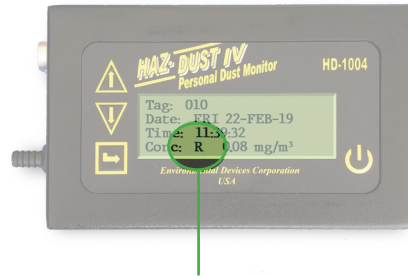## Step 4: Air Sampling

After performing clean air zero switch should already be in the desired position. If sampling for Respirable, insert the RS-104 [comprised of the GS3 Cyclone and the GS3 Cyclone Adapter (p/n GSA-204)] into IOM inlet at bottom of optical sensor. If sampling for Inhalable, remove the RS-104, if attached. Choose the appropriate size fraction on the instrument. Select Enter → Special Functions → System Options → Extended Options → Size → Respirable or Inhalable

Insert GS3 Cyclone into IOM inlet at bottom of sensor or position cyclone between sensor and sensor bracket for a locked fitting. Remove Cyclone for Inhalable air sampling.

An "R" will appear when Respirable is selected in the menu option. An "I" will appear when Inhalable is selected.

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HD-1004-S

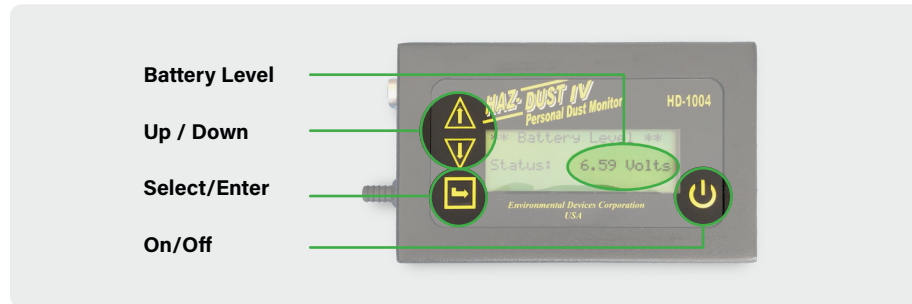# HAZ-DUST IV
Personal Dust Monitor

Quick Start Guide

The HD-1004-S is a Real-Time Personal Particulate Air Monitoring Instrument with the ability to monitor for Respirable and Inhalable size fractions. When in the Inhalable setting, the flow rate should be set to 2.0 LPM and factory dust calibration is in accordance with the NIOSH 0500 dust method. When in the Respirable setting, the flow rate should be set at 2.75 LPM and used with SKC's Respirable Cyclone and factory dust calibration is in accordance with the NIOSH 0600 dust Method. When the user has set flow rates the instrument can be used to easily switched between Inhalable and Respirable size fractions. The flow rate and dust calibration is automatically adjusted.

Note: Before Operating Check Battery Status. Charging time is 16 hours. Operating time is 7 hours for Respirable and 8hrs for Inhalable sampling without a gravimetric filter.

STEP 1 Check Battery Level

Ensure battery is fully charged: Turn monitor on. Press "Enter". Select "Special Functions" → "System Options" "Extended Options" → "Battery Status." The battery status reads greater than 6.5 Volts when fully charged.
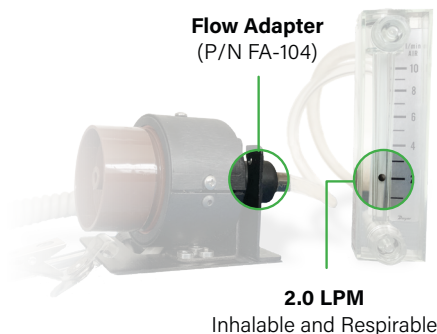

