



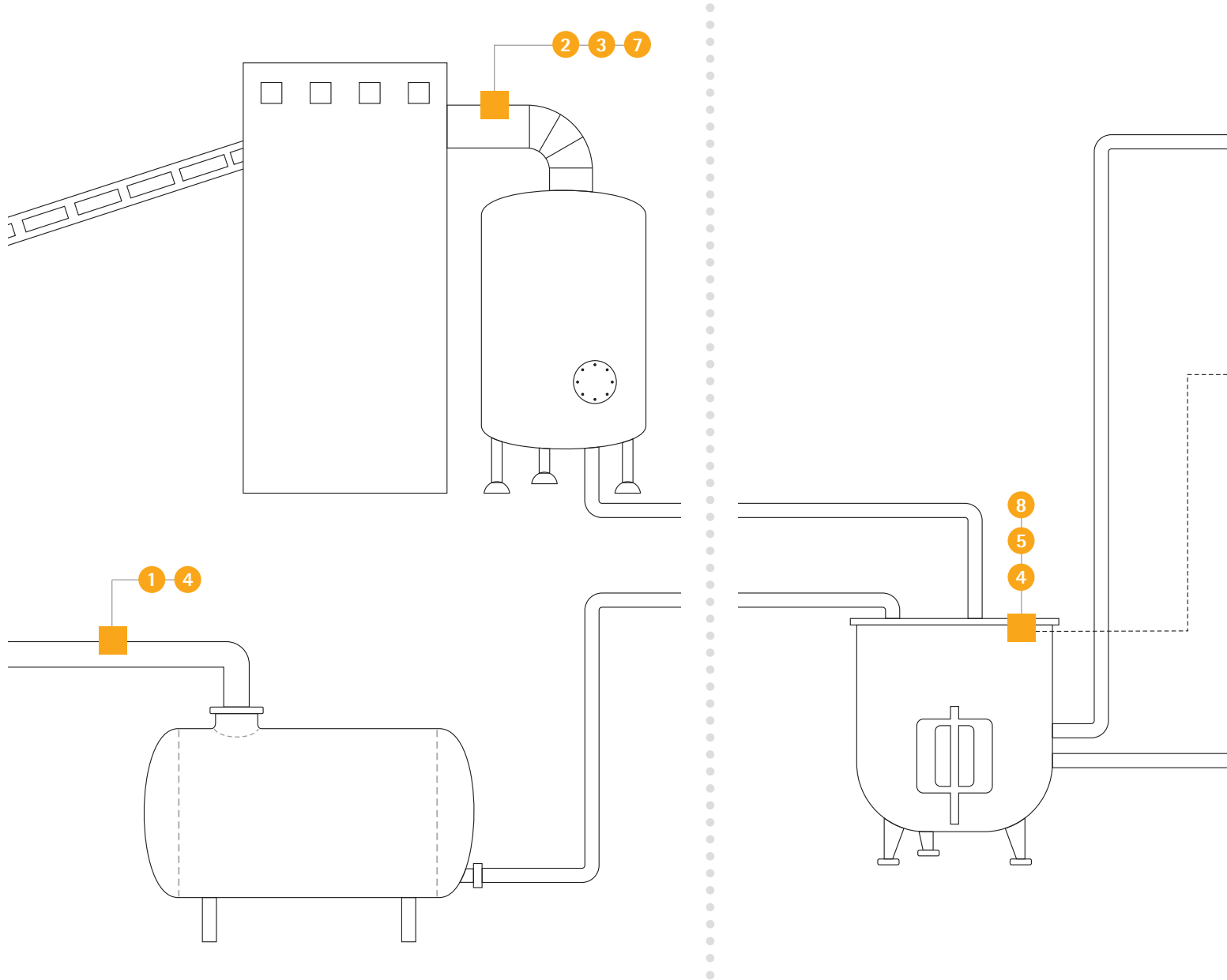
sartorius
mechatronics

Optimize Your Processes
with Online Analysis.



turning science **into solutions**

Online Analysis by Sartorius Releases Optimization Potentials Throughout



Optical Process Analysis (PMD 500)

Ideally suited for split-second measurement of a broad range of qualitative and quantitative parameters.

This modular combination of NIR, UV | VIS spectrometers and a high-resolution CCD camera can be used in a variety of applications, e.g. for completeness control and homogeneity measurement including end-point determination in mixing processes or for determining TOC.



