

# Sample Management (QM-IM-SM)



HELP.QMIMSM

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## Icons

Icon	Meaning
	Caution
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	Recommendation
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## Sample Management (QM-IM-SM)

### Purpose

The *Quality Management* (QM) application component includes comprehensive functions for processing and managing physical samples during [goods receipt \[Page 7\]](#) and [production \[Page 8\]](#). The *Sample Management* component supplements the existing QM functions for processing samples by allowing you to:

- Flexibly plan the drawing of physical samples
- Identify physical samples on the basis of unique, client-wide keys
- Record inspection results for physical samples
- Manage the physical-sample data in the system

The *Sample Management* component supports many of the requirements in the process industry for documenting and tracking the physical samples drawn in quality inspections. It provides the QM component with many of the functions that are typically found in Laboratory Information Management Systems (LIMS).

### Implementation Considerations

Sample management capabilities are particularly important in the food, chemical, and pharmaceutical industries, where products are often subjected to complex chemical, organic and physical quality inspections. You should consider implementing the *Sample Management* component if your company needs to:

- Process different types of physical samples (for example, goods receipt samples, production samples, competitor samples)
- Draw different categories of physical samples (for example, primary samples, pooled samples, and reserve samples)
- Define procedures for drawing physical samples based on different inspection processing procedures
- Plan sufficient quantities of physical samples for several inspections
- Store and track physical samples for a specified period of time

### Integration

The functions of the *Sample Management* component (QM-IM-SM) are integrated with the QM functions for planning inspections, processing inspection lots, and recording inspection results. If you want to process and manage physical samples using the *Sample Management* component, you must also implement the following QM components:

- *Quality Planning* (QM-PT)
- *Quality Inspection* (QM-IM)

### Features

The *Sample Management* component gives you increased flexibility and control in the following areas:

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**Sample Management (QM-IM-SM)****Inspection planning**

- You can create [sample-drawing procedures \[Page 12\]](#) to define your strategy for creating and drawing physical samples. For example, you can specify:
  - Which categories of physical samples should be drawn (for example, primary samples, pooled samples, and reserve samples).
  - How many physical samples must be drawn
- If your materials are delivered in different types of containers, you can define different procedures for drawing physical samples from different container types.
- To activate the functions for sample management, you must assign a sample-drawing procedure to a task list. As a result, the information in the sample-drawing procedure applies to all materials that are inspected with the task list.

**Inspection processing**

- The system automatically creates [physical-sample records \[Page 30\]](#) for all planned physical samples when it creates an inspection lot. A unique physical-sample number identifies each physical sample.
- The system assigns all physical samples that were created automatically for an inspection lot to a unique [physical-sample-drawing \[Page 39\]](#) number. Using this number, you can determine how many physical samples were drawn from an inspection lot and how many pooled and reserve samples were created.
- In addition to the planned, automatically generated physical samples, you can create physical samples manually.
- You can record inspection results for all automatically and manually created physical samples.
- When you make the usage decision for an inspection lot, you can display an overview of all processed physical samples with their respective statuses.
- You can track the physical samples after the inspection by recording the physical sample location data in the physical-sample records.

## Sample Management During Goods Receipt

### Overview

When you inspect a material upon goods receipt, you typically draw physical samples from a readily available, known quantity of goods or materials. The goods are usually delivered in one or more containers from which you draw the physical samples. The system determines the scope of the physical-sample drawing from the information in the inspection plan and assigned sample-drawing procedure, and prints it out on the sample-drawing instruction when an inspection lot is created. The sample-drawing instruction specifies:

- How many physical samples you must draw from the available quantity of goods
- How to distribute the physical samples among the laboratories for inspection

For most goods receipt inspections, you only need to plan one sample-drawing item in the sample-drawing procedure to specify how to draw the physical samples. The operations in the inspection plan represent the different laboratories to which you distribute the physical samples. Although each laboratory usually performs a different type of inspection, the inspected material is generally the same in all laboratories.

You can also inspect physical samples drawn in a goods receipt inspection that have not been planned.

### Procedure

The following questions and answers can help you determine how to proceed:

- What do I have to do if I want to plan and process physical samples for a goods-receipt inspection?
  - a. Plan the physical samples in a sample-drawing procedure.
  - b. Assign the sample drawing procedure to the inspection plan.
  - c. Record inspection results for the automatically created physical samples after the system creates the inspection lot.
- What do I have to do if I want to draw and inspect additional physical samples beyond the ones that were planned?
  - Expand the existing physical-sample drawing to include the new, manually created physical samples.

OR

- Create a new physical-sample drawing manually with reference to an inspection lot or an order.

## Sample Management During Production

### Overview

The requirements for drawing physical samples in production may vary from one process to another, depending on different factors (for example, the type of production process, the type of product being produced, and the number of production stages). A production process typically consists of different production stages or operations that describe how a product is produced. In the course of the production process, the physical properties of the product usually change from one operation to the next. In view of these changes, the procedure for drawing the physical samples and the number of required physical-sample drawings may also change in the course of the production process. For this reason, you may need different instructions for drawing physical samples at different production stages.

In general, you have the following possibilities for drawing physical samples in production:

- **Planning a physical-sample drawing**

You can plan the physical-sample drawing by defining a sample drawing procedure and assigning it to the routing or recipe. In this case, the system creates the physical samples automatically when an inspection lot is created.

- **Drawing physical samples manually**

You draw the physical samples manually on the basis of such criteria as time or quantity (for example, you draw a physical sample every three hours or after every 1000 liters). In this case, you do not plan the drawing of physical samples in a sample-drawing procedure. You create them manually with reference to an inspection lot or order.



If necessary, you can combine both of the above methods in your production process.

### Guidelines

- You can only plan the **first** physical-sample drawing in a production process. When you plan a physical-sample drawing, the system automatically creates the physical samples and the inspection specifications for results recording when it creates an inspection lot.
- If you want to plan the drawing of **different physical samples** in **different operations** of the production process, you must define a separate physical-sample drawing item in the physical-sample drawing procedure for each inspection-relevant operation.
- For each operation that contains inspection-relevant characteristics, you can process one or more physical-sample drawings. However, you can only plan the **first** of several physical-sample drawings.
- After the first planned drawing, you must carry out all physical-sample drawings **manually**. This means you must create new physical-sample drawings with reference to an inspection lot, production order, run schedule header, or process order.

### Activities

The following questions and answers can help you determine how to proceed:



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**Sample Management During Production**

- What do I have to do if I want to plan and process physical samples in production?
  - d. Plan the physical samples for the **first** physical-sample drawing in a physical sample drawing procedure.
  - e. Assign the sample drawing procedure to the routing or recipe.
  - f. After the system creates the inspection lot, record inspection results for the automatically created physical samples.
- What do I have to do if I want to plan and inspect different physical samples and a different number of physical samples in each operation?

You must make sure that the system finds a separate and distinct sample-drawing item for each operation. This is achieved through the partial-sample numbers, which define the validity of a sample-drawing item and its assignment to the partial-sample at the characteristic level of an operation.
- How can I process additional physical-sample drawings after the first physical sample drawing?
  - a. Create a new physical-sample drawing manually with reference to an inspection lot or order.
  - b. In the operation for which you created the new physical-sample drawing, record inspection results for the physical samples.

## Planning the Physical Samples

# Planning the Physical Samples

## Purpose

You plan physical samples to:

- Develop and adapt your strategy for drawing physical samples to your company's inspection processing procedures
- Enable the system to automatically create physical-sample records when an inspection lot is created

## Prerequisites

The Customizing requirements for *Sample Management* include the required and optional activities specified below.

### Required activities

In Customizing for *Quality Management*, your project team has:

- Defined physical sample types (for example, goods receipt samples, production samples, competitor samples)
- Assigned physical sample types to the inspection type for goods receipt or production
- Defined number ranges for physical samples numbers and physical-sample drawing numbers
- Defined inspection points for physical samples
- Set the indicator to display the number of containers for goods receipt inspection lots (settings at plant level)

### Optional activities

In Customizing for *Quality Management*, your project team has:

- Defined container types for physical samples
- Defined physical sample locations for storing the physical samples
- Assigned material authorizations for processing and confirming physical samples
- Specified whether a digital signature is required for the material authorization to confirm the drawing of physical samples

For more information about the activities in Customizing, refer to the Implementation Guide (IMG) for *Quality Management*.

