

TRITIUM SURFACE CONTAMINATION MONITOR

Model # PTS-26 /S /M

Model # PTS-27 /S /M

AND NOW...

MODEL PTS-27/PRS FOR REJECTION OF OTHER
NUCLIDES AND INTEGRATION CAPABILITIES

FEATURES:

- PORTABLE
- SENSITIVE
- LOW GAS CONSUMPTION
- BUILT IN AUDIO
- AUTO GAS SHUTOFF

DESCRIPTION: The PTS-26 and PTS-27 Tritium Contamination Monitors are portable gas flow proportional counters sensitive to betas of H-3. The windowless probes slide over flat surfaces on poly tape which gives repeatable spacing from surface as well as easy scratch-free movement. The poly tape is easily cleaned but may also be replaced if contaminated. P-10 counting gas utilized in the PTS-26 and PTS-27 probes is non-combustible and can be used in any environment.

Gas use is minimized by careful design of chamber and by auto shut-off of gas flow when "trigger" on probe handle is released. Typical counting efficiency is 70% of all Tritium betas escaping the surface being monitored as compared with results obtained using an internal hemispherical 2 pi counter. Gas flow is normally set at 800 cc/min, giving a one hour use for lecture bottle or, of course, proportionally longer within larger cylinder. (See option below) Probe may also be used to monitor hands, clothing and equipment with included Model H face plate. Two lecture cylinders of P-10 gas are included with instrument.

The electronics include T/A stabilized high voltage bias supply, preamp, pulse shaper and pulse to analog converter. Circuit design minimizes recovery time of detector and allows linear response at higher count rates than previously possible. A piezo electric speaker with volume control and 3-1/2" meter provide audible as well as visual readout.



Figure 1: PTS-26S

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TECHNICAL ASSOCIATES

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\$Revision: 1.1 \$

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SPECIFICATIONS:

Ranges:	500; 5,000; 50k; 500k cts/min (PTS-26M and PTS-27M) or 0-10; 100; 1,000; 10,000 cts/sec (PTS-26S and PTS-27S)
Flowmeter:	10-1000 cc/min. Needle valve control.
Background:	Typically less than 500 cts/min or 10 cts/sec (PTS-26M or PTS-26S) 800 cts/min for (PTS-27M) 15 cts/sec for (PTS-27S)
Controls:	Open range switch, battery check, flow gas control, sound volume control. Hidden high voltage bias supply for detector: Input sensitivity high voltage control.
Calibration:	4 range pots and 1 overall control. Internal.
Detection Area:	PTS-26S (or M) With clothing mask attached 0.5cm x 6.5cm. Mask removed 1.5cm x 11.5cm. PTS-27S (or M) With clothing mask attached 0.5cm x 14cm. Mask removed 4.6cm x 21.6cm.
Sensitivity:	At 100 Bq/100 cm ² , 35 cts/sec above background for PTS-27. 6 cts/sec above background for PTS-26.
Battery:	2 nine volt "transistor" batteries Eveready 1222 or equivalent, 300 hour normal operating life.
Weight:	Probe PTS-26: 0.53 Kg (1lb. 3 oz.) Probe PTS-27: 0.57 Kg (1lb. 4 oz.) Electronics Package: 2.6 Kg (5lbs. 12oz.) plus P-10 gas container: 0.6 Kg (2lbs. 6 oz.)
Shipping Weight:	15 lbs.
Option:	Larger gas cylinder (DOT 3AA2015) 35 capacity of lecture bottle. On two wheel dolly.



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