1 PMD 500 NIR Process Analyzer with PMD Cell



2 PMD 500 NIR Process Analyzer with PMD Square

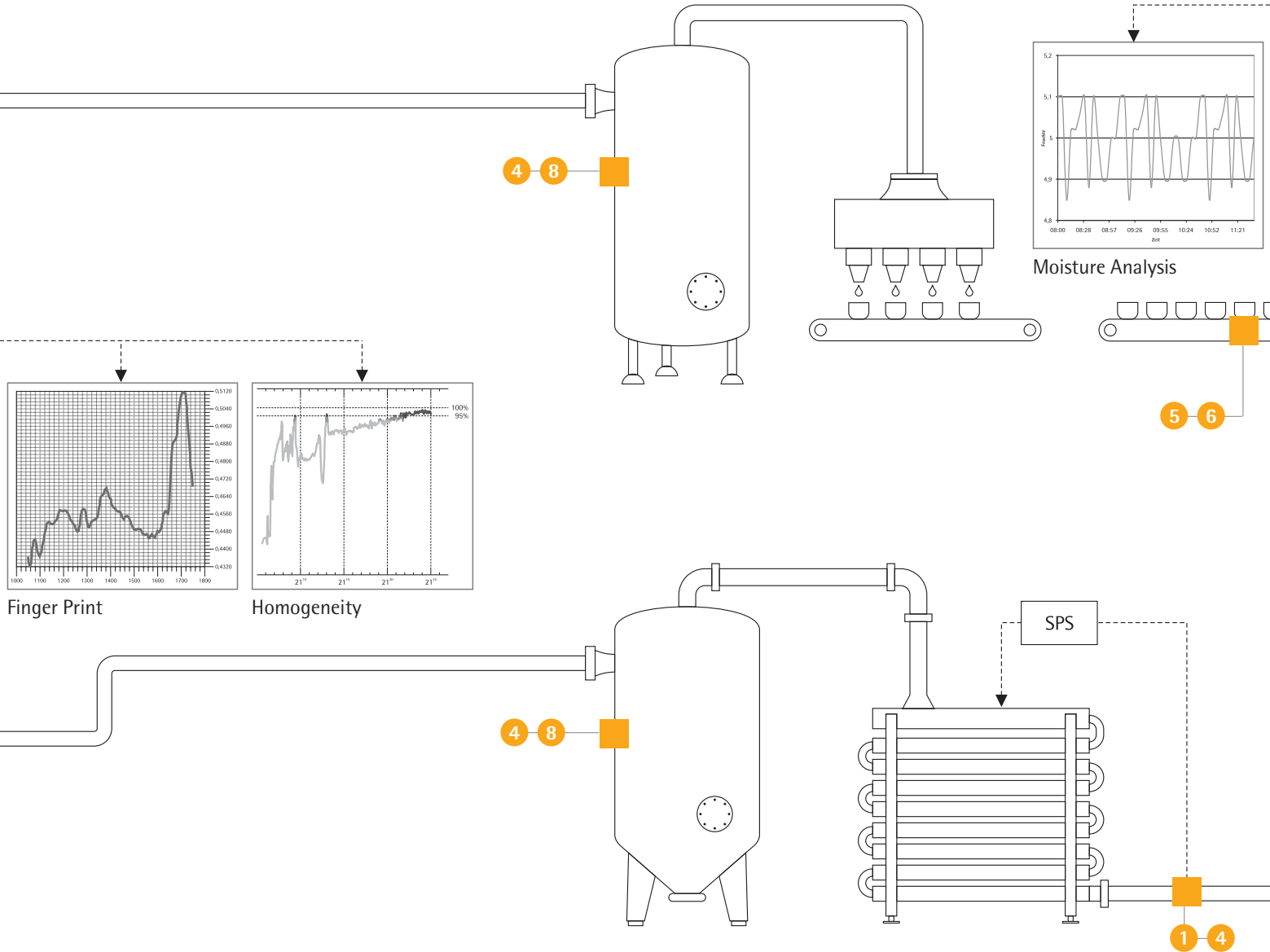


3 PMD 500 NIR Process Analyzer with Bypass Auto Sampler



4 PMD 500 NIR Process Analyzer with PMD Flange

the Entire Process Chain.



Microwave Resonance Technology (PMD 320)

Especially useful for core and surface moisture analysis of pourable, granulated and panel-shaped products. Split-second measurement times enable integration into almost every process, for instance, dryer control with combined final product moisture analysis.