## Process Flow

1. You develop a concept for drawing the physical samples and define your strategies in one or more [sample-drawing procedures \[Page 12\]](#).
2. You make sure the [sampling procedures \[Page 26\]](#) used in the inspection plans and [sampling schemes \[Page 23\]](#) referenced in the sample-drawing procedures are compatible with the functions for sample management.

**Planning the Physical Samples**

3. You activate the functions for sample management by:
  - Defining inspection points for physical samples in the inspection plan
  - Assigning a sample-drawing procedure to an inspection plan
  - Defining the inspection point valuation at the operation level of the inspection plan

**See also:**

[Creating a Sample-Drawing Procedure \[Page 19\]](#)

[Creating a Sampling Procedure for Physical Samples \[Page 27\]](#)

[Creating a Sampling Scheme for a Sample-Drawing Procedure \[Page 24\]](#)

[Assigning a Sample-Drawing Procedure to an Inspection Plan \[Page 20\]](#)

[Setting the Inspection-Point Valuation Mode \[Page 21\]](#)

## Sample-Drawing Procedure

# Sample-Drawing Procedure

## Definition

A master data object in which you plan the drawing of physical samples. In the sample-drawing procedure, you specify:

- Which categories of physical samples must be drawn
- How many physical samples must drawn
- The size of each physical sample
- Whether the drawing of physical samples must be confirmed

## Use

The system uses the information in the sample-drawing procedure together with the information in the inspection plan to calculate the physical sample sizes, and to create physical-sample records when an inspection lot is created.

## Structure

A sample-drawing procedure contains the following types of information:

- **Header data**

The sample drawing header contains the following information fields and control indicators:

- Key that identifies the sample-drawing procedure
- Short text description for the sample-drawing procedure
- Authorization group that limits the access to the sample-drawing procedure
- Text for matchcode searches
- Long text indicator
- Indicator for calculating the number of physical samples on the basis of number of containers in the inspection lot (as opposed to the base unit of measure)
- Confirmation indicator to activate or deactivate the confirmation requirement
- Lock indicator to prevent the sample-drawing procedure from being used
- Usage indicator that shows whether the sample-drawing procedure is currently used in an inspection plan

- **Sample-drawing item(s)**

A sample-drawing item contains specific instructions for creating physical samples with respect to a specific inspection lot container type and specific partial-sample numbers in the inspection plan. In a sample-drawing item, you can also specify:

- Which categories of physical samples you want to create (primary samples, pooled samples, and reserve samples)
- The physical sample container you use to draw each category of physical sample

**Sample-Drawing Procedure**

- A factor to increase the quantity of physical samples to be created (for example, if you need to carry out more than one inspection)
- The number of physical samples to be created (fixed number or variable number based on a sampling scheme)

**Integration**

The sample-drawing procedure interacts with the following planning objects:

- Inspection plan  
You assign a sample-drawing procedure to an inspection plan to activate the functions for sample management.
- Sampling scheme (optional)  
If you want the system to determine the number of physical samples automatically on the basis of a sampling scheme, you can reference sampling schemes in a sample-drawing procedure.

## Planning the Sample-Drawing Procedure

# Planning the Sample-Drawing Procedure

## Purpose

The purpose of planning a sample-drawing procedure is to:

- Define your strategy for creating and drawing physical samples
- Implement your strategy by providing the system with specific instructions on how to create the physical samples

This process provides an example that shows how the system calculates the physical sample size based on the information you enter in the sample-drawing procedure.

## Process Flow

1. You evaluate your procedures for processing inspections and determine which criteria will be important for [creating sample-drawing procedures \[Page 19\]](#).

In many companies, the procedures for drawing physical samples are based on how materials are processed in an inspection. For example, an inspection planner typically assigns all materials that are inspected in the same way to the same inspection plan. Because you have to assign the sample-drawing procedure to the inspection plan header to activate the functions for sample management, all materials assigned to the inspection plan also use the same sample-drawing procedure.

You must evaluate your company's procedures and criteria for drawing physical samples and define your sample-drawing procedures accordingly.

2. You specify how the number of physical samples will be calculated.

In each sample-drawing procedure, you must specify whether the system should calculate the number of physical samples on the basis of the **lot quantity in the base unit of measure** (for example, 1000 liters) or on the basis of the **number of lot containers and lot container type** (for example, five barrels).

3. You specify whether the drawing of the physical samples needs to be confirmed.

In a sample-drawing procedure, you can activate a function that requires the drawing of physical samples to be confirmed. This means that when the system creates physical-sample records, the records are not released until you confirm the physical-sample drawing. As long as a record is not released, you cannot record inspection results for the physical sample. If you do not activate this function, the system releases the records automatically when they are created.

For more information about the statuses of physical samples, see [Status Management for Physical-Sample Records \[Page 32\]](#).

4. You define one or more sample-drawing items in a sample-drawing procedure.

A sample-drawing item contains specific instructions on how many physical samples should be created for a material and how they should be created. You must define at least one sample-drawing item in each sample-drawing procedure.

You may need to define several different sample-drawing items if:

- You want to draw a different number of physical samples for different partial-sample numbers in the inspection plan.

**Planning the Sample-Drawing Procedure**

- The materials are delivered in different types of containers and you have different procedures for drawing physical samples based from each container type.
- 5. You specify which categories of physical samples must be created for each sample-drawing item:
  - **Primary samples** (1st stage)  
Physical samples drawn directly from a material or batch that will be inspected or used to create pooled samples.
  - **Pooled samples** (2nd stage)  
Physical samples to be created by mixing the contents of two or more primary samples from the same material or batch.
  - **Reserve samples**  
Primary physical samples drawn from a material or batch reserved for future inspection.

The following table shows which physical samples are normally distributed to the laboratories and inspected, based on the physical samples that are created:

<b>If you create</b>	<b>You inspect</b>
Primary samples	Primary samples
Primary and reserve samples	Primary samples only
Primary and pooled samples	Pooled samples only
Primary, pooled, and reserve samples	Pooled samples only

- 6. You specify how many physical samples must be created.

In each sample-drawing item, you must specify how many primary, pooled, and reserve samples should be created. You have the following options:

<b>For primary and pooled samples, you can specify:</b>	<b>For reserve samples, you can only specify:</b>
A fixed number of physical samples	A fixed number of physical samples
A sampling scheme to allow the system to determine the number of physical samples automatically based on the inspection lot quantity	

**Planning the Sample-Drawing Procedure**

A formula to have the system calculate the number of samples

The SAP formula interpreter supports the following formula parameters to calculate the number of physical samples:

- Lot quantity (P1)
- Number of lot containers (P2)
- Number of primary samples (P3)

For example, if you want to draw one physical sample from each lot container, you can simply enter the parameter "P2" in the formula field.

For primary and pooled samples, you can also enter a size factor that instructs the system to create a greater quantity of physical samples than you need for the current inspection. For example, if you specify a factor of "3," the system creates sufficient quantities of physical samples for you to carry out three inspections.

