CARBON-14, CO₂ PORTABLE AIR MONITOR
Model ~ PTG-9-C-14

FEATURES:
- USER SETTABLE UNITS - uCi/l or Bq/m³ 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

DESCRIPTION:
A sensitive, rugged, and portable instrument for detection and measurement of airborne C-14 (¹⁴CO₂).
- The subtractive balanced chamber electrometer circuit decreases background effects to negligible levels.
- A deionized and filtered intake reduces to negligible levels 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 –C-14 Will measure airborne C-14 as CO₂, gas or as volatile chemicals in concentrations as low as 1 x 10⁻³ uCi/l of air (3.7 KBq/m³).

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.

NOTE: For measuring C-14 in other forms, not CO₂, please see the C-14 Air Monitor chart.

SPECIFICATIONS:
Ranges: Compact, easy to read digital LCD readout.
1 x 10⁻³ to 10 uCi/l (3.7 KBq/m³ to 3.7 x 10⁸ Bq/m³)
Background: Essentially eliminated by subtractive balanced chambers.
Smoke, Dust & Ion Elimination: 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.
Controls: Power, Pump On/Off, Battery Check, Set (calibration aid), Zero Adjust, Meter Programming (Two buttons).

TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY
7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) 818-883-6103 (Fax)
tagold@nwc.net WWW.TECH-ASSOCIATES.COM
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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. **Battery Life:** 20 hours between charges. Battery charger is built-in.

**WEIGHT & DIMENSIONS:**

Dimensions: **Instrument Case (Including handle):** 9"W x 13"L x 9" H.

**Front Panel:** 9" H x13” Wide.

Weight: 18 lbs.

Shipping Weight: 24 lbs (excluding pre-filter)

**Options:**

Higher Range Different Readout Units

C-14 Air/stack Monitors

<table>
<thead>
<tr>
<th>Model</th>
<th>G = Gas</th>
<th>A= Aerosol Particulate</th>
<th>Sensor</th>
<th>Media</th>
<th>Standard Low Bq/M³</th>
<th>Range High Bq/M³</th>
<th>Pre-filter Typical</th>
<th>Use with Chemical Vapors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTG-9-C14</td>
<td>CO₂ Gas</td>
<td></td>
<td>Dual Ion Chambers</td>
<td>1 Liter Air</td>
<td>3,700</td>
<td>3.7 x 10⁷</td>
<td>STD particulate or HEPA Filter</td>
<td>Not Approved</td>
</tr>
<tr>
<td>E-CARB-9</td>
<td>Organic (A, P)</td>
<td>CO₂ Gas</td>
<td>2” Dia NaI Scintillator</td>
<td>Charcoal</td>
<td>370</td>
<td>3.7 x 10⁶</td>
<td>None</td>
<td>Yes</td>
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<tr>
<td>CAM-TCO</td>
<td>Organic (A)</td>
<td>2” GM</td>
<td>Charcoal</td>
<td>37</td>
<td>3.7 x 10⁵ or 3.7 x 10⁷</td>
<td>Particulate</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>CAM-TCI</td>
<td>CO₂ Gas</td>
<td></td>
<td>Dual Ion Chambers</td>
<td>8 liter Air</td>
<td>370</td>
<td>3.7 x 10⁶ or 3.7 x 10⁸</td>
<td>Particulate HEPA Filter</td>
<td>Not Approved</td>
</tr>
<tr>
<td>8 liter Air</td>
<td>Organic (A, P)</td>
<td>CO₂ Gas</td>
<td>Dual Ion Chambers</td>
<td>8 liter Air</td>
<td>370</td>
<td>As Above</td>
<td>Particulate</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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