triggered exception is represented in the list of available user-triggered exceptions in the Exception Window, as the description of the exception, and in the batch report.

The following user-triggered exceptions are available.

---

#### Reprint label (SR0060.3.1.1)

The **Reprint label** exception allows an operator to reprint a subplot label.

Representation during exception handling:

- Instruction:  
To reprint a subplot label, enter the ID of the produced subplot.  
Box for barcode input.  
**Confirm** button.
- Exception text:  
<Exception text>  
(taken from **Reprint (SR0060.8.3)** process parameter (page 40))  
Label of < subplot identifier> subplot reprinted.

- Example:  
Label reprinted  
Label of SL00008765 subplot reprinted.

Step	#	Description
Operator confirms exception	10	Phase reprints label.

### Post-completion Exceptions (SR0060.3.3+)

A post-completion exception is accessible via the Navigator and represented in the list of available post-completion exceptions in the Exception Window, as the description of the exception, and in the batch report.

The following post-completion exceptions are available.

---

#### Reprint label (SR0060.3.3.1)

The **Reprint label** exception allows an operator to reprint a subplot label from the Navigator after the completion of the phase.

Representation of the exception:

- Instruction:  
To reprint a subplot label, enter the ID of the produced subplot.  
Box for barcode input.  
**Confirm** button.
- <Exception text>  
(taken from **Post - Reprint (SR0060.8.4)** process parameter (page 40))  
Label of < subplot identifier> subplot reprinted.
- Example:  
Label reprinted  
Label of SL00008765 subplot reprinted.

Step	#	Description
Operator triggers action	10	Phase displays Exception Window.
Operator confirms exception	20	Phase reprints label.

## Information Messages

There are no information messages available.

## Questions

There are no questions available.

## Decisions

There are no decisions available.

## Error Messages (SR0060.3.6+)

Error messages are represented in an error message dialog containing a message type-specific icon, the error message, and an **OK** button.

The following error messages are available to inform the operator about error conditions.

---

### No sublots identified (SR0060.3.6.1)

UI text	Comment
Cannot proceed, since no sublots of the ingoing material(s) are currently identified.	Message pack: PhaseProductProduceMaterial<version> Message ID: NoOSIMsg

## Output Variables

The following output variables are available to reference the phase's output.

---

### Instance count (Framework capability)

- Data type: Long
- Usage: The output variable provides the count of the number of instances the phase has been processed, for example in a loop. The count is also increased when the phase is skipped from an operator's perspective, since the phase is still executed, but as a hidden phase.  
The count variable of a phase that has not been executed provides 0 as output value.

---

**Start time (Framework capability)**

- Data type: Timestamp
- Usage: The output variable provides the start time of the phase.

---

**Completion time (Framework capability)**

- Data type: Timestamp
- Usage: The output variable provides the completion time of the phase.

---

**Identifier (Framework capability)**

- Data type: String
- Usage: The output variable provides the identifier of the phase.

## Reference Documents

The following documents are available from the Rockwell Automation Download Site.

No.	Document Title	Part Number
A1	PharmaSuite Functional Requirement Specification Execution Framework	PSFRSEF-RM004E-EN-E

**TIP**

To access the Rockwell Automation Download Site, you need to acquire a user account from Rockwell Automation Sales or Support.

- 
- 
- Rockwell Software PharmaSuite® 8.4 - Functional Requirement Specification Material Tracking Phases
- 
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## Document Information

The document information covers various data related to the document.

### Approval

This document has been approved electronically via the Rockwell Automation Document Management System (DMS). The required approvers of this document include the following:

Name	Role
Martin Dittmer	Product Manager
Steffen Landes	Development Manager
Martin Irmisch	Test Manager

In addition, the electronic document approval via DMS is confirmed by a handwritten signature of all approvers in the Quality Document when the release is completed. The Quality Document summarizes the quality-related planning activities and results of a PharmaSuite release.

### Version Information

Object	Version
PharmaSuite	8.4
Identify material	5.0 MR4
Account material	5.1
Produce material	5.0 MR4
Functional Requirement Specification	1.0

### Revision History

The following table describes the history of this document.

Changes related to the document:

Object	Description	Document
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Changes related to "Identify Material" (page 3):

Object	Description	Document
System-triggered Exceptions (SR0050.3.2+) (page 14)	Update The message dialog of a system-triggered exception no longer provides a <b>Cancel</b> button.	1.0
Instruction (SR0050.8.1) (page 10)	Update The maximum length of the <b>Instruction</b> process parameter is 2000 characters (including HTML tags). No change of code.	1.0

Changes related to "Account Material" (page 23):

Object	Description	Document
System-triggered Exceptions (SR0070.3.2+) (page 30)	Update The message dialog of a system-triggered exception no longer provides a <b>Cancel</b> button.	1.0
Instruction (SR0070.8.1) (page 29)	Update The maximum length of the <b>Instruction</b> process parameter is 2000 characters (including HTML tags). No change of code.	1.0

Changes related to "Produce Material" (page 33):

Object	Description	Document
Instruction (SR0060.8.1) (page 39)	Update The maximum length of the <b>Instruction</b> process parameter is 2000 characters (including HTML tags). No change of code.	1.0

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