# FORMALDEHYDE GAS DETECTOR

Gas Detection For Life

## 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/mobil home inspecting

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 in 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)


Tab

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# Model FP-31

| | | |
|---|---|---|
| **Detection gas** | Formaldeyde (HCHO) in air | |
| **Detection range** | 0-0.4 ppm<br>(0.005ppm/digit) | 0-1.0 ppm<br>(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 ~ 40°C (14 ~ 104°F), 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 20°C) | |
| **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) **<br>• Carrying case<br>• AA size alkaline batteries<br>• Operating manual | |
| **Optional Accessories** | Zero and span tab, datalogging software, USB-IRdA cable (for downloading stored data) | |
| **Warranty** | One year material and workmanship | |

## Interference against other gases (typical)

| Test Gas | Concentration | Reading |
|---|---|---|
| Toluene | 1.0 vol.% | 0 ppm |
| Benzene | 1.0 vol.% | 0 ppm |
| Acetoaldehyde | 100 ppm | 0 ppm |
| Carbon monoxide | 50 ppm | 0 ppm |
| Carbon dioxide | 1.0 vol.% | 0 ppm |
| Ammonia | 25 ppm | 0 ppm |
| Acetone | 1.0 vol.% | 0 ppm |

## Field Test Verification Data

| Measurement Place | FP-31 | DNPH method* |
|---|---|---|
| Interior | 0.020 ppm | 0.025 ppm |
| Locker | 0.030 ppm | 0.03 ppm |
| Furniture | 0.040 ppm | 0.05 ppm |

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

Note: Specifications subject to change without notice.


RKI INSTRUMENTS

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