

# IOM Sampler

A Gold Standard for Personal Inhalable  
Particulate Sampling



- **Meets U.S. and international standards**
  - ACGIH sampling criteria for inhalable particulate
  - Preferred sampler for HSE Method MDHS 14/3
  - NIOSH Method 5700 for particulate formaldehyde
  - Australian standard for inhalable particulate
  - Complies with MDHS 25/3 for organic isocyanates (*stainless steel model*)
  - Complies with MDHS 6/3 for lead (*with accessory head*)
- **Economical and reusable**
- **Small and lightweight**
  - Plastic model weighs less than 2 ounces (55 grams)
- **Efficient particulate sampling up to 100  $\mu\text{m}$**
- **Maintains sample integrity**
  - Removable 25-mm cassette system eliminates filter handling
  - Cassette and filter are weighed as a single unit to include all collected particles in analysis
- **Sampler and cassette available in stainless steel for chemical analysis**
  - Provides ultimate moisture stability and autoclaving at higher temperatures
  - Ideal for sampling vapor-phase isocyanates
- **Improved plastic material significantly reduces effects of moisture**

\* U.S. Patent No. 4,675,034

## IOM Sampler

The patented\* IOM Sampler, developed by J. H. Vincent and D. Mark at the Institute of Occupational Medicine (IOM) in Scotland, meets the ACGIH sampling criteria for inhalable particulate mass. The IOM Personal Inhalable Sampler is a conductive plastic sampling head that houses a reusable 25-mm filter cassette with specified filter for the collection of inhalable airborne particles. When attached to a personal sampling pump operating at 2 L/min and clipped near a worker's breathing zone, the IOM effectively traps particles up to 100  $\mu\text{m}$  in aerodynamic diameter and closely simulates the manner in which airborne workplace particles are inhaled through the nose and mouth. Because both the cassette and the filter are pre and post-weighed as a single unit, all particles collected (even larger ones) are included in the analysis. The cassette can be cleaned, reloaded with a new filter, and reused.

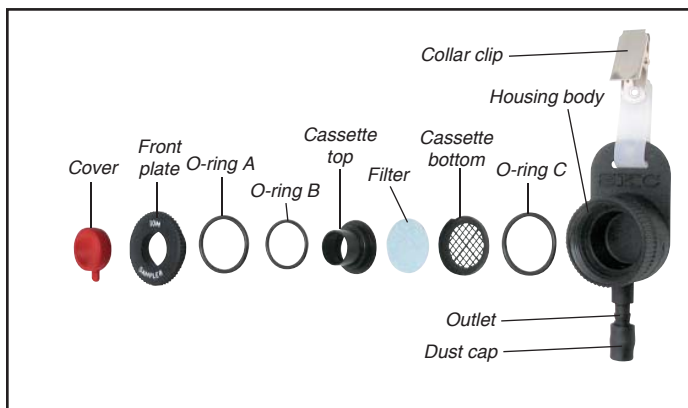
## IOM Accessories

- **Calibration adapter**  
Easy to use; simple and accurate calibration
- **Cassette**  
Conductive plastic or stainless steel
- **Transport clip and cover**  
Protect loaded filter cassette without IOM body during transportation

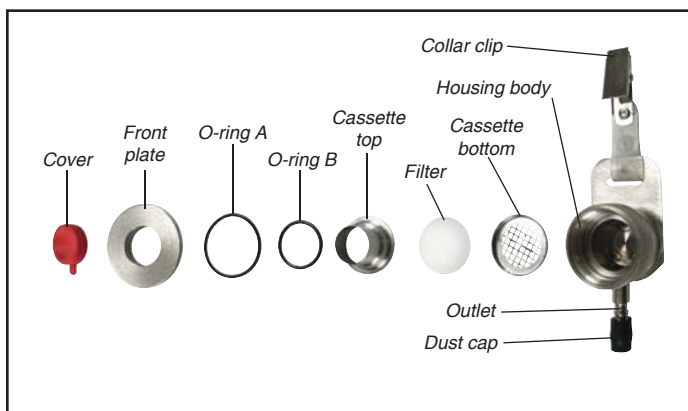


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Conductive plastic IOM Sampler and cassette – Cat. No. 225-70A



Stainless steel IOM Sampler and cassette – Cat. No. 225-76A

## References

Mark, D. and Vincent, J. H., "A New Personal Sampler for Airborne Total Dust in Workplaces," *Ann. Occup. Hyg.* Vol. 30, 1986, pp. 89-102

ACGIH Technical Committee on Air Sampling Procedures: Particle Size-selective Sampling in the Workplace, ACGIH, Cincinnati, Ohio, 1984

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## Performance Profile

**Flow Rate:** 2 L/min

**50% Cut-point:** 100 µm at 2 L/min inhalable fraction

**Construction:** Molded autoclavable conductive plastic or stainless steel

**Filters:** 25-mm membrane or fibrous filter

**Analysis:** Gravimetric or chemical (stainless steel model)

## Ordering Information

IOM Samplers, use with filter, select from below	Cat. No.
IOM Sampler and cassette, in conductive plastic, with transport clip and cover	225-70A
IOM Sampler and cassette, in stainless steel, with transport clip and cover	225-76A
IOM Sampler, in conductive plastic, with stainless steel cassette, transport clip, and cover	225-79A
Accessories	
Cassette assembly, in conductive plastic, with transport clip and cover	225-71A
Cassette assembly, in stainless steel, with transport clip and cover	225-75A
Transport Clip with cover for cassette	225-72A
Calibration adapter	391-01
Single Hole Lead Head, for sampling lead to MDHS 6	225-52

## 25-mm Filters

Each sample requires its own filter.

PVC, 5.0 µm, pk/100	225-8-04
Glass Fiber, 1.0 µm, pk/500	225-702
MCE, 0.8 µm, pk/100	225-1930
Polycarbonate, 0.8 µm, pk/100	225-1601
Gelatin, pk/50	225-9551

