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**INSTRUCTIONS: CIS Inhalable Sampler**

**Introduction:**

This inhalable sampler<sup>1</sup> is intended to be operated with 37mm GF/A Fiberglass filter paper at a flow rate of 3.5 lpm. At this flow rate, the instrument conforms to the ACGIH Sampling Criteria for inhalable Particulate Matter. At the stipulated flow rate, a personal sampler must maintain the flow at an initial resistance of 6 cm of H<sub>2</sub>O. This is readily accomplished by the BGI AFC 123 pump. If it is desired to utilize 0.8µm MCE, the resistance at 3.5 lpm is 27 cm of H<sub>2</sub>O. This would require a high performance pump, such as the BGI AFC 123 R/T.

**Operation:**

Unscrew the fluted ring and remove the front portion of the sampler. Check the inside surfaces for cleanliness and ascertain that the □O□ ring is intact. Remove the cassette by lifting out of the lower portion of the sampler. Inspect the lower □O□ ring to ascertain that it is intact. Insert a previously loaded cassette into the recess in the lower filter holder and reinstall the conical upper section. Tighten the knurled ring firmly to obviate potential leakage.

The CIS is clipped to the worker's lapel and the long hose is run over the shoulder or under the arm, to the personal sampler appropriately situated on the worker's waist belt.

Proceed with sampling according to your experience, regulations of the instructions for the personal sampling pump being used.

**Loading/Reloading Cassette:**

The cassette is opened by prying up the top section with a fingernail. Alternatively, the accessory cassette opener (CIS-3) may be utilized. Place the cassette on a smooth horizontal surface next to the opening in the CIS-3. Push the cassette into the opening until the top has been lifted off. Remove the top and the CIS-3. Pick up the bottom section, containing the filter and support screen. Lift the filter and support screen with a finger and draw the filter away with tweezers. **NOTE:** The cassette and support screen have been purposely made from lightweight materials. Best procedure will involve pre and post weighing the loaded cassette, as a unit. However, with lightly loaded cassettes, the alternative procedure of weighting the filter, ex. The cassette may be adopted.

**Calibration:**

Calibration of the CIS/Sampling should be accomplished as a unit. Attach your flow measuring device (rotameter, soap film meter etc.) To the front of the conical inlet. This is readily accomplished by pressing a tube from the flow meter over the inlet cone. **NOTE:** This tube may have to be held in place during the calibration procedure. Turn on your pump and adjust until the flow meter reads 3.5 lpm.

**Cleaning:**

Disassemble CIS and cassettes and clean in warm water and mild soap. Rinse and air dry. Your parts may be contaminated with hazardous dust. Utilize good hygiene practice at all times.

1. Note: The inhalable sampler CIS is the commercial equivalent of the GSP Sampler - See Kenny et al; Annals of Occupational Hygiene, □A Collaborative European Study of Personal Inhalable Aerosol Sampler Performance□. V. 41, No. 2, Apr. 1997.