Liquid Particle Counter

KP-MP500D

Particulate matter testing for cochlear implant systems

The KingPo KP-MP500D combines optical particle detection with controlled liquid sample preparation. It supports comparative analysis of reference and test liquids for particulate matter evaluation associated with ISO 14708-7:2019, Clause 14.2.



Detection range	Counting thresholds	Temperature	Sampling volume
1–500 μm	≥5 / ≥10 / ≥25 μm	37°C ± 2°C	From 0.1 mL

Core capabilities

Sample preparation. Simultaneous stirring of reference and test samples with adjustable speed from 0–1500 r/min.

Liquid sampling. Selectable sampling volume; less than 10 s for 5 mL and less than 3 min for 100 mL.

Test records. Test method configuration, calibration management, maintenance, historical queries and result management.

Applications Cochlear implant development, medical device verification, QC and third-party testing laboratories.

Technical specifications

Parameter	Specification
Detection system	Optical particle detection
Particle detection range	1–500 μm
Particle counting thresholds	≥5 μm, ≥10 μm and ≥25 μm
Particle counting range	0–9,999,999 particles
Particle concentration range	0–10,000 particles/mL
Relative standard deviation	≤2% at a standard particle concentration of ≥1,000 particles/mL
Accuracy	±5%
Channel resolution	≥95% for the ≥10 μm channel
Minimum sampling volume	0.1 mL
Sampling time	5 mL: <10 s; 100 mL: <3 min
Stirring speed	0–1500 r/min
Temperature control	37°C ± 2°C
Sample processing	Simultaneous stirring of reference and test samples
Custom test settings	At least 2 sets
Additional test function	20 μm particle removal efficiency testing

Standards and test conditions

ISO 14708-7:2019, Clause 14.2 — particulate matter evaluation for cochlear and auditory brainstem implant systems. Related Chinese standard: YY 0989.7—2017.

Test method item	Referenced condition
Medium and temperature	Saline solution, approximately 9 g/L; 37°C ± 2°C
Agitation and evaluation	8–18 h; compare test liquid with a reference liquid
Excess average particle count	≤100 particles/mL for particles >5.0 μm; ≤5 particles/mL for particles >25.0 μm

These are test method conditions, not instrument performance specifications. Confirm continuous agitation capability for the required duration. The 20 μm removal efficiency function is a separate application.

Configuration support

Send the standard and clause, specimen type and dimensions, preparation procedure, particle-size thresholds and sampling volume. Include any requirement for 20 μm particle removal efficiency testing.

Product reference: www.dgkingpo.com/product/liquid-particle-counter/

Technical information is subject to the confirmed equipment configuration.