

PPM Technology Limited

Glutaraldemeter[®]3

The user friendly Glutaraldemeter[®]3 from PPM Technology Ltd. gives a rapid indication of whether the glutaraldehyde level is above or below the Maximum Exposure Level.

- Uses the well proven Lion electrochemical fuel cell sensor
- Has improved selectivity
- Stores time to peak readings
- Holds peak reading
- Stores last ten values

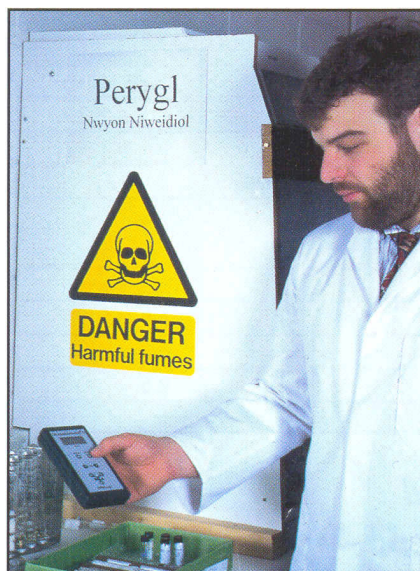


The **GLUTARALDEMETER[®]3** incorporates the latest technology in its design. Although it uses the same fuel cell and sampling system as its predecessor it has several advantages over it, in that it is much more user friendly. The instrument displays zero when the fuel cell is clear and ready to sample, also holds the peak reading, and memorises the last ten peak values which are then easily accessible. The time to peak i.e. the time taken to reach peak reading is usually characteristic of the vapour being analysed. When alcohols such as ethanol, propanol or butanol are present the time to peak is considerably shorter than the time to peak for glutaraldehyde. This enables the instrument to be more selective.

DO YOU COMPLY WITH YOUR HEALTH AND SAFETY REGULATIONS?

In The UK - Control Of Substances Hazardous to Health regulations 1988 require that:

Control of exposure to glutaraldehyde as far as inhalation is concerned shall only be regarded as adequate if the level of exposure is controlled and below the Occupational Exposure Level (OEL)



APPLICATIONS

Glutaraldehyde based solutions are the most commonly used chemical disinfectants in various specialist areas:

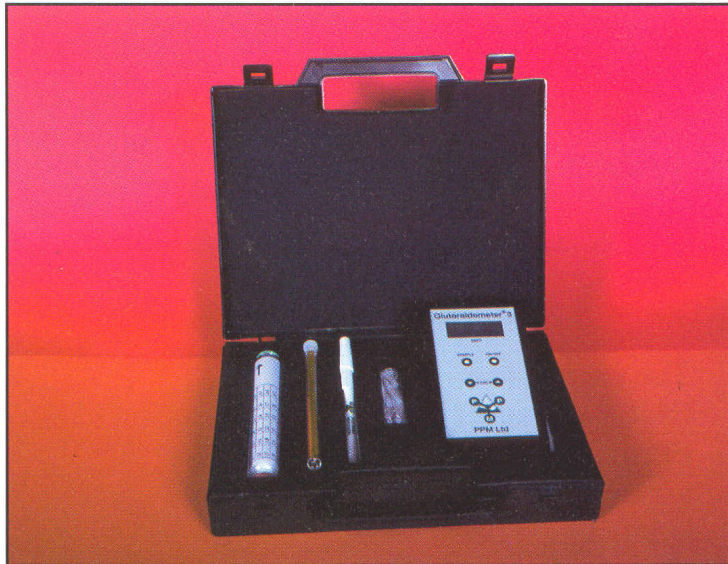
- Medicine
- Dentistry
- Veterinary medicine
- X-ray processing
- Microbiology
- Histopathology
- Paper and leather manufacture

HOSPITAL USE

In a typical hospital application, readings can be taken above and around disinfectant machines, trolley units and in locations such as endoscopy suites, X-ray departments and theatre areas. It can be used to monitor glutaraldehyde when mixing and disposing glutaraldehyde solutions.

PRINCIPLE OF OPERATION

The glutaraldehyde vapour when drawn across the fuel cell sensor undergoes catalytic oxidation on the platinum surface. This produces an electrical output directly proportional to the glutaraldehyde level in the atmosphere.



HOW TO USE

1. Hold the instrument in the atmosphere to be tested and switch on.
2. Press the sample button
3. The glutaraldehyde level is displayed in approximately 60 seconds.

PHENOL FILTERS

Complete removal of any phenol contaminant is possible with the use of phenol filters.

SELECTIVITY

A high degree of selectivity has been incorporated into the fuel cell sensor. However some substances such as ethanol, propanol and butanol can interfere. By comparing the time to peak with that of the standard it is possible to determine if interfering substances are present and whether more sophisticated analysis is required.

CALIBRATION

The Glutaraldemeter will normally hold calibration for several months. The instrument can however be checked and calibrated in the field, using the PPM Glutaraldehyde standard. The standard consists of glutaraldehyde solution impregnated on a special absorbent material. A headspace sample from this tube can be used to calibrate the instrument.

TECHNICAL SPECIFICATIONS

SENSOR:

Electrochemical Fuel Cell

CALIBRATION:

Glutaraldehyde-absorbent standard (sealed unit)

DISPLAY:

3 digit LCD

SAMPLING RATE:

Dependent on previous reading (0 - 5 minutes)

SAMPLE VOLUME:

10 cm³

DETECTION RANGE:

0.03 - 4ppm

PRECISION:

10% at 0.20ppm

RESPONSE TIME:

Approximately 60 seconds from sampling glutaraldehyde

BATTERY LIFE:

300 field tests approx. PP3 9v alkaline battery

WEIGHT:

Instrument 270g Complete Kit 750g

DIMENSIONS:

Instrument
150 x 80 x 34 mm
Carrying Case
266 x 230 x 50 mm

KIT CONTENTS:

instrument including battery
1 calibration standard
1 handbook
1 thermometer

ACCESSORIES:

Calibration Standard Phenol Filters

Extract from summary of independent validation by Inveresk Research International Ltd, Scotland.

The PPM Glutaraldemeters were found to be light, compact and easy to use. Individual measurements using the meters were undertaken in less than one minute, and at a level of ca 0.1ppm glutaraldehyde (determined using the amended MBTH method) mean readings of 0.11, 0.10 and 0.12 glutaraldehyde were obtained from 3 individual meters showing good agreement with the chemically measured concentration.

Meter readings, Glutaraldehyde stream concentration determined at 0.100ppm by MBTH method

METER	1	2	3	4	5	6	Mean	Coeff. of var.
01	0.11	0.12	0.11	0.10	0.11	0.12	0.11	6.7
05	0.10	0.10	0.10	0.11	0.12	0.12	0.11	9.1
09	0.12	0.13	0.12	0.12	0.12	0.13	0.12	4.21

Calibration Standards: Calibration performance

METER	1	2	3	4	5	6	Coeff. of var.
01	0.54	0.51	0.48	0.51	0.45	0.50	6.9
05	0.59	0.57	0.54	0.60	0.52	0.56	6.0
09	0.56	0.54	0.50	0.60	0.55	0.55	6.6