5 PMD Beam



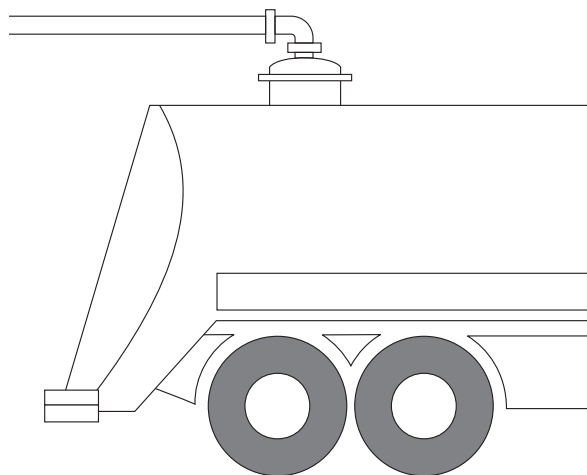
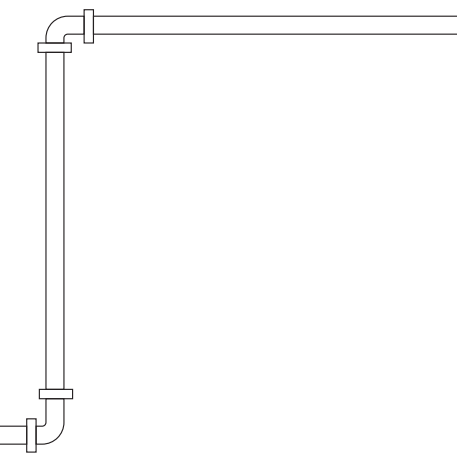
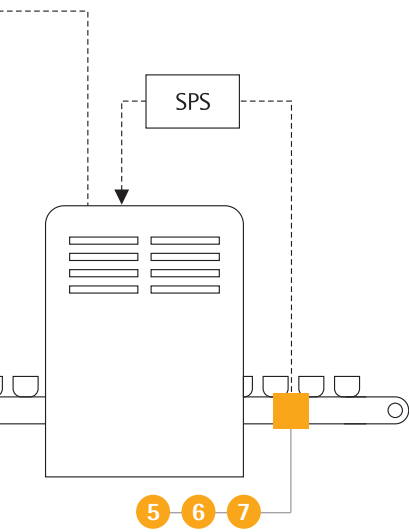
6 PMD Light



7 PMD 320PA Online Moisture Analyzer with PMD 330S Sensor



8 PMD 320PA Online Moisture Analyzer with Sensor PMD 330S



Reference Analyses for Determination of Moisture and Water Content

The demands placed on process analysis are extremely high in terms of precision and speed. To meet these requirements, indirect analysis methods are employed that need to be calibrated. The vast technical and application expertise Sartorius has amassed in laboratory moisture analysis over decades extends along the entire calibration chain – from the laboratory to the process scale.



Coulometry
Sartorius LMA 400 Water
Detection System



Thermogravimetric rapid material
moisture analyzer, e.g. Sartorius
MA 100Q

Or:
Karl Fischer titrator
Drying oven

Moisture Analysis

Concentrations


- Water
- Lipids
- Protein
- Lactose
- Alcohols
- Organic solvents
- Additional analyses upon request

Quantitative Analysis

- Physical and chemical parameters
- Density
- Viscosity
- pH
- Turbidity
- Color
- Additional analyses upon request

Qualitative Analysis

- Product homogeneity and end-point determination in mixing processes
- Completeness control of formulas in mixing processes
- Identification and purity testing of raw materials, intermediate and final products



By using Sartorius online analysis systems, you can directly influence all cost, quality and safety-relevant parameters that make up an optimal process. All systems feature a modular design and can be seamlessly integrated into the processes and process control systems of the chemical, pharmaceutical, cosmetics, food and pet food industry.

The benefits in detail:

Cost Cutting

- The price for raw materials not only depends on quantity but also on quality
- Seamless batch documentation prevents product liability claims
- The combination of 100% real-time monitoring and PLC avoids out-of-specification batches

Time savings

- The compliance with reporting obligations is simplified considerably
- Process-specific calibrations can be generated easily with the proprietary auto calibration features
- Warning and control limits prevent production downtimes

Quality Improvement

- Compliance with specifications
- Consistently high product quality and product standardization
- Greater efficiency and optimization of the raw materials and resources used

Increased Process Reliability

- Reliability thanks to 24|7 availability
- Automatic documentation of all process steps from incoming goods inspection to the finished end product
- Fast and simple 100% process control instead of incomplete sampling

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