

OPERATING MANUAL

PAS-500 Personal Air Sampler



Contents of Kit:

- PAS-500 Sampler
- Holder for 6mm charcoal tube
- Screwdriver
- Instruction Manual
- One 9-volt battery

Purpose:

The PAS-500 is a Personal Air Sampler for moving air through an external collection device, such as charcoal or other sampling tube. Weighing only 4 oz. and furnished with a special "shirt-pocket clip", it can be worn in a shirt pocket or on a lapel.

Features:

- Battery, pump, electronics and detector all in one compact, rugged module. Eliminates cumbersome Tygon tubing and charcoal tube holder clipped to lapel.
- Light (4oz.) and compact, with flame-retardant case.
- Special pocket clip ensures unit stays firmly in pocket.
- Flow range: 5-200cc/min.
- Flow regulation between 20-150cc/min. A constant voltage is applied to pump as battery voltage drops.
- Low power consumption. A low cost (less than \$2.00) alkaline battery is sufficient for a 40 hour work week at 50cc/min.
- Easily replaceable 9-volt battery. NiCad, zinc-carbon, and alkaline types are interchangeable.
- Adaptable – Accepts 6 mm diameter (single and double) and 8mm diameter charcoal tubes, other absorber tubes, and Draeger & Kitigawa colorimetric tubes.
- Intrinsically safe. Current-limiting resistor in battery circuit prevents danger of short-circuit sparks.
- Optional clip set if wearer does not have a pocket.

Step-by-Step Calibration Instructions

1. Slide front cover upwards, to stop, by applying thumb pressure to cover and pushing upwards.
2. Insert 9v. battery, observing correct terminal orientation.
3. Slide front cover downward to stop, revealing control panel, with "Flow" and "On" markings.
4. Unscrew charcoal tube holder and insert absorber tube. Make sure the right length of holder is used for the specific tube used. Screw tube holder down to stop, to avoid leaking.
5. Connect nipple on end of holder to bubble flow device.
6. Turn on pump with on/off switch.
7. Follow instructions provided with bubble flow meter to generate bubble.
8. Set required flow with screwdriver provided. Turning the potentiometer clockwise increases flow.
9. Turn off the pump.
10. Disconnect hose to bubble flow meter.
11. Remove nipple on end of charcoal tube holder before sampling.

Calibration:

Spectrex can provide the following instrument for setting pump flow:

- BFM – 10 Pocket Bubble Flow Meter
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Optional Low Flow Orifice:

For flows below 50 ml/min. a low-flow orifice is available for \$30.00 (part # 4300094). The orifice screws onto the tube holder base and any standard tube holder will screw onto it.

Warning:

Certain Drager and Kitigawa colorimetric tubes may have acid emission which could corrode pump parts. These should not be used on the PAS-500 (without a trap, part # 4300360) and are listed below:

- * Benzene * Carbon Disulphide * Carbon Monoxide * Toluene

Intrinsic Safety:

Intrinsically safe for use in Class 1, Groups A, B, C, D. Class II, Groups E, F, G, and Class III, Hazardous Locations.

Maintenance:

The sampler is modular in design and is extremely rugged. Maintenance is minimal. The pump/control board assembly can be removed by undoing the Phillips head screw in the center of the pocket clip, removing the "Flow/On" label and with a pair of long-nose pliers and removing the connecting tube to the tube holder base.

Warranty:

The Sampler is warranted for 90 days against any defects in parts or workmanship.

Service:

For additional information or assistance, or for repairs, contact your local distributor or **Spectrex Corporation**.