

# **SURFACE CONTAMINATION MONITORS**



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# THE FERRET FAMILY

**RADIOACTIVE SURFACE CONTAMINATION THE FERRET FINDS IT  
...even Tritium and Carbon 14 in 60 seconds or less  
When time is money - use the low cost easy to use  
FERRET Surface Contamination Monitor**

## HIGH SENSITIVITY FAST RESPONSE.

The FERRET will, within seconds, detect and determine radioactive surface contamination to a fraction of regulatory requirements for permissible amounts.

## WHAT ARE THE FERRETS?

The Ferrets are self contained ultra sensitive proportional counters for Tritium, Carbon 14 and all other alpha, beta and gamma emitters

## WHAT DISTINGUISHES THE FERRETS FROM EACH OTHER?

There are two FERRETS, both of which was designed for specific applications.

## FEATURES:

- The FLAT FERRET for the accurate measurement of all flat surfaces
- SPEEDY FERRET. An a.c. powered counter for the rapid assay of wipes and swipes.

## BENEFITS:

- The FERRETS are your low cost solution to rapid, accurate and sensitive determination or assay of radioactive surface contamination.
- The FLAT FERRETS are used to screen suspected surface areas, only those that show evidence of contamination will then require closer inspection.
- The SPEEDY FERRET is used to assay wipes and swipes for removable contamination well beyond regulatory requirements.



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# THE FLAT FERRET, MODEL FF-27

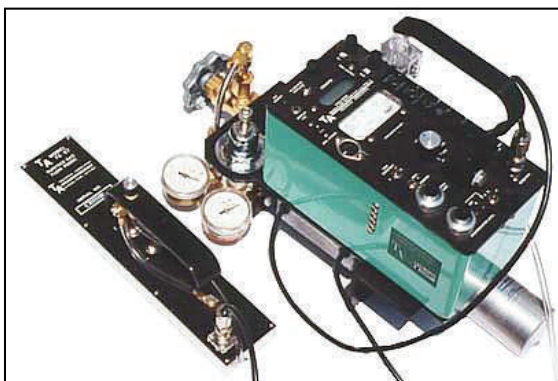
## OPEN WINDOW GAS PROPORTIONAL COUNTER

### AND NOW...

MODEL FF-27 FOR REJECTION OF OTHER  
NUCLIDES AND INTEGRATION CAPABILITIES

### FEATURES:

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



### DESCRIPTION:

The FF-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 FF-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 OTC 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.

**SPECIFICATIONS****Ranges:**

500; 5,000; 50k; 500k cts/min (FF-27M) or  
0-10; 100; 1,000; 10,000 cts/sec (FF-27S)

**Flowmeter:** 10-1000 cc/min. Needle valve control.

**Background:**

Typically less than 800 cts/min for (FF-27M) or 15 cts/sec for (FF-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:**

FF-27S (or M) With clothing mask attached 0.5cm x 14cm.  
Mask removed 4.6cm x 21.6cm.

**Sensitivity:**

At 100 Bq/100 cm<sup>2</sup>, 35 cts/sec above background for FF-27.

**Battery:**

2 nine volt "transistor" batteries Eveready 1222 or equivalent, 300 hour normal operating life.

**Weight:**

Probe FF-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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## SPEEDY FERRET, MODEL SF-TF-6 FOR WIPE AND SWIPE ASSAY

### FEATURES:

- WINDOWLESS
- WIPE
- COUNTER
- PORTABLE

### FOR:

- TRITIUM
- CARBON 14
- SULPHUR 35
- ETC.

### SYSTEM INCLUDES:

- PRS-5 SCALER
- PRE-AMP
- STB-TF-6 DRAWER, SHIELD, DETECTOR

### SPECIFICATIONS:

- Ideal for wipe test counting of flow energy beta emitters
- 1-1/8" diameter low background gas flow detector probe with drawer and 1 inch lead shield
- Background: typically < 10 cpm
- Connects directly - no changes or adapters needed
- Low gas usage
- O-ring gas seal
- Uses P-10 (90% argon 10% methane) or similar counting gas
- Includes 3 feet RG 58 cable
- MHV terminated
- Includes 6 feet of 1/4" gas supply tubing



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