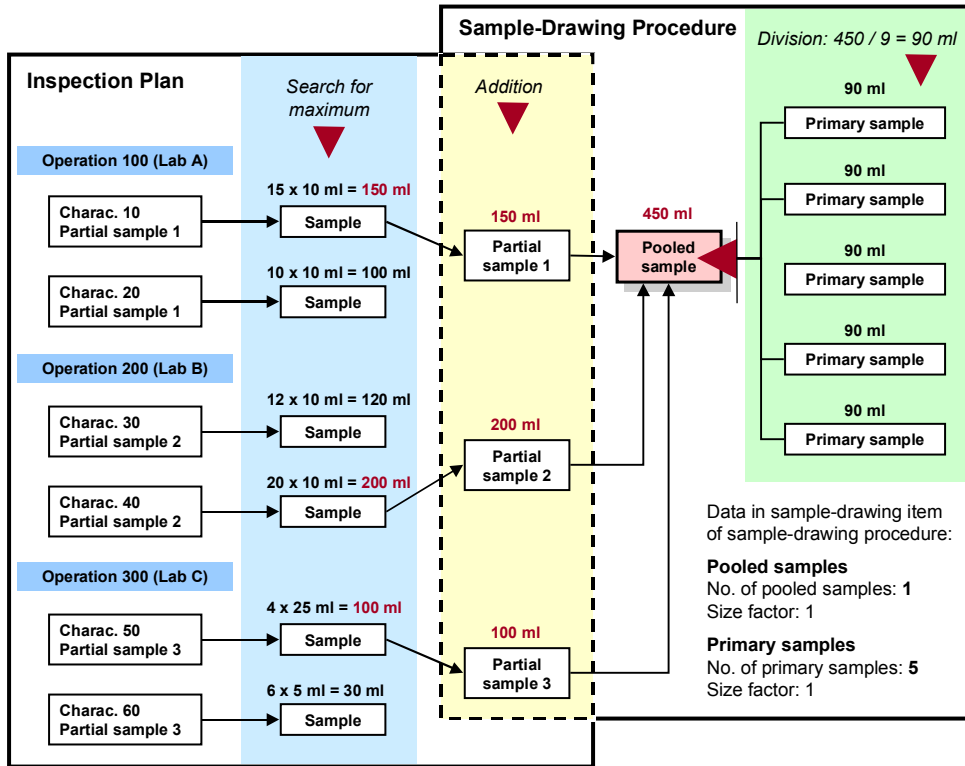


You should understand how the system calculates the number and sizes of physical samples. For an explanation, refer to the example [Determining the Physical-Sample Sizes \[Page 17\]](#).



## Determining the Physical-Sample Sizes

This example shows how the system calculates the number of physical samples and the quantity of each sample based on the information in the inspection plan and the sample-drawing procedure.

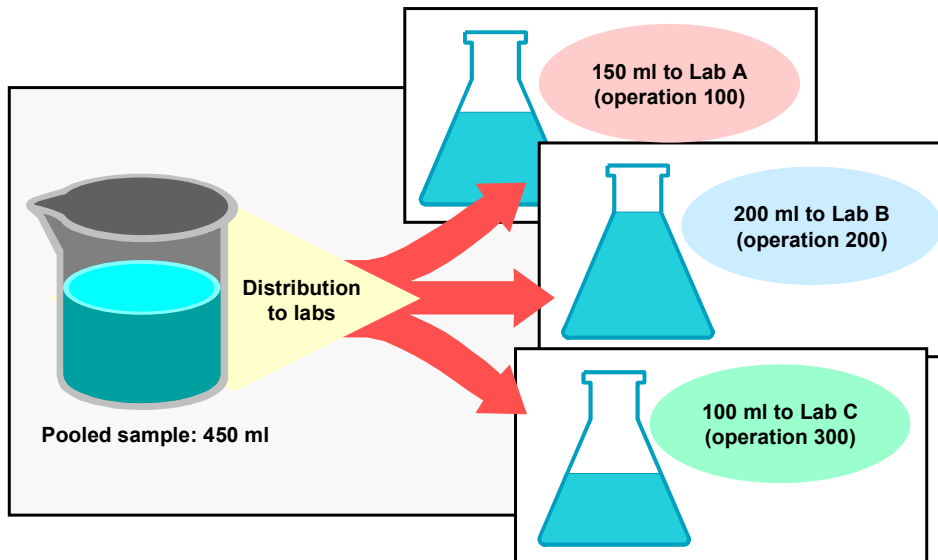


How does the system calculate this information based on the above data?

Step	The system determines		Value	Result
1	One pooled sample equals the sum of the partial samples defined in the inspection plan	=	450 ml	
2	The size of one pooled sample for one inspection	=	450 ml x 1	450 ml
3	The size of one primary sample for one inspection	=	450 ml / 5 x 1	90 ml
4	The size of all primary samples for one inspection	=	90 ml x 5	450 ml

**Determining the Physical-Sample Sizes**

In the above example, the quantities of physical samples are only enough for a single inspection. If you want the system to calculate additional quantities of physical samples that will be sufficient for more than one inspection, increase the size factors in the sample-drawing procedure accordingly.

**How are the contents of a pooled sample distributed among the laboratories?**

## Creating a Sample-Drawing Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Sample-drawing procedure* → *Process*.

The initial screen for creating a sampling drawing procedure appears. This screen contains a table in which you can define the header data for one or more sample-drawing procedures.
2. Choose *New entries*.

The table fields are ready for input.
3. Enter the data in the table as required. You must at least enter a key that identifies the sample-drawing procedure.
4. Select the new sample-drawing procedure in the table and then double click *Sample-drawing items* in the tree.

The screen for creating sample-drawing items in the sample-drawing procedure appears.
5. Choose *New entries*.

The detail screen for a sample-drawing item appears.
6. Enter the required data for the following fields or tabs in the sample-drawing item:
  - *Lot container*

This is the type of lot container to which the sample drawing item applies (for example, barrels).
  - *ToPartSampleNo*

This is the highest partial sample number in the inspection plan to which the sample-drawing item applies (for example, up to partial-sample number 003).
  - The data for the primary samples (*Primary samples* tab)
7. If needed, enter the optional data for the pooled and reserve samples.
8. Save the data.

## Assigning a Sample-Drawing Procedure to a Task List

# Assigning a Sample-Drawing Procedure to a Task List

## Prerequisites

You have already created the task list(s) you intend to use with the sample-drawing procedure and the task list(s) contains at least one required characteristic.



The procedure for assigning a sample-drawing procedure to a task list is essentially the same for all task list types (for example, for an inspection plan, a routing, or a master recipe). The procedure below describes the how to assign a sample-drawing procedure to an inspection plan. For routings or master recipes, refer to the appropriate functions for creating or changing a routing or master recipe.

## Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Inspection planning* → *Inspection plan* → *Create or Change*.

The initial screen for creating or changing an inspection plan appears.

2. Enter the necessary data to call up an inspection plan in the create or change mode.
3. In the inspection plan, choose the function to display the inspection plan header.
4. In the *Inspection points* field, enter a value that specifies inspection points for physical samples and then choose *Continue*.

The field for a sample-drawing procedure appears below the field for the inspection points.

5. Enter the key for the sample-drawing procedure that you want to assign to the inspection plan.
6. Save the data.

When you save the data, the system automatically executes a consistency check for the inspection plan. The system issues a warning message:

- To inform you that the sampling texts for the characteristics will be not be printed on the sample-drawing instruction, if you created and stored a long texts in the sample drawing procedure
- If there are different sample units of measure for the same partial sample in the inspection plan

## Result

The functions for sample management are active for the materials assigned to the inspection plan.

## Setting the Inspection-Point Valuation Mode

### Prerequisites

In the inspection plan, you have:

- Defined inspection points for physical samples
- Assigned a sample-drawing procedure to the inspection plan

### Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Inspection planning* → *Inspection plan* → *Create or Change*.

The initial screen for creating or changing an inspection plan appears.

2. Enter the necessary data to call up an inspection plan in the create or change mode.
3. Choose the function to display the operation overview in the inspection plan.
4. Select an operation and choose *Operation*.

The detail screen for the selected operation appears.

5. In the *Inspection point completion* field, choose a value for inspection point completion (for example, an automatic valuation of inspection points based on the inspection-point definition).
6. Repeat step 5 for the remaining operations in the inspection plan.
7. Save the data.

### Result

During results recording, you can value the inspection points manually or the system can value them automatically in the background (depending on how you set the inspection point completion).

## Change Documents for Sample-Drawing Procedures

### Use

Whenever you change information in a sample-drawing procedure, the system automatically records these changes in change documents. The sample-drawing procedure must have been saved at least once before the system creates change documents.

A change document contains the following information:

- Fields in the sample-drawing procedure that were changed (old and new values)
- Name of the person who made the changes
- Date and time of changes

### Activities

You can display and print change documents for a sample-drawing procedure when you process a sample-drawing procedure.

## Sampling Scheme

### Definition

Sampling plans grouped together on the basis of various determining criteria (for example, acceptable quality level and inspection severity).

In the R/3 System, the structure of the sampling scheme is based on international standards (for example, ISO 3951 and 2859). However, you can also use sampling schemes based on other sampling procedures in the R/3 System.

