FORMALDEHYDE GAS DETECTOR

Model FP-31

Features

- Simple operation
- Built-in sample draw pump
- Easy to read LCD display
- Self-diagnosis
- Uses photoelectric photometry technology
- Direct digital readout
- Colorimetric detection tablet method
- No false readings from interfering gases
- Operates on 4 AA alkalines
- Stores 99 readings
- No warm up time

Applications

- Furniture and woodworking
- Coating and varnishing
- Engineered wood products
- Medical/veterinary
- Painting & corrosion resistant finishes
- Carpet manufacture & storage
- Adhesives
- Heat treatment operations
- RV/Trailer/mobile home inspecting
- IAQ/green buildings

The FP-31 is a highly sensitive portable gas detector specific for formaldehyde detection. It uses a photoelectric photometry method which utilizes colorimetric tablets for detection. A tablet is placed into the instrument, and then a room air sample is pumped onto the tablet for either a 15 minute or a 30 minute period. If formaldehyde is present, it will cause the chemically impregnated tablet surface to darken or stain. The magnitude of the stain directly correlates to the level of formaldehyde in the air. The stain darkness is read by an optical sensor in the FP-31, and then the instrument calculates the formaldehyde concentration. The FP-31 then has a direct readout of the formaldehyde measurement on an easy to read LCD display. The unit is capable of detecting very low levels of formaldehyde, in order to confirm if an area contains safe breathing levels. There are no known interfering gases, as shown on the chart on the reverse side of this sheet.

Detection Ranges

30 minute sample 0 - 0.4 ppm (0.005 ppm/digit)
15 minute sample 0 - 1.0 ppm (0.01 ppm/digit)
### Detection gas
Formaldehyde (HCHO) in air

### Detection range
| 0-0.4 ppm | 0-1.0 ppm |
| (0.005ppm/digit) | (0.01 ppm/digit) |

### Detection time
| 30 minutes (1,800 sec.) | 15 minutes (900 sec.) |

### Detection principle
Photoelectric photometry method

### Detection method
Colorimetric tablet method (accumulating measurement)

### Accuracy
± 10% of reading or ± 5% of full scale (which ever is greater)

### Display
Digital LCD

### Sampling method
Sample drawing with built-in pump

### Operating conditions
-10 ~ 40ºC (14 ~ 104ºF), below 90%RH

### Memory
Up to 99 readings (automatic recording at the completion of measurement)

### Self-diagnosis
Failure of light source and light receiver, low battery voltage, pump failure, system trouble

### Power Source
AA size Alkaline batteries (quantity 4)

### Continuous Operation
Approximately 12 hours (with no alarm or backlight, with alkaline batteries at 20ºC)

### Dimension
Approx 85(W) x 190(H) x 40(D)mm, 3.35(W) x 7.48(H) x 1.57(W),

### Weight
500g, 17.6 oz

### Standard Accessories
- Detection TAB (20 pcs/pack) **
- Carrying case
- AA size alkaline batteries
- Operating manual

### Optional Accessories
Zero and span tab, datalogging software, USB-IRdA cable (for downloading stored data)

### Warranty
One year material and workmanship

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### Interference against other gases (typical)

<table>
<thead>
<tr>
<th>Test Gas</th>
<th>Concentration</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>1.0 vol.%</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Benzene</td>
<td>1.0 vol.%</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Acetoaldehyde</td>
<td>100 ppm</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>50 ppm</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>1.0 vol.%</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Ammonia</td>
<td>25 ppm</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Acetone</td>
<td>1.0 vol.%</td>
<td>0 ppm</td>
</tr>
</tbody>
</table>

### Field Test Verification Data

<table>
<thead>
<tr>
<th>Measurement Place</th>
<th>FP-31</th>
<th>DNPHT method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>0.020 ppm</td>
<td>0.025 ppm</td>
</tr>
<tr>
<td>Locker</td>
<td>0.030 ppm</td>
<td>0.03 ppm</td>
</tr>
<tr>
<td>Furniture</td>
<td>0.040 ppm</td>
<td>0.05 ppm</td>
</tr>
</tbody>
</table>

* Dinitrophenylhydrazine detection method
** Please note: Detection tabs have a 6 month shelf life. They must be stored in a refrigerator (37ºF-50ºF, 3-10ºC)

Note: Specifications subject to change without notice.