# PORTABLE TRITIUM AIR MONITOR

Model ~ PTG-9

#### **FEATURES:**

- HIGH SENSITIVITY TRITIUM AIR MONITOR
- USER SETTABLE UNITS uCi/l or Bq/m<sup>3</sup> etc.
- WIDE RANGE DIGITAL ACCURACY
- PROGRAMMABLE DIGITAL READOUT
- SENSITIVE FOR OCCUPATIONAL EXPOSURE
- DYNAMIC BACKGROUND COMPENSATION
- BATTERY OPERATION OR AC OPERATION
- BUILT-IN HIGH LEVEL ALARM
- BUILT-IN LOW FLOW ALARM
- BUILT-IN RS-232 COMPUTER INTERFACE
- PORTABLE



### **DESCRIPTION:**

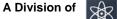
Technical Associates PTG-9 is a Tritium Air monitor; a highly sensitive, rugged, and portable instrument.

- A subtractive balanced chamber electrometer circuit decreases background effects to negligible levels and its deionized and filtered intake reduces spurious effects from smoke dust and existing ionization in the air.
- It is line operated with nominal 20 hour battery back-up.
- Optional inlet and outlet hoses allow monitoring interiors of fume hoods, exhaust stacks, etc.
- The PTG-9 will measure airborne Tritium as free hydrogen or as volatile chemicals in concentrations as low as 1 x 10<sup>-3</sup> uCi/l of air. (37KBq/m<sup>3</sup>)
- All instruments are calibrated at the factory. Calibration check may be performed in the field with a microCurie level Beta or Gamma source.
- Background chamber may be disconnected to check linearity of response on a gamma calibration range.
- User friendly calibration controls are provided.





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### **MEASURING TRITIUM IN WATER & OIL MIXTURES: Strategies**

Tritium is radioactive hydrogen and hydrogen atoms regularly jump or exchange between different adjacent oil and water molecules.

In a mixture of normal water mixed with tritiated oil, both components will, over time, share the Tritium equally.

In GASEOUS Samples, the same principals apply.

- 1. A vapor separation system is recommended.
- 2. Use a PTG-9 Tritium Ion Chamber to make the measurements.

#### **SPECIFICATIONS:**

Ranges:		Compact, easy to read digital LCD readout. 1 x 10 <sup>-3</sup> to 10 uCi/l (37 KBq/m <sup>3</sup> to 3.7 x 10 <sup>8</sup> Bq/m <sup>3</sup> )	
Background:		Essentially eliminated by subtractive balanced chambers.	
Smoke, Dust & Ion E	limination:	Filter and deionizer reduce effects to negligible level.	
Circuit:		Electrometer circuit amplifies net difference between 0.7 liter Tritium internal chamber and a sealed background chamber of similar configuration.	
Alarms:		Low Air Flow, Alarm High Level Alarm: Red Lamp and Audio Alarm.	
Controls:		Power, Pump On/Off, Battery Check, Set (calibration aid), Zero Adjust, Meter Programming (Two buttons).	
Calibration:		Can calibrate internally with Tritium gas, or on a calibration course, or (at a single point) with optional Beta or Gamma source.	
Computer Port:		RS-232 serial port is built in (fully addressable).	
Portability:		PTG-9 is provided with carrying handle.	
Case:		Deep drawn aluminum case, with handle and gasket lid, easily cleanable anodized finish.	
Battery:		9V rechargeable sealed. <b>Battery Life:</b> 20 hours between charges. Battery charger is built-in.	
WEIGHT & DIMENSIONS:			
Dimensions:		Instrument Case (Including handle):	9.25''W x 13.5''L x 10'' Tall.
		Front Panel:	9" Long x13" Wide.
Weight:		18 lbs.	
Shipping Weight:		24 lbs (excluding pre-filter)	
Options:			
	Higher Range	Different Readout Units	

TECHNICAL ASSOCIATES 7051 Eton Ave., Canoga Park, CA 91303 (Phone) 818-883-7043 (Fax) 818-883-6103 tagold@nwc.net WWW.TECH-ASSOCIATES.COM