

# Sampling



Provides lot-based sampling as well as sub-material sampling at metrology steps

## Overview

In many cases it's not practical to inspect or measure every single lot; and even in an inspection or metrology step, it's not practical to inspect or measure every single unit of a lot. The Sampling module provides the capability to implement sampling strategies by pre-defining 1) which materials must

go through an inspection or metrology step based on time or counters; and 2) which sub-materials to be measured at an inspection or metrology step. Once the sampling strategy is defined, the system will execute and enforce it automatically.

The screenshot displays a web interface for configuring a sampling plan. The main section is titled 'My Sampling Plan (Active)'. Under the 'DETAILS' section, the 'Sampling Plan' details are shown: Name: My Sampling Plan, Description: My Sampling Plan, Type: Standard, and Universal State: Active. The 'Details' section shows Type: CounterBased and Counter Frequency: 10. Below this, the 'CONTEXT' section includes 'Refresh' and 'Manage' buttons. A search bar is present above a table of context information. The table has columns for ORDER, NAME, DESCRIPTION, and CONTEXT. The first row shows ORDER 1, NAME Resource, DESCRIPTION Resource, and CONTEXT MaterialResource. At the bottom right, it indicates 'Rows per page: 10' and 'Page 1 of 1 (1 records)'.

ORDER	NAME	DESCRIPTION	CONTEXT
1	Resource	Resource	MaterialResource

Figure 1 Sampling Plan example

## Key Features

- Support for static and dynamic inspection plans, including AQL, supporting:
  - In-process measurements as well as measurements that are performed in different inspection stations (e.g.: a lab)
  - Variable and Attribute results
  - The definition and capture of measurement instruments, ensuring that they are calibrated and that they cover the required range and have the required precision
  - Automatic severity switching rules
- Support for lot-based sampling strategies based on flexible contexts that can be:
  - Counter based (e.g.: every 10th lot of a certain product)
  - Time based (e.g.: one lot from a certain equipment every 8 hours)
- Support for sub-material selection at a metrology step, for example to measure the top, middle and bottom wafers and in that particular sequence. The sub-materials to be measured can be defined manually or by a business rule (system or user-defined).
- Integration with Material Tracking and transparent to the user.

## Benefits

- Improved process control
- Reduction of costs
- Reduction in the opportunity for errors

✔ Post Data to Data Collection

■ LOT-01 (InProcess) / 🏭 MOSRM8HQ (MOSRM8HQ Product) / ● Inspection / 100 Kg

< Width (Variable)

WIDTH (VARIABLE)	
* Sample 1	999 mm
* Sample 2	999.8 mm
* Sample 3	1000.1 mm
* Sample 4	998.8 mm
* Sample 5	1000.4 mm

Last entered value: Width > Sample 5 > 1000.4 mm

Measure the width of the scalpel at the thinnest point.



Width > Sample 5

999	1,000	1,001
1000.4	mm	

7	8	9	C
4	5	6	Del
1	2	3	OK
+/-	0	.	

Comments:

Cancel
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Figure 2 Inspection example