### Use

You can reference a sampling scheme in the sample-drawing procedure if you want the system to determine the number of physical samples automatically. The system can determine the number of physical samples using one of the following values:

- Inspection lot quantity in the base unit of measure
- Inspection lot quantity based on the number of containers and the container type

#### See also:

[Creating a Sampling Scheme for a Sample-Drawing Procedure \[Page 24\]](#)

## Creating a Sampling Scheme for a Sample-Drawing Procedure

## Creating a Sampling Scheme for a Sample-Drawing Procedure

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Sampling scheme* → *Create*.

The initial screen for creating a sampling scheme appears.

2. Enter a name for the sampling scheme you want to create.
3. You can create a completely new sampling scheme or you can copy an existing one. Choose one of the following options accordingly:

To create a completely new sampling scheme	To create a new sampling scheme by copying an existing one		
a.	Choose <i>Continue</i> . The initial screen for creating a sampling scheme appears.	a.	Choose <i>Copy</i> . A dialog box for copying a sampling scheme appears.
b.	Enter data in the required fields of the initial screen.	b.	Enter the name of the sampling scheme you want to copy.
	c.	Choose <i>Copy</i> . The initial screen for creating a sampling scheme appears.	
	d.	Change any existing data in the initial screen if necessary.	

4. In the initial screen, set the *Without valuation parameters* indicator.



If you do not set this indicator, you cannot use the sampling scheme in a sample-drawing procedure.

5. Specify whether the sampling tables in the sampling scheme should be based on an inspection severity or on an inspection severity **and** an AQL.
6. Choose *Continue* and then save the data.

## Result

You can reference the sampling scheme in a sample-drawing procedure.



## Inspection Point (Physical Samples)

### Definition

A reference object for carrying out several inspections and recording characteristic results within an operation.

In a goods receipt inspection with planned physical samples, each inspection corresponds to a physical sample number. In addition to the physical sample number, the inspection point can also include several other optional, freely definable fields.

### Integration

You must maintain information related to inspection points in the following planning objects:

- Inspection plan
  - At the header level of the inspection plan, you must specify the inspection point type (inspection points for physical samples).
  - At the operation level, you specify how the inspection points will be valued when you record inspection results. You can value each inspection point manually or the system can value the inspection points automatically.
- Sampling procedures
  - For each sampling procedure used at the characteristic level of the inspection plan, you must specify an identifier for inspection points based on a sample-drawing procedure.

---

**Sampling Procedure**

## Sampling Procedure

### Definition

A procedure that contains the rules for determining the sample size for an inspection. The sampling procedure also specifies the type of valuation to use for results recording (attributive, variable, or manual).

### Use

You assign a sampling procedure to each characteristic in an inspection plan to calculate the sample size.

### Integration

In a sampling procedure, you must activate the function for inspection points based on a sample-drawing procedure if you assigned a sampling procedure and a sample-drawing procedure to an inspection plan at the characteristic and header levels respectively.

## Creating a Sampling Procedure for Physical Samples

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Basic data* → *Sample* → *Sampling procedure* → *Create*.

The initial screen for creating a sampling procedure appears.

2. Enter a name for the sampling procedure you want to create.
3. You can create a completely new sampling procedure or you can copy an existing one. Choose one of the following options accordingly:

To create a completely new sampling procedure	To create a new sampling procedure by copying an existing one		
a.	Choose <i>Sampling procedure</i> . The initial screen for creating a sampling procedure appears.	a.	Choose <i>Copy</i> . A dialog box for copying a sampling procedure appears.
b.	Enter data in the required fields of the initial screen.	b.	Enter the name of the sampling procedure you want to copy.
		c.	Choose <i>Copy</i> . The initial screen for creating a sampling procedure appears.
		d.	Change any existing data in the initial screen, if necessary.

4. In the screen block for inspection points, set the indicator for *Sample management*.
5. Choose *Continue* to display the next screen for the sampling procedure.
6. Enter or change the data as necessary and then save the data.

### Result

You can assign the sampling procedure to a characteristic in an inspection plan that specifies a sample-drawing procedure in the inspection plan header.

---

**Processing Planned Physical Samples in an Inspection**

## Processing Planned Physical Samples in an Inspection

### Purpose

This scenario describes how to process physical samples in a goods receipt inspection. The objective of the inspection is to determine the quality of the materials in the inspection lot by:

- Inspecting a specified number of physical samples
- Recording inspection results for each physical sample
- Valuating each physical sample
- Making the usage decision for the inspection lot
- Retaining the physical samples after the inspection for possible future testing (optional)

### Prerequisites

You can only process physical samples in a goods receipt inspection if physical-sample records exist for each physical sample. Physical-sample records are created as follows:

- The system creates the records automatically for all planned physical samples.
- You can create records manually for unplanned physical samples.

### Process Flow

1. The system creates the inspection lot automatically or you create the inspection lot manually.  
For more information about the system activities that take when the inspection lot is created, see [Inspection Lot Creation with Planned Physical Samples \[Page 29\]](#).
2. You draw the physical samples from the inspection lot according to the directions in the [sample-drawing instruction \[Page 44\]](#).
3. You confirm the drawing of the physical samples if the confirmation requirement is active (specified in the sample-drawing instruction).
4. You create additional [physical samples manually \[Page 34\]](#) if necessary.
5. Once the physical samples have been distributed to the work centers or laboratories, you inspect each physical sample and record inspection results for each characteristic.  
When you record inspection results, you valuate and close each characteristic, and then valuate each physical sample.
6. You complete the inspection by making the usage decision for the inspection lot.
7. If necessary, you can store the physical samples for further testing.

#### See also:

[Creating a Physical-Sample Record Manually \[Page 35\]](#)

[Results Recording for Physical Samples \[Page 48\]](#)

[Usage Decision for Inspection Lot \[Page 50\]](#)

## Inspection Lot Creation with Planned Physical Samples

### Use

The system automatically creates physical-sample records for an inspection lot if you planned the physical samples in a sample-drawing procedure and assigned the sample-drawing procedure to an inspection plan that contains at least one required characteristic.

The system creates the physical-sample records:

- When it creates an inspection lot automatically on the basis of a goods receipt.
- If you create an inspection lot manually for a goods receipt.

### Activities

When an inspection lot is created, the system automatically:

- Calculates the number of physical samples to be drawn and the quantities of each physical sample.
- Creates [physical-sample records \[Page 30\]](#) for each primary sample, pooled sample, and reserve sample. These records are automatically filled with the following data:
  - Physical sample type
  - Quantity in the inspection lot
  - Specifications from the inspection plan
  - Specifications from the sample-drawing procedure.
- Assigns a [physical-sample drawing \[Page 39\]](#) number to all physical-sample records.



If you want to [create additional physical samples manually \[Page 35\]](#) for the same inspection lot, you must specify the same physical-sample drawing number that was assigned to the automatically generated physical samples.

- Generates inspection specifications for each physical sample and work center in preparation for results recording (that is, it copies the characteristics from the inspection plan into the inspection lot record and creates [inspection points \[Page 25\]](#) for results recording).

If the sample-drawing procedure specifies:

- Primary samples only, the system creates inspection specifications for each primary sample and work center.
  - Primary samples and pooled samples, the system creates specifications for each pooled sample and work center only.
- Prints out the [sample-drawing instruction \[Page 44\]](#) (provided the function for an immediate printout was set in Customizing for *Inspection type*).

## Physical-Sample Record

# Physical-Sample Record

## Definition

A record that contains all master data and transaction data for a physical sample. Physical-sample records are created for all samples (primary, pooled, and reserve samples). Each physical sample master record is identified by a unique, client-wide, physical sample number.

## Use

You use a physical-sample record to document all inspection-related data for a physical sample. Physical-sample records can be “planned” or “unplanned”:

- The system creates planned physical-sample records automatically on the basis of a sample-drawing procedure and an inspection plan when it creates an inspection lot for a goods receipt.
- You create unplanned physical-sample records manually.

