

## Sampling (continued)

2. Clip the sampler onto a worker's clothing near the breathing zone.
3. Connect tubing from the inlet of the worker's sampling pump to the outlet of the Sampler. Ensure the pump has been calibrated to 2 L/min.
4. Sample for the duration specified by the chosen method.
5. After sampling, remove the cassette from the sampler, install the rubber cap on the cassette inlet, and wipe down the cassette with a lint-free cloth or soft brush.
6. Load the cassette with rubber cap into the transport clip.
7. Place the assembly into a sterile plastic bag, package in padded envelope or box and ship to a laboratory for analysis.

**Note: If using NIOSH Method 5700 to determine exposure to formaldehyde on dust, ship a blank cassette along with the sampled cassette. Sample blank filters should be loaded into a clean cassette and handled in the same manner as the filter used for sampling. Do not pull air through the blank.**

To reuse the Sampler after sampling, refer to the *Cleaning the Sampler* section.

Accessories	
PART#	DESCRIPTION
ZA0301	Spare cassette for inhalable dust sampler
ZA0304	Stainless steel sampling cassette for inhalable dust sampler
ZA0305	Replacement o-ring for inhalable dust sampler



5350 SW 1st Lane, Ocala, FL 34474 USA  
Tel: (352) 854-8080  
Fax: (352) 854-7480  
E-mail: ZefonCS@zefon.com  
www.zefon.com

## Operating Instructions

### Zefon Inhalable Dust Sampler

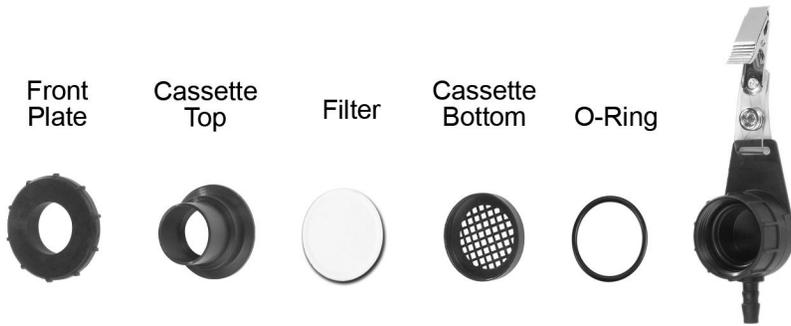


The Zefon Inhalable Dust sampler is a reusable filter cassette with a sampling head designed to measure the worker's exposure to inhalable particulates, dust and bioaerosols. The physical design of the Zefon Inhalable Dust Sampler is a replica of the sampling head developed by the Institute of Occupational Medicine (IOM) in Scotland during the 1980's and currently marketed under license by SKC. As a result, the Zefon Inhalable Dust Sampler features identical performance and features cassette/sampling head interchangeability with the samplers design by IOM and marketed by SKC.

- ACGIH definition of inhalable particulate matter
- NIOSH Method 5700 for particulate formaldehyde
- British Method MDHS 14/3 for inhalable dust in air
- British Method MDHS 25/3 for organic isocyanates in air
- British Method MDHS 6/3 for lead in air
- Australian standard for inhalable particulate
- ISO/CEN for bioaerosols (health related fractions)

### Product Specifications

<b>Flow Rate:</b>	2 L/min (personal sampling)
<b>50% Cut Point:</b>	100µm at 2L/min inhalable fraction
<b>Construction:</b>	Molded conductive plastic (autoclavable)
<b>Filters:</b>	25mm membrane or fibrous filter
<b>Weight w/ cassette:</b>	0.8oz. (22.7 gm)
<b>Size:</b>	3.0 x 1.3 in. (7.6 x 3.3 cm)



### Cleaning the Sampler

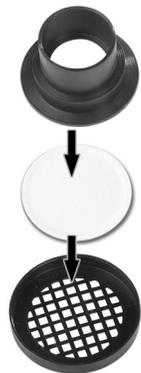
1. Disassemble the sampler.
2. Clean the sampler components using either of the following methods:
  - a) Rinse with a solvent such as isopropyl alcohol, then wipe dry with a lint-free cloth
  - or**
  - b) Place the parts in an ultrasonic cleaner with water and mild soap for several minutes. Wipe dry with a lint-free cloth.

### CAUTIONS:

**Do not use solvents to clean the o-rings. Use water only. Do not use CFC-based substances to clean the sampler. When using solvents, use eye protection, and avoid vapor inhalation and sources of ignition.**

### Cassette Assembly

**Note: Wear gloves when assembling a clean cassette prior to sampling, and utilize tweezers to handle filters.**



**Figure 2**

1. Remove the **cassette base** from the **cassette body**.
2. Place a filter onto the inside of the **cassette base**.
3. Install the **cassette base** back onto the **cassette body**, ensuring it is fully snapped into place.
4. Install the loaded cassette into the sampler as shown in Figure 2.

### Pre/Post Sampling Procedures

While transporting the sampler to the sampling location, or if sampling is to take place at a later time, install the rubber cap over the cassette body inlet. Alternatively, the red transport clip can be used to carry the cassette body with rubber cap.

When sampling has concluded, install the cassette and rubber cap into the transport clip prior to shipment to a laboratory.

### Calibration

Before sampling can take place, the sampling pump and sampler need to be properly calibrated. This can be done easily by using the Zefon Dust Sampler Calibration Adapter (p/n ZA0307). Follow the steps below:

1. Insert dust sampler into calibration adapter. Tighten thumbscrew until snug.
2. Use the supplied tubing to couple the dust sampler outlet port to the inlet fitting on the pump.
3. Attach one end of the supplied Tygon® tubing to the brass hose barb on the calibration adapter and the other end to the calibrator.
4. Start the pump and adjust flow rate until the calibrator indicates 2 L/min.

NOTE: Calibration Jars, such as Zefon P/N ZA0063 may alternatively be used for calibration.

### Sampling

**Note: Wear gloves when handling cassettes**

1. If a loaded cassette was carried to the sampling site in a transport clip, remove the cassette from the transport clip, install it into the sampler body, remove the rubber cap from the cassette inlet, then screw on the sampler front cover (Figure 3).



**Figure 3**