Spray Laser Particle Size Analyzer - Benchtop Droplet Size Analyzer - 0.1-100 µm, ≤1% Accuracy

Model **MSPSA-LS311SWISS** | Brand **Master Science**









The Master Science Spray Particle Size Analyzer is built for droplet size distribution testing on small spray devices. It measures droplets in the air without touching them, across 0.1 to 100 µm, and includes a lens protection device so the optics stay clean while sprays pass through the open measurement zone.

KEY HIGHLIGHTS

- Made for sprays
- Instant data
- Clean optics
- Wider range, finer resolution
- Realistic distributions

AT A GLANCE

0.1 to 100 µm	≤1% (CRM D50)
MEASURING RANGE	ACCURACY

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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www.themsci.com

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Overview

Typical subjects are medical atomizers, atomized medications, aerosols, sprays and similar small spray equipment. The Master Science Spray Particle Size Analyzer starts a measurement the moment a spray is released, so data are captured in real time.

> For powders and suspensions, see the Master Science wet and dry laser particle size analyzer.

Key Benefits

Made for sprays
: the Master Science Spray Particle Size Analyzer measures airborne droplets without contact.

Instant data
: testing is triggered by the spray itself.

Clean optics
: airflow keeps droplets off the lens.

Wider range, finer resolution
: dual-lens, dual-array detection.

Realistic distributions
: free-fitting analysis without a fixed model.

Technical Specifications

GENERAL

General	Specifications of the Master Science Spray Particle Size Analyzer are as follows.
Brand	Master Science
Model Number	MSPSA-LS311SWISS
SKU	MSPSA-LS311SWISS
Instrument Type	Spray
Measuring Range	**0.1 to 100 µm**
Accuracy	**≤1% (CRM D50)**
Repeatability	≤1% (CRM D50)
Design Principle	Laser diffraction
Analysis Principle	Mie scattering, Fraunhofer diffraction
Laser	Semiconductor laser, 650 nm, P>1 mW
Laser Safety	Class 1
Measurement Area Length	60 mm
Feeding Mode	Open
Connect to PC, LIMS	Yes
Test Report	Word, Excel, image, text and other formats
Working Environment	5 to 35°C, humidity <85%
Photodetector Elements	80
Storage Environment	-20 to 50°C
Power Supply	110/220 V, 50/60 Hz

DIMENSIONS & WEIGHT

External Dimensions (L x W x H)	720 x 620 x 370 mm
Net Weight	30 kg

COMMON PROBLEMS THIS ANALYZER SOLVES

Common Problems This Analyzer Solves	Sizing spray droplets raises difficulties that ordinary particle sizers do not address.
Droplets foul the lens	: the airflow protection device keeps them away.
Sprays last only a moment	: measurement starts automatically when the spray fires.
Sampling changes the droplets	: the open, non-contact measurement zone leaves them undisturbed.
Narrow detection angle limits range	**: dual lenses and dual detector arrays capture more scattered light.**

Applications

The Master Science Spray Particle Size Analyzer is mainly applied to: Medical atomizers and nebulizers Atomized medications Aerosols and sprays Other small spray equipment

Optics and Protection

- Laser scattering principle with a single parallel optical path
- Dual-lens and dual-array detector design collects scattered light at different angles, extending range and improving resolution
- Airflow protection system shields the lens from droplet contamination and extends service life

Testing

- Spray-triggered measurement for real-time testing and immediate data
- Non-contact measurement of droplets in the air
- Developed for particle size testing of inhaled aerosols, sprays and powder aerosols from small spray systems

Software

- Unconstrained free-fitting technology collects scattering data during measurement
- Three distribution modes: free distribution, R-R distribution and log-normal distribution
- Test reports in Word, Excel, image and text formats

Optional Accessories

- Audit trail software