## Structure

All physical-sample records contain several types of data:

- **Header data**  
General information about the physical sample (for example, physical sample number, physical sample type, physical sample category, status information, short text).
- **Physical sample origin data**  
Information about the origin of the physical sample (for example, material, batch, material document number, plant, vendor, manufacturer, and so on).
- **Inspection lot data**  
Information about the inspection lot from which the physical samples were drawn (for example, inspection lot number, inspection lot status, lot quantity, sample size, inspection plan group, and so on).
- **Physical-sample drawing data**  
Information about the physical-sample drawing (for example, physical sample category, lot container unit, number of lot containers, physical-sample container, physical sample quantity, physical-sample drawing number, sample-drawing procedure, sample drawing confirmation data, and so on).
- **Physical sample location data**  
Information about where the physical samples are stored after an inspection (storage location, holding time, physical sample location, and physical sample status).

## Integration

All physical-sample records are assigned to a [physical-sample drawing \[Page 39\]](#). The physical samples drawn together from the same inspection lot have the same physical-sample drawing number. The system assigns manually created physical samples that do not reference an existing physical-sample drawing number to a new physical-sample drawing number.



---

**Status Management for Physical-Sample Records**

## Status Management for Physical-Sample Records

### Use

Physical-sample records are linked to the R/3 System's general status management function. The system records an initial system status when a physical sample master record is created and changes the status accordingly when the processing status of the physical sample changes. The status management function documents all activities that have been carried out for a physical sample and shows which activities are still possible.

Whenever you try to carry out a function for a physical sample, the system checks whether the current processing status allows the function to be used.

In addition to the system statuses, you can also define your own user statuses to supplement your needs.

### Features

The following table lists the system statuses that can be set for physical sample master records:

Status	Meaning
CRTD	Physical sample created
REL	Physical sample released
DLFL	Deletion flag set for physical sample master record
LKD	Physical sample locked
LBPR	Label printed for physical sample
STRD	Physical sample stored
USED	Physical sample no longer exists

Your system administrator can define status profiles for the physical-sample records in Customizing for *Sample Management*. The status profiles are assigned to the physical sample type.



## Change Documents for Physical-Sample Records

### Use

Whenever you change information in a physical-sample record, the system automatically records the changes in change documents. A physical-sample record must have been saved at least once before the system creates change documents.

A change document contains the following information:

- Fields in the physical sample master record that were changed (old and new values)
- Name of the person who made the changes
- Date and time of changes

### Activities

You can display and print change documents when you process a physical-sample record.

## Manual Creation of Physical Samples

# Manual Creation of Physical Samples

## Use

Beyond the planned, automatically generated physical samples, you can also create **additional**, unplanned physical samples manually for an inspection lot. When you create a physical sample manually, the system creates a corresponding physical-sample record.

## Activities

You can create a completely new physical sample or you can create one by using an existing physical-sample record as a copy model.

- **Using a copy model**

If you create a physical sample using a copy model, the system copies all information from the copy model into the record for the new physical sample.



All physical-sample records that are created manually receive the initial status CRTD (created). If the physical-sample record you are using as a copy model has a different status, this status is not copied.

- **Creating a completely new physical sample**

If you create a physical sample without a copy model, you must enter all of the physical-sample data manually.

In addition to using a copy model, you can create physical samples with or without reference to an existing physical-sample drawing number.

- **With reference to an existing physical-sample drawing number**

If you specify an existing physical-sample drawing number when you create a new physical sample, the system assigns the existing physical-sample drawing number to the new physical sample. The new physical sample is assigned to the existing group of physical samples with the same physical-sample drawing number.

- **Without reference to an existing physical-sample drawing number**

If you do not specify an existing physical-sample drawing number, the system automatically creates and assigns a new physical sample drawing number to the new physical sample.

### See also:

[Creating a Physical-Sample Record Manually \[Page 35\]](#)

## Creating a Physical-Sample Record Manually

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Physical sample* → *Create*.

The initial screen for creating a physical sample appears. Before you create the physical sample, determine whether or not:

  - You want to create a physical sample using a copy model
  - You want to reference an existing physical-sample drawing number
2. In the initial screen, enter the necessary data and set the appropriate indicators according to how you want to create the physical sample.
3. Choose *Create physical sample*.

Depending on the settings in Customizing for the *Inspection type* and the options you selected in the initial screen to create the physical sample, the a dialog box with additional data may be displayed.
4. Enter the required data and choose *Continue*.

The initial screen for the physical-sample record appears.
5. Enter the necessary data in the header areas and on the following tab pages:
  - *Phys. sample drawing*
  - *Phys. sample details*
  - *Insp. lot data*
  - *Phys. sample storage*
6. Save the data.

## Maintaining Data for a Physical Sample

# Maintaining Data for a Physical Sample

## Prerequisites

To maintain data for a physical sample, the system must have created physical-sample records automatically or you must have created the records manually.

## Procedure

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Physical sample* → *Change*.

The initial screen for changing a physical sample record appears.

2. Enter the key for a physical sample and choose one of the following functions, depending on the data you want to maintain:

- *Phys. sample drawing*
- *Phys. sample details*
- *Insp. lot data*
- *Phys. sample storage*

The header screen and the corresponding tab page are displayed.

3. Maintain the data for the physical sample as necessary. You can use the functions listed in the following table for this purpose:

Function	Pushbutton / Menu path
Change status of physical sample	Choose <i>Physical sample</i> → <i>Functions</i> → <i>&lt;Status change&gt;</i>
Create a manual inspection lot for physical sample	Choose <i>Create inspection lot</i>
Print labels for physical samples	Choose <i>Print labels</i>
Process physical-sample drawing	Choose <i>Physical sample</i> → <i>Phys. sample drawing</i>
Display overview of physical samples	Choose <i>Goto</i> → <i>Phys. sample overview</i>
Display administrative data	Choose <i>Administrative data</i>
Display change documents	Choose <i>Change documents</i>
Display physical sample status	Choose <i>Phys. sample status</i>

4. Maintain the desired information and save the data.

## Mass Maintenance of Physical-Sample Storage Data

### Use

Using this function, you can globally maintain the storage data for a selection of physical samples. This function is implemented in a report that allows you to:

- Select the physical samples for which you want to maintain the storage data
- Enter the new storage data to be maintained for the selected physical samples

The fields for entering the storage data in this report are identical to the fields in the physical-sample record. You can maintain data for the standard storage data fields, as well as any customer-specific fields you may have included in the physical-sample record.

The system copies all of the storage data you maintain in this report into the respective physical-sample records **exactly as you enter it**.



If you leave a field **blank** when maintaining the storage data in this report and one or more of the selected physical-sample records contain data in the corresponding field, the system **deletes** the existing data in the physical-sample records.

### Features

#### Executing the report

You can execute this report in two different ways. Depending on the setting of the *No list display* indicator in the selection screen, the system can:

- Display the list of the physical samples you selected **before** it copies the storage data into the respective physical-sample records (*No list display* indicator is **not** set)
  - In this case, the system copies the data into the physical-sample records when you choose *Save* in the list screen.
- Suppress the list of physical samples you selected (*No list display* indicator **is** set)
  - In this case, the system copies the data into the physical-sample records **as soon as you choose** *Execute* in the selection screen.

#### Physical samples in a list

If you execute the report with a list display, the system displays all selected physical samples.

You can only change the status of a physical sample if the **current** status of the sample permits it. If the status of a physical sample does not allow a status change, the physical sample will still be included in the list, since you can change the remaining storage data independently of the status.

#### Monitor function in a list

If you execute the report with a list display, the system displays a traffic light next to each physical sample. The traffic light colors have the following meaning:

Color	Meaning
-------	---------

**Mass Maintenance of Physical-Sample Storage Data**

Green	The storage data has changed for the physical sample. You can save all changes to the physical-sample storage data.
Yellow	The storage data has not changed (this means that the data you maintained was the same as the data previously contained in the physical-sample record)
Red	<ul style="list-style-type: none"> <li>• The storage data could not be changed because: <ul style="list-style-type: none"> <li>– Physical sample could not be locked</li> <li>– Physical sample is currently locked and is being processed</li> <li>– Physical-sample location is not compatible with storage location</li> </ul> </li> <li>• The storage data could not be <b>completely</b> changed because the desired status change is not allowed; all other data, however, can be changed.</li> </ul>

**Activities**

1. To display the selection screen for this report, choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Physical sample* → *Maintain storage data*.
2. Enter your selection criteria in the top screen block, the storage data you wish to maintain in the *Storage data* tab, and make sure you set the *No list display* indicator appropriately.
3. Choose *Execute* to execute the report.

