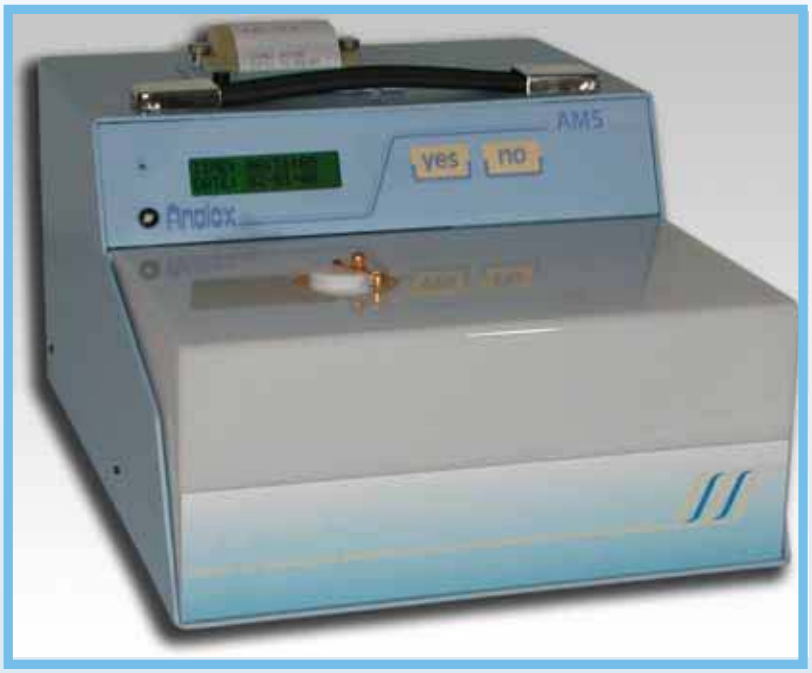
www.imlab.com
imlab@wanadoo.fr

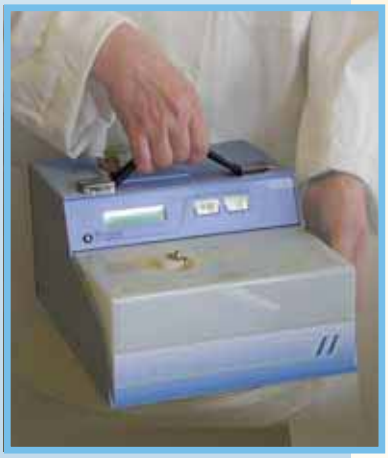
Tél 03 20 55 19 11
Fax 03 20 55 20 85

ANALOX AM5

Methanol Analyser



- **Printed result 20 in seconds**
- **Simple YES/NO operation**
- **Word display for user guidance and self-test functions**
- **Direct readout in %, g/L or mg/L**
- **Fully sterilizable fluid pathways**
- **RS232 interface plus software option**
- **Different reagent kit sizes available**



Lightweight and easily transportable for use at different locations within the plant

A compact, easy-to-operate off-line analyser for the ultra-rapid monitoring of methanol in various industrial applications. These include its use as a fermentation carbon source, e.g. in Pichia pastoris expression systems, and its formation from breakdown of DMDC (dimethyl dicarbonate) used to preserve beverage products.

Rapid Methanol Analysis

The Analox AM5 Methanol Analyser gives a printed result in direct concentration units within 20 seconds of sample injection into the reaction chamber using a precision positive displacement pipette. Thus a quick check can be made on manufacturing processes as well as quality control of final product.

Applications

Key industrial applications for the measurement of methanol using the AM5 include:

a) the monitoring of dimethyl dicarbonate (DMDC) dosage as preservative in the beverage industry.
b) monitoring the depletion of methanol as a carbon source in cell culture fermentation processes.

Analyser Operation

Sample injection via a positive displacement pipette supplied with the instrument initiates the analyser cycle. A displayed and printed result is obtained within 20 seconds of sample injection. The analyser then automatically prepares itself for the introduction of a new sample within a further 40 seconds. The 32-character word display guides the user through all operating procedures using just 2 buttons, (YES and NO), for the simplest possible control.

Analytical Principle

Oxygen consumption is measured in the reaction between sample methanol and alcohol oxidase (AOD) using a Clark-type amperometric oxygen electrode.

$$\text{Methanol} + O_2 \xrightarrow{\text{Alcohol Oxidase (GOD)}} \text{Formaldehyde} + H_2O_2$$

Under the assay conditions, the maximum rate of oxygen consumption is directly proportional to methanol concentration.

Samples

Any aqueous sample can be used provided it is free of gross particulates. Turbidity or opacity does not present a problem. Carbonated samples are simply degassed before analysis. Ethanol should be absent from the sample matrix. A brief aqueous pre-dilution step is applied to concentrations exceeding 0.5g/L (500mg/L). All accessories for accurate dilutions are provided with the analyser.

Reagent Kits

Simple-to-use methanol reagent kits are available in 70, 560 and 1000 (4 x 250) cycle packs.

Performance Specifications

Analytical Range