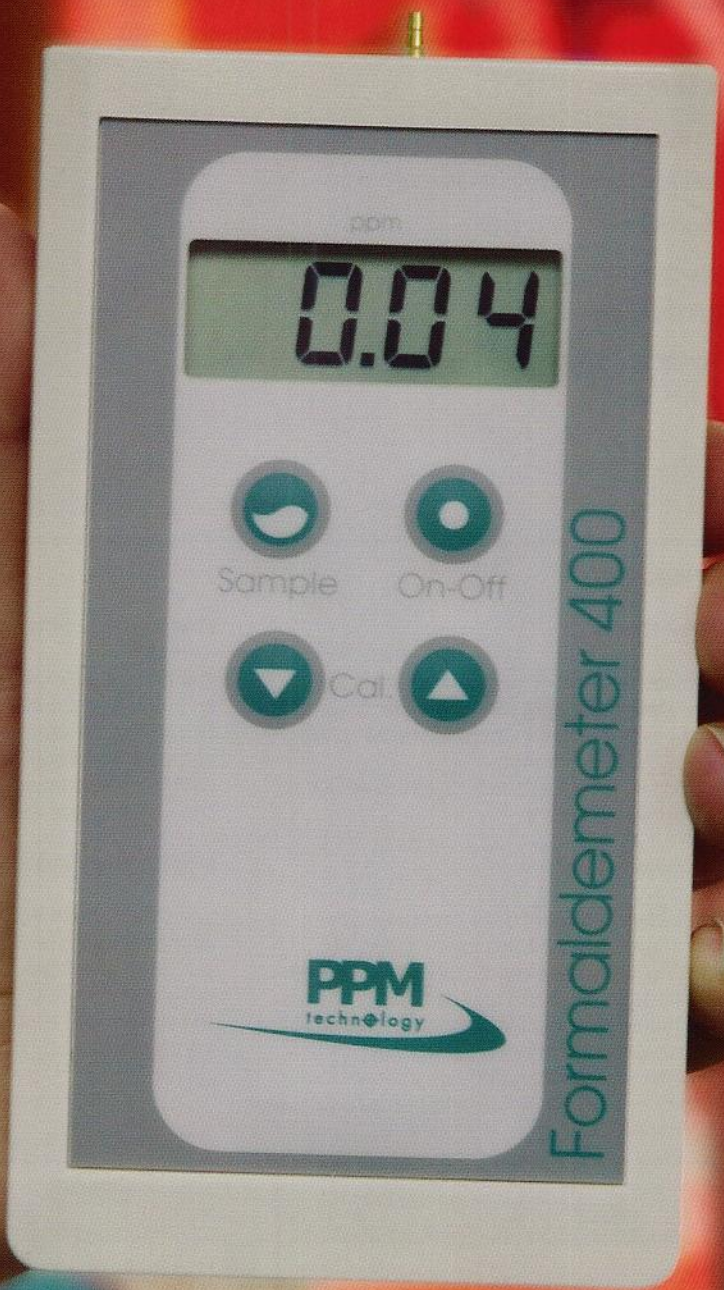
Formaldemeter™ 400



The advanced direct read formaldehyde monitor from PPM Technology

The Formaldemeter 400 is an ultra compact, truly hand held instrument that can provide a rapid indication of hazardous airborne formaldehyde levels at the touch of a button.

Advantages:

- Easy to use - minimal operator training required
- Rapid response time
- Real time readings allow immediate response to results
- Reliable electrochemical sensor
- Does not require inconvenient ancillary sampling equipment or readers
- Simple in-field calibration
- Connectivity to Base Unit or PC for continuous monitoring

Applications:

Formaldehyde is one of the most commonly used substances in industry. The Formaldemeter 400 has been designed for use in a wide variety of fields, including:

Medical
Pharmaceutical
Particle boards
Laminated boards
Synthetic resins
Paint manufacture
Paper manufacture
Dye stuffs
Textile treatment
Horticulture
Cosmetics

formaldehyde monitoring made simple

PPM technology

Formaldemeter™400

Portable Direct Read Formaldehyde Monitor

The Formaldemeter 400 offers a simple way to monitor levels of airborne formaldehyde in the workplace. The instrument has been designed with ease-of-use in mind, being operated via a simple four-button keypad and featuring an easy-to-read four-digit display.

The Formaldemeter 400 uses a well-proven electrochemical formaldehyde sensor that will provide an immediate indication of atmospheric formaldehyde levels. Unlike other formaldehyde monitoring devices such as colour stain tubes and badges, the Formaldemeter 400 is capable of measuring many samples consecutively without the need for inconvenient ancillary equipment. Real time results also mean that potential overexposures can be identified as they occur, without the delay associated with laboratory analysis.

A formaldehyde calibration standard is included in the Formaldemeter 400 kit that enables the user to check and adjust calibration in the field at the touch of a button.

How to use:

1. **Hold the instrument in the atmosphere to be analysed.**
2. **Depress the SAMPLE button.**
3. **The formaldehyde concentration is displayed in parts-per-million (ppm) in approximately 8 seconds.**

PPM technology

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Represented by:

PPM Technology Ltd reserves the right to change the design or specification without prior notice.

TECHNICAL SPECIFICATION

Sensor:	Electrochemical
Calibration:	In-field formaldehyde calibration standard
Display:	4 digit LCD
Sampling Frequency:	0 - 3 minutes depending on previous reading
Sample volume:	Approx. 10 ml
Detection Range:	0 - 10 ppm (other ranges available on request)
Precision:	10% at 2 ppm level
Response Time:	Approximately 8 seconds from sampling
Power:	9V PP3 alkaline battery
Enclosure:	ABS plastic
Weight:	Instrument: 270 g Complete Kit: 750 g
Dimensions:	Instrument: 150 x 80 x 34 mm Carrying Case: 266 x 230 x 50 mm

Kit Contents

1 Formaldemeter 400 instrument with battery

1 Formaldehyde calibration standard tube

1 Pack of phenol filters (10)

1 Thermometer

1 Ball point pen

1 Operation manual

ACCESSORIES

Phenol Filters

Complete removal of contaminants such as phenol and resorcinol can be achieved by attaching PPM Phenol Filters to the sampling port of the instrument.
The data in Table 2 show their effectiveness on the Formaldemeter II

Calibration Standard

PPM supplies an easy-to-use formaldehyde calibration standard tube for checking and adjusting the calibration of the Formaldemeter 400. The tube produces a known concentration of formaldehyde vapour that can be sampled by the instrument to check accuracy and performance. The standard has a 100-sample capacity or a useful life of six months (whichever occurs sooner).

PPM AMS-2 Aldehyde Monitoring Station

The PPM AMS-2 enables the Formaldemeter 400 to be used as a datalogging semi-continuous formaldehyde area monitor. The AMS-2 is a compact benchtop unit that connects to the hand held instrument and essentially automates the operation of the Formaldemeter 400.

Single / Multi Point System

The Single / Multi Point Monitoring System enables formaldehyde monitoring to be carried out at one or more location simultaneously. Several monitoring points can be connected to the system and monitored at a central location via one PC.

Table 1 Accuracy

Formaldemeter II (F) versus the Modified NIOSH (N) Method

(Formaldehyde Concentration / ppm)

	N	F	N	F	N	F
	0.37	0.4	1.84	1.9	5.07	4.9
	0.37	0.4	1.96	1.9	4.94	5.0
	0.31	0.3	1.93	1.7	5.07	5.1
	0.34	0.3	1.93	1.7	5.15	5.1
Mean	0.35	0.35	1.92	1.80	5.06	5.03
St Dev	0.03	0.06	0.05	0.12	0.09	0.10

Ref: Am Ind Hyg J 46 (10):578-584

Table 2: Phenol Filters

Results at 21.5°C from Formaldehyde (0.5 g/l) and Phenol (80 g/l) Standard (Formaldehyde Concentration 2.7 ppm)

	Instrument Reading / ppm			
Instr. No.	67	74	97	132
Without filter	53.5	42.1	43.1	37.1
With filter	2.7	2.8	2.6	2.6

Ref: BTTG Shirley Technology Centre