

Syringe Liquid Sampler

with UltraChem® 40 Particle Counter



The SLS-1040 Syringe Sampling System enables safe, accurate and efficient testing of particle levels in liquid laboratory samples and process chemicals. Precision is achieved through accurate control of a syringe and simple flow-path for delivering liquid samples from a sample vessel or chemical container directly to the particle sensor. The SLS-1040 features an on-board UltraChem 40 particle sensor, which uses PMS patented NanoVision Technology® to measure particles as small as 40 nm in a wide variety of process chemicals. It is ideal for applications where efficient sampling of chemicals or lab samples is required, with the sampler contributing zero contamination to the chemical sample. The system consists of a selectable syringe for either corrosive or non-corrosive liquids, a selectable particle sensor for different sizing sensitivities, and batch sampling software.

BENEFITS

- Precisely measures particles as small as 40 nm
- Versatile system allows selection of various particle sensors and syringe sizes
- Eliminates sample waste with a small sample volume
- Cost-effective
- Easily configurable

FEATURES

- Proven PMS UltraChem particle sensor with NanoVision Technology
- Menu-driven data collection with SamplerSight software
- Multiple syringe sizes—1, 5, 10 and 25 ml
- Wetted materials compatible with corrosive chemicals
- Compact design with on-board particle sensor

APPLICATIONS

- Diverse applications in semiconductor and process chemical manufacturing
- Incoming quality measurement of process chemicals
- Point-of process monitoring on process tools
- Testing and qualification of chemical components
- Outgoing chemical qualification testing
- Mechanical parts cleanliness testing



NANOVISION TECHNOLOGY



**PARTICLE
MEASURING
SYSTEMS®**
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Without measurement there is no control

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Specifications

	SLS-1040
Syringe Size	1, 5, 10 (standard), 25 ml
Sampling Mode	Vacuum, Batch
Wetted Surface Materials	Glass, Teflon® (all fluoropolymer materials optional)
Power	100 – 240 V, 50 – 60Hz
Sample Volume	Adjustable using software interface
Dimensions (H x W x L)	15 x 9 x 17.1 in (38.1 x 22.0 x 43.4 cm) including particle counter
Weight (Particle Counter)	42 lb (19.1 kg) including particle counter
Environment	Temperature: 50 – 86 °F (10 – 30 °C); Humidity: Non-condensing Indoor use only Pollution degree 2 Over-voltages (transients) Category II Ordinary protection (not protected against harmful ingress of moisture) Class I equipment (Electrical earth ground from the mains power source to the product input is required for safety)

	UltraChem40	
SLS Instrument Label	SLS-1040	<i>*Greater than 90% accuracy (less than 10% coincidence loss) at max. recommended concentration.</i>
Size range	40 – 125 nm	
Channels	40, 70, 100, 125 nm	<i>** Compatible with hydrofluoric acid sampling.</i>
Flow rate	5 ml/min	
Sampled %	40% Monitor mode; 20% Spectrometer mode and High-Scatter mode	
Maximum concentration*	2,500 particles/ml, Monitor mode and Spectrometer mode 15,000 particles/ml, High-Scatter mode	
Zero count	< 20 counts/l	
Maximum pressure	Ambient pressure	
Laser source	Laser diode Class I, complies with US 21 CFR 1040.10 and EN 60825-1 Internally an enclosed Class 4 laser is used per EN 60825-1	
Sample temperature	50 – 122 °F (10 – 50 °C)	
Wetted surface materials	Sapphire**, Teflon®, Kel-F®	
Calibration	Materials used are traceable to US National Institute of Standards and Technology (NIST) and Japanese Institute of Standards (JIS).	
Software	SamplerSight	

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