If the system does not display a list of physical samples, the storage data is changed immediately. If a list is displayed, you can also choose the following functions in the list:

  - Display a physical sample record
  - Display a detailed summary of the physical-sample data
  - Save the changes

## Physical-Sample Drawing

### Definition

A data record that serves as a reference object for all physical samples (primary samples, pooled samples, and reserve samples) that were drawn from the same inspection lot. The system automatically assigns a unique number to each physical-sample drawing when an inspection lot is created.

### Use

You can use the physical-sample drawing to collectively process all physical samples drawn from the same inspection lot. The physical-sample drawing allows you to:

- Release one or more physical samples and record comments for the sample drawing (when you release a physical sample, the system changes the status from created to released)
- Lock one or more physical samples (prevents you from recording inspection results for the physical samples)
- Set a deletion flag for one or more physical samples (marks the physical-sample records for deletion when the next reorganization run takes place)

### Structure

The physical-sample drawing record consists of a header with the following information:

- Physical-sample drawing number
- Date and time physical-sample drawing was created and name of person who created the record
- Date and time physical-sample drawing was released and name of person who released the record
- Plant, material, and batch
- Inspection lot number

---

**Automatic Assignment of Physical-Sample Drawing**

## Automatic Assignment of Physical-Sample Drawing

### Use

Whenever an inspection lot is created for a goods receipt for which physical samples have been planned, the system automatically assigns a physical-sample drawing number to the inspection lot.

The physical-sample drawing number is referenced in all physical-sample records for primary, pooled, and reserve samples. This allows you to identify the origin of and relationship between all physical samples drawn together from the same inspection lot (for example, to determine which pooled and primary samples belong to the same physical-sample drawing).



The system also creates a physical-sample drawing for an inspection lot in which no physical samples were planned. You can use the corresponding physical-sample drawing number for such an inspection lot, to create and process physical samples manually. For more information about unplanned physical samples, see [Processing Unplanned Physical Samples in an Inspection \[Page 52\]](#).



## Digital Signature in QM

### Use

The SAP System provides the [digital signature \[Ext.\]](#) tool to identify and approve digital data. The digital signature ensures that certain tasks are only performed by specially authorized users and documented in a signed document together with the name of the undersigned person, and the date and time. You need the digital signature to meet the GMP guidelines (Good Manufacturing Practices) for the approval of quality-related processes and documentation.

The *Quality Management (QM)* application component uses the simple signature. This means, that a document is signed or approved by the signature of a single authorized person. You can use the digital signature for the following functions:

- During results recording
- At the usage decision
- When confirming the physical-sample drawing. This means, when releasing the first physical sample in a physical-sample drawing.

#### See also:

[Approval Using Digital Signatures \[Ext.\]](#)

### Integration

In the SAP System, the digital signature is supported by the Basis component [Secure Store and Forward \(SSF\) \[Ext.\]](#). This provides you with various [signature methods \[Ext.\]](#). If you use the user signature as the signature method, you require an external security product that is linked to your SAP System using SSF.

### Prerequisites

The following prerequisites must be met for a user in QM to be able to use a digital signature:

- You have made the general settings for a digital signature (see [Approval with Digital Signatures \[Ext.\]](#)).
- You have activated the digital signature for QM. For this, you must:
  - Define the necessity of a digital signature in the *QM-Material Authorization* for inspection processing (see *Customizing for Quality Management, Environment* → *Central Functions* → *Authorization Management* → *Define Authorization Groups*)
  - Enter the *QM material authorization* for the relevant material in the *Quality Management* view of the material master

## Entering a Digital Signature


# Entering a Digital Signature

## Prerequisites

You have selected a function that requires a digital signature. As a result, the *Digital signature* dialog box appears.

## Procedure

1. If necessary, enter a comment in the text field.
2. If you want to use the user signature as the [signature method \[Ext.\]](#), make sure that the system can access your [Personal Security Environment \(PSE\) \[Ext.\]](#).

The procedure is dependent on your security product. For example, if you work with a smartcard reader, you enter your smartcard in the card reader.
3. Enter your user name and password in the dialog box for the digital signature.
4. Choose  *Continue*.

The system checks whether:

  - You are authorized to enter a digital signature.
  - Your entries correspond to the data in your user master record.
  - Your entries for the user signature correspond to the data in your PSE.

Depending on the result of the check, processing continues as follows:

  - If your entries are invalid or the system cannot access your PSE, the dialog box appears again and you can re-enter your signature (step 3).

The function is canceled after a number of attempts. This number is defined by the user. Your user is locked for the digital signature and for the renewed system logon with the system signature.
  - If your entries are correct, the chosen function is performed.
5. Save the data.

## Processing a Physical-Sample Drawing

### Prerequisites

The system must have created a physical-sample drawing when an inspection lot was created.

### Procedure

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Phys. sample drawing* → *Process*.

The initial screen for processing a physical sample drawing appears.

2. Enter the key for a physical-sample drawing.
3. Choose *Phys. samples*.

A list of all physical samples that belong to the physical-sample drawing appears. The physical samples are grouped and listed by physical sample category (primary samples, pooled samples, and reserve samples).

4. You can process one or more physical samples in the list by selecting the desired samples and choosing an appropriate function. The important functions and how you can use them are listed in the table below:

Function	Pushbutton / Menu path / Operation
Release one or more physical samples	Choose <i>Release and save</i>
Lock one or more physical samples	Choose <i>Lock and save</i>
Print physical-sample label	Choose <i>Print label</i>
Set deletion flags for one or more physical samples	Choose <i>Edit</i> → <i>Set deletion flag and save</i>
Download a list of physical samples	Choose <i>PhysSampleDrawing/PhysSample</i> → <i>Download</i>
Print a list of physical samples	Choose <i>PhysSampleDrawing/PhysSample</i> → <i>Print</i>
Save a list of physical samples in PC file	Choose <i>PhysSampleDrawing/PhysSample</i> → <i>Save in PC file</i>
Display physical sample record	Double-click a physical sample number

## Sample-Drawing Instruction

# Sample-Drawing Instruction

## Definition

A printed instruction that contains all the information that you need to draw one or more physical samples from an inspection lot. The information in the sample-drawing instruction is generated on the basis of the data in the inspection plan and sample-drawing procedure.

## Use

You use the sample-drawing instruction to determine how to process the physical samples in the inspection.

The system prints out the sample-drawing instruction automatically when an inspection lot is created (provided the function for an immediate printout was set in Customizing for *Inspection type*).

## Structure

The sample-drawing instruction contains the following information:

- Header data, plant, inspection lot, inspection lot text, inspection plan, document number
- Physical-sample drawing
- Physical sample confirmation requirement (yes/no)
- Sample-drawing procedure and long text stored in header of sample-drawing procedure
- Sample-drawing item and long text stored for the sample-drawing instruction
- For each sample-drawing item, a list of physical samples to be drawn:
  - Physical sample categories (primary, pooled, and reserve samples)
  - Keys for physical-sample records
  - Physical sample container
  - Quantity of each physical sample with unit of measurement
  - Which physical samples are used to create the partial samples
  - Partial samples in the inspection plan (partial-sample number, operation number, sizes, and units of measure)
- Distribution of physical samples to work centers or laboratories



If a sample-drawing procedure was assigned to the inspection plan, the system suppresses all sampling texts for the inspection characteristics. Instead, the system prints out the long texts stored in the sample-drawing procedure.

### See also:

[Printout of Sample-Drawing Instruction \[Page 45\]](#)

## Printout of Sample-Drawing Instruction

### Use

When the system creates an inspection lot, it automatically calculates the number and sizes of the physical samples and documents this information in a sample-drawing instruction. The system can print out the sample-drawing instruction automatically or you can print it out manually.

### Prerequisites

If you want the system to print out the sample-drawing instruction automatically when the inspection lot is created, your project team must configure the following in Customizing:

- Print control  
Customizing for *Inspection lot processing* (*Quality Management* → *Quality Inspection* → *Inspection lot processing*).
- Function for an immediate printout  
Customizing for *Inspection type* (*Quality Management* → *Quality Inspection* → *Inspection Lot Processing* → *Inspection Lot Creation*).

### Activities

If you want to print out the sample-drawing instruction manually, call up an inspection lot in the display or change mode and choose the function to print the sample-drawing instruction.

## Label Printing for Physical Samples

# Label Printing for Physical Samples

## Use

Using this function, you can print out labels for physical samples. These labels contain important information about the physical samples and can be affixed to the physical-sample containers for identification purposes. The labels can be printed out with bar codes so you can quickly scan the information using a bar-code reader.

The label for a physical sample can be printed out:

- Automatically, when a physical-sample record is created (for example, when an inspection lot is created for planned physical samples or when creating a new physical-sample drawing with reference).
- Manually, when you process a physical-sample record
- Manually, when you process a physical-sample drawing

## Prerequisites

The label printing function for physical samples is activated in Customizing for *Quality Management* as follows:

- **Standard example for label printing**

The system contains the following objects for printing labels for physical samples:

- A function module that is assigned to the physical-sample type for data retrieval.
- In Customizing for *Print Control*, a new order type that has a print program and form assigned to it.

If you use the standard objects, you do not need to make any further preparations. You can, however, replace or modify the above-mentioned objects to meet your individual requirements.

- **Time of printout**

In Customizing for *Physical Samples (Define physical sample type)* you can specify when the labels should be printed. Depending on how you set this control, an original label is printed out:

- Automatically by the system when a physical sample is created
- Manually by the user while processing a physical-sample record or physical-sample drawing

## Features

If you use the predefined example in the standard system to print your labels, the following features apply:

- **Print format and number of labels**

Each time a printout is triggered, the system prints labels on a new sheet of paper (A4 size). The system can print a maximum of 12 labels on a single sheet. If more than 12 labels need to be processed, the system prints additional pages.

**Label Printing for Physical Samples**

If you trigger the label print manually while processing a physical-sample record, the system prints one label. If you trigger the label print manually while processing a physical-sample drawing, the system prints labels for all of the selected physical sample records.

- **Original printouts and reprints**

The first printout of a label is the original. All subsequent printouts are reprints and identified as such. The system documents the original printout of a label in the physical-sample record. If you trigger the label printing manually, the system saves the data and exits the transaction after it executes the print function.

- **Information in a label**

In the standard system, the following information is available for output in a physical-sample label:

- All data in the physical-sample record and associated physical-sample drawing
- All data in the material master
- All data of the current inspection lot (if available)



For more information, refer to the SAPscript documentation for the sample form QM\_SAMPLE\_LABEL1.

- **Automatic Printout of Labels**

If you want the labels to be printed out automatically when an inspection lot is created, set the indicator for an immediate printout in Customizing for *Physical Samples (Define physical-sample type)*.

## Activities

For automatically created physical samples, the system automatically prints the labels when the physical samples are created (provided you have set the indicator for an immediate printout in Customizing).

You can print out a label manually using the transactions to process a physical-sample record or a physical-sample drawing.

## Results Recording for Physical Samples

# Results Recording for Physical Samples

## Use

When you inspect each physical sample, you must record inspection results for all required characteristics to determine whether the materials meet the predefined quality requirements. On the basis of the inspection results, you value and close each characteristic and then value each physical sample. The valuation specifies whether you accept or reject the physical sample.

You can record inspection results for physical samples using one of the following functions:

- **Work list for results recording**

This is the recommended method for recording the inspection results for physical samples if you want to process several inspection lots. Using this function, for example, you can generate a list of inspection lots for each work center or laboratory. You can then drill down each inspection lot to display a hierarchical list of operations, physical sample numbers, and characteristics.

- **Record inspection results for physical sample**

You can use this function to record inspection results for a physical sample that was created manually for an inspection lot.

## Integration

Depending on how you valued the inspection characteristics during results recording, the system proposes a valuation for the physical sample. You can store proposals for these valuations in Customizing for *Inspection Planning (Define inspection point identification)* as follows:

- A code proposal if all characteristics are accepted
- A code proposal if at least one characteristic is rejected

## Prerequisites

You can only record inspection results for physical samples whose records have been released. All automatically or manually created physical-sample records receive this status if the confirmation requirement was not set in the sample-drawing procedure. If you set the indicator for the confirmation requirement, you must confirm the drawing of the physical samples before you can record the inspection results.

For more information about confirming the drawing of physical samples, see [Processing a Physical-Sample Drawing \[Page 43\]](#).

## Activities

When you record inspection results for a physical sample, you:

1. Record an inspection result for each required characteristic
2. Value and close each characteristic
3. Value each physical sample after all required characteristics for each physical sample have been valued and closed



Results Recording for Physical Samples



You can value the physical samples manually or the system can value them automatically. You set the valuation mode for the inspection points in the inspection plan on the operation detail screen.

If you create or assign a new batch while valuating a physical sample, the batch number is automatically updated in the physical-sample record.

For more information about	See
Recording results using a work list	<a href="#">Recording Results for a List of Inspection Lots [Ext.]</a>
Recording results for a specific physical sample	Recording Results for Inspection Points
Recording results (in general)	<a href="#">Results Recording [Ext.]</a>

## Usage Decision for Inspection Lot

# Usage Decision for Inspection Lot

## Use

The usage decision for an inspection lot confirms that all physical samples have been valuated and the inspection has been completed. It also specifies whether the goods in the inspection lot have been accepted or rejected for use. You can make the usage decision manually or the system can make the decision automatically.

The usage decision can be made using one of several functions:

- You can make the usage decision manually for a single inspection lot.
- You can make the usage decision manually for several inspection lots using the work list function.
- The system can make the usage decision automatically for one or more inspection lots by means of preplanned, periodically executed jobs.

## Prerequisites

You can make the usage decision for an inspection lot if:

- You have the user authorization to make the usage decision.
- The inspection lot is released.
- You have recorded inspection results for all required inspection characteristics.
- You have closed all characteristics and valuated all physical samples during results recording.
- No active status exists that blocks the usage decision.

## Activities

When you make the usage decision for an inspection lot, you can also:

- Display an overview of all physical samples with their respective statuses.
- Make stock postings
- Activate quality notifications
- Record defects

When you make the usage decision, the system can also execute the following functions automatically:

- Calculate the quality score
- Update the quality level
- Trigger automatic follow-up actions (provided they are linked to the usage decision code)

<b>For more information about...</b>	<b>See...</b>
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Usage Decision for Inspection Lot

Making the usage decision for a single inspection lot	<a href="#">Making a Usage Decision [Ext.]</a>
Automatic usage decisions	<a href="#">Automatic Usage Decision [Ext.]</a>
Making usage decisions for several inspection lots	<a href="#">Making Usage Decisions for Several Inspection Lots [Ext.]</a>

## Processing Unplanned Physical Samples

# Processing Unplanned Physical Samples

## Purpose

This scenario describes how to process physical samples that were not planned in advance using a sample-drawing procedure. In this situation, you create the physical samples manually after the inspection lot has been created.

## Prerequisites

In the field for inspection points in the inspection plan header, you must have entered a value that specifies the inspection points for physical samples.

## Process Flow

1. The system creates the inspection lot automatically or you create the inspection lot manually.

When the inspection lot is created, the system creates a [physical-sample drawing \[Page 39\]](#). It does not, however, create physical-sample records or inspection points.

2. You create one or more physical samples manually with reference to the physical-sample drawing that was created with the inspection lot. You can determine the physical-sample drawing on the basis of the inspection lot number.

3. You release each manually created physical sample (change status from created to released).

4. You distribute the physical samples to the work centers or laboratories and inspect each physical sample.

5. You record inspection results for each physical sample using one of the following functions:

- Work list (inspection point 999999)
- Results recording for a specific physical sample (physical sample number)

When you record inspection results, you must valuate and close each characteristic, and then valuate each physical sample.

6. You complete the inspection by making the usage decision for the inspection lot.

7. You can store the physical samples for further testing, if necessary.

### See also:

[Releasing Manually Created Physical Samples \[Page 43\]](#)

[Results Recording for Physical Samples \[Page 48\]](#)

[Usage Decision for Inspection Lot \[Page 50\]](#)

## New Physical-Sample Drawing with Reference

### Use

Using this function, you can create a new physical-sample drawing (with one or more physical samples) that references:

- An inspection lot
- A production order or process order
- A production version

You use this function to create physical samples that have not been planned in a sample-drawing procedure and which you can draw from a production process according to your specific needs. In an inspection during production, for example, you can draw physical samples from the process on the basis of time or quantity (for example, a physical sample every three hours or for every 1000 liters of material produced). You can freely specify the inspection-relevant operations in which you want to inspect the physical samples for the new physical-sample drawing.

### Prerequisites

To be able to create a new physical-sample drawing that references one of the above objects, the following conditions must be met:

- The task list header must specify inspection points for physical samples.
- If you intend to create a physical-sample drawing with reference to a production order, process order, or production version, an inspection lot must already exist for the order or production version.

### Features

#### Selection criteria

This function consists of a report that creates the physical-sample drawing and physical samples based on the selection criteria you enter in the report. You can enter the following information (among other data), before you execute this report:

- Number of physical samples to be created
- Physical-sample category
- Physical-sample container
- Quantity for each physical sample
- Unit of measure for each physical sample
- Storage data for the physical samples

#### New physical sample-drawing (simulation)

If you want to simulate the creation of a new physical-sample drawing (for example, for test purposes), you can set a corresponding indicator in the report. The system displays a list of the physical samples that would have been created, had you not set the indicator.

## New Physical-Sample Drawing with Reference



If you execute this report without setting the simulation indicator, the system automatically creates the physical-sample drawing and physical samples in the background. You cannot cancel the operation.

### Creating a new physical-sample drawing for an inspection lot

If, for example, you want to create and inspect one or more physical samples in a new production step for an inspection lot, you can create a new physical-sample drawing with physical samples and simultaneously create the corresponding inspection points:

- For a **specific** operation in the inspection lot
- For **all** operations in the inspection lot

On the selection screen for creating a new physical-sample drawing, you can set an indicator that allows the system to automatically create the inspection points for the physical samples. If you want create the inspection points for a specific operation, you can also specify the operation. If you do not specify an operation, the system creates the inspection points for all operations.

If you call the transaction to create a new physical-sample drawing from the worklist or from a process instruction (PI) sheet, the system automatically sets the indicator to create the inspection specifications and it creates the inspection points as follows, based on the position of the cursor:

- If the cursor is positioned on an operation, the system creates the inspection points for **this** operation and proposes the physical-sample detail data on the basis of the physical samples contained in the last physical-sample drawing for the operation.
- If the cursor is positioned at the inspection lot level (but not on the inspection lot number), the system creates the inspection points for **all** operations. The proposal for the physical-sample detail data is taken from the last physical-sample drawing for the inspection lot, independently of the operations.

## Activities

You execute the report to create the physical-sample drawing.

After the system has created the physical-sample drawing and the list of physical samples, you can branch directly to the transaction for processing the physical-sample drawing (for example, to release the physical samples).

## Creating a New Physical-Sample Drawing

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Physical-sample drawing* → *Create with reference*.

The screen for creating a new physical-sample drawing appears.

2. Specify the number of the inspection lot or order for which you want to create the physical-sample drawing.
3. Enter the data as required for the physical samples you want to create:
  - Number of physical samples
  - Physical sample details
  - Physical-sample storage data
  - Results recording



In the screen block for results recording, set the indicator specify whether or not you want the system to also create the inspection points when it creates the physical samples. If you specify an operation, the system will create the inspection points for this operation only. Otherwise, the system will create the inspection points for all operations.

4. Choose *Program* → *Execute*.

The physical samples are automatically created in the background (provided you have not set the indicator for a simulation) and displayed in a list.

5. Choose *Goto* → *Process physical-sample drawing* in the list to release the physical samples.

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**Creating and Preparing Physical Samples for Inspection**

## Creating and Preparing Physical Samples for Inspection

### Use

If you are processing an inspection with physical samples and you want to create an **additional, unplanned physical sample** or a **new physical-sample drawing** for an inspection lot, you can create the physical sample(s) and corresponding inspection specifications (inspection points) simultaneously in a single step. This allows you to record inspection results for the additional physical samples immediately after you create them.

### Features

You have the following options for creating additional, unplanned physical samples:

#### Creating a new physical sample in results recording

If, for example, you want to create and inspect an additional physical sample in a goods receipt inspection (in addition to the physical samples that were planned and previously created automatically with the inspection lot), you can create the physical sample and the corresponding inspection specifications in a single step in the transaction for recording inspection results for physical samples.

The system creates the physical sample in the background and then branches directly to the results recording screen, where you can record the inspection results for the physical sample.

When the physical sample is created, the system automatically proposes the following data, which you can change if necessary:

- Number of last physical-sample drawing for the inspection lot or operation
- Physical-sample category
- Physical-sample container
- If possible, the physical-sample quantity and the sample unit of measure (for example, the data for an existing physical sample belonging to the physical-sample drawing for the operation)

Also, when the physical sample is created:

- You or the system can assign a number to the new physical sample
- You can decide whether you want to create a new physical-sample drawing or expand an existing one.

If the inspection lot does not require you to confirm the physical sample drawing, the new physical sample is released immediately. Otherwise, you must first release the physical sample manually or confirm the physical-sample drawing, if you created a new one.

#### Creating a new physical-sample drawing for an inspection lot

See [New Physical-Sample Drawing with Reference \[Page 53\]](#).

#### See also:

Recording Results for Inspection Points



## Manual Inspection Lots for Physical Samples

### Use

You can manually create inspection lots for one or more **existing** physical samples. The system creates a **single** inspection lot for **each** physical sample. All inspection lots created in this manner have the inspection lot origin 15 and cannot be used to manage stocks.

You can use this function, for example, to:

- Carry out stability tests on reserve samples
- Inspect samples received from a competitor
- Inspect samples received with reference to a customer complaint

### Prerequisites

You can only create a manual inspection lot for a physical sample if the following conditions have been met:

- The physical sample must contain a quantity that is greater than 0.
- You must be able to convert the quantity of the physical sample into the material's base unit of measure.
- Inspection type 15 must be active for the material in the material master (inspection data).
- The last inspection lot for the physical sample must have been completed (that is, no open inspection lot exists for the physical sample).
- The physical sample must have the correct status (released, still in existence, no deletion flag set).

### Features

#### Inspection lot creation

You can create inspection lots manually for existing physical samples using a:

- Report that generates a list of physical samples that meet your selection criteria. In this list, you can select one or more physical samples and create the corresponding inspection lots.

This report contains a **monitor** function that enables you to identify the physical samples for which you can create an inspection lot (for example, you can create lots for all physical samples in the list that have a green status light).

- Corresponding function in the transaction for maintaining a physical-sample record.

#### Log for inspection lot creation

When you create inspection lots for physical samples, the system automatically displays a log for each physical sample after you save the data (or exit the report). The log informs you whether or not an inspection lot was created and what additional activities are necessary.

## Manual Inspection Lots for Physical Samples

### Task list assignment

If several task lists apply to a physical-sample material for which you create an inspection lot, the system cannot select and assign a task list to the inspection lot automatically. You must therefore call up the function to change an inspection lot and assign the appropriate task list manually.

## Activities

You can create inspection lots for physical samples manually by:

- Executing the corresponding [report \[Page 59\]](#). From the list generated by this report, select the desired physical samples and create the inspection lots.



The system creates inspection lot(s) in the database when you **save** the data in the list. If you exit the list without saving and have created inspection lots for physical samples, the system prompts you to confirm whether or not you want to create the inspection lots.

- Choosing the function to create an inspection lot manually when you [process a physical-sample record \[Page 36\]](#).

## Creating Inspection Lots for Physical Samples

1. Choose *Logistics* → *Quality management* → *Quality inspection* → *Sample management* → *Physical sample* → *Create inspection lots*.

The screen for creating inspection lots for physical samples appears.

2. Enter the data to select the physical samples for which you want to create inspection lots.
3. If you want to use a display variant, enter the variant name in the corresponding field.
4. Make sure the value for the monitor control is 1.
5. Choose *Execute*.

A list of physical samples is generated.

6. Select one or more physical samples in the list for which the traffic light status is green.
7. Choose *Create inspection lot*.

Inspection lots are created for the selected physical samples.

8. Save the data.

The inspection lots are saved to the database.