Battery Level

Up / Down

Select/Enter

On/Off

STEP 2 Set Flow Rate

Inhalable Flow Adjust

Trim Stick

Switch Position
Up for Inhalable
Down for Respirable

Respirable Flow Adjust
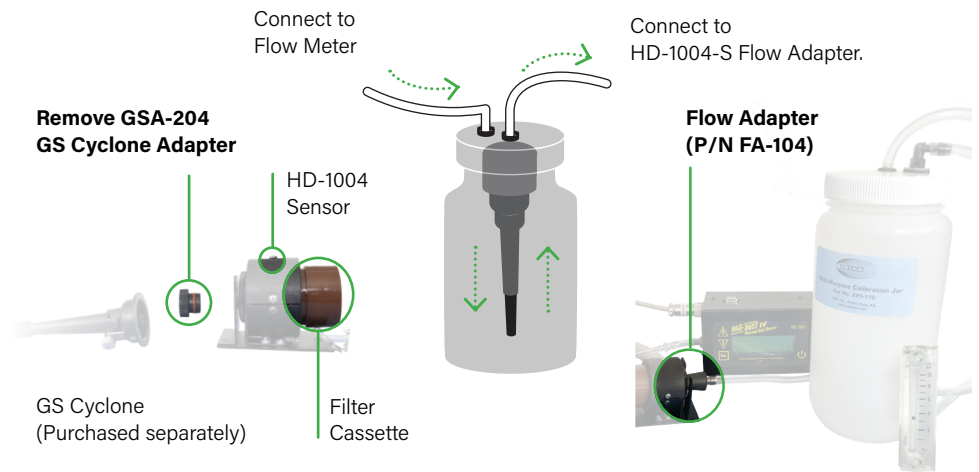
For Inhalable Air Sampling

Ensure switch position is in the upward setting, labeled "Inhalable." If using gravimetric filter insert into cassette. Flow can be calibrated by inserting the Flow adapter (P/N FA-104) into the IOM inlet. Select "Run" from the main menu to activate air sampling pump. In the "Inhalable Flow Adjust" position, flow can be adjusted using the trim stick.

Flow Adapter
(P/N FA-104)

2.0 LPM
Inhalable and Respirable

B. For Respirable Air Sampling

Ensure the manual switch is positioned to the downward setting labeled "Respirable." If using gravimetric filter insert into cassette. Flow can be calibrated by using a calibration jar. Remove the GS3 Cyclone Adapter (P/N GSA-204) from the GS3 Cyclone. Attach the GS3 Cyclone to the underside of the calibration jar lid. Screw lid tightly. Insert Flow Adapter (p/n FA-104) into the IOM Inlet. Attached one tube from the Calibration jar to the Flow Adapter (P/N FA-104). Attach the other tube to the flow meter. Select "Run" from the main menu to activate air sampling pump. Using the trim stick, adjust the flow on the "Respirable Flow Adjust" located to the left of the switch. Adjust to **2.75 LPM.**

Insert Flow Adapter (p/n FA-104) into IOM Inlet. Attach tubing from calibration jar to FA-104. Attach another tube to a flow meter.

Connect to Flow Meter

Connect to HD-1004-S Flow Adapter.

Remove GSA-204 GS Cyclone Adapter

HD-1004 Sensor

Flow Adapter (P/N FA-104)

GS Cyclone (Purchased separately)

Filter Cassette

STEP 3 Perform Clean Air Zero

Note: Clean Air Zero needs to be preformed every time the user switches between Respirable and Inhalable size fractions.

Position the switch to the desired size fraction. Remove GS Cyclone, if attached. Insert the zeroing filter (p/n ZA-202A) into the IOM Inlet. Select Respirable or Inhalable. Select "Run" from the main menu to activate air sampling pump. Run monitor for 5 minutes to stabilize baseline. Select "Enter" to stop sampling. Using arrows, select "Auto Zero." When complete, remove the Zeroing filter (p/n ZA-202A). To begin an air sampling session, select "Run" from Main Menu. Select "Overwrite" if you do not want to save previous data.

Insert the **rubber stopper** of the zeroing filter into the **IOM adapter.**