

# DATA SHEET: FSC-A6 Six-stage Microbial Air Sampler

High-Precision Cascade Impactor for Bio-aerosol Analysis

## 1. PRODUCT OVERVIEW

The **FSC-A6** is a multi-orifice, six-stage cascade impactor designed to measure the concentration and particle size distribution of aerobic bacteria and fungi in ambient or indoor air. By simulating the human respiratory tract, it effectively captures biological aerosols onto Petri dishes across six distinct stages. This instrument is widely used for detailed microbial analysis in cleanrooms, pharmaceutical facilities, and public health research.

## 2. KEY FEATURES

- Six-Stage Separation:** Utilizes a cascade design to classify particles into six size ranges from  $>7.0 \mu\text{m}$  down to  $0.65 \mu\text{m}$ .
- Biological Simulation:** Captured particle sizes correspond to different levels of the human respiratory system for health risk assessment.
- High Collection Efficiency:** Achieves a measurement range of  $\geq 98\%$  for viable particles.
- Industrial Build:** Durable construction with a dedicated aluminum alloy carrying case for safe field transport.
- Adjustable Timing:** Flexible sampling periods ranging from 1 to 99 minutes.
- Standardized Testing:** Ideal for analyzing air quality and microbial loads in controlled environments and research labs.

## 3. TECHNICAL SPECIFICATIONS

Feature	Specification
Flow Rate	28.3 L/min ( $\pm 5\%$ )
Collection Efficiency	$\geq 98\%$
Sampling Period	1 - 99 min (Optional)
Stage 1 ( $> 7.0 \mu\text{m}$ )	Aperture: 1.18 mm
Stage 2 ( $4.7 - 7.0 \mu\text{m}$ )	Aperture: 0.91 mm
Stage 3 ( $3.3 - 4.7 \mu\text{m}$ )	Aperture: 0.71 mm
Stage 4 ( $2.1 - 3.3 \mu\text{m}$ )	Aperture: 0.53 mm
Stage 5 ( $1.1 - 2.1 \mu\text{m}$ )	Aperture: 0.34 mm

Feature	Specification
Stage 6 (0.65 – 1.1 µm)	Aperture: 0.25 mm
Noise Level	≤ 50 dB
Power Supply	AC 220V / 50Hz
Main Unit Dimensions	210 × 250 × 130 mm (4.7 kg)
Impactor Head Dimensions	110 × 110 × 85 mm (1.1 kg)

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## 4. APPLICATIONS

- **Research:** Detailed study of biological aerosols and particle distribution.
- **Air Quality Research:** Monitoring indoor and outdoor microbial environments.
- **Cleanroom Validation:** Specialized particle analysis in sterile and controlled zones.
- **Clinical Settings:** Assessing airborne microbial risks in hospitals and diagnostic laboratories.

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## 5. STANDARD ACCESSORIES

- FSC-A6 Main Unit
- Six-stage Cascade Impactor Head
- Aluminum Alloy Carrying Case
- Connection Tubing & Accessories Set
- **Factory Calibration Report**
- User Manual

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**Manufactured by:**  
**Honri Airclean Technology (Suzhou) Co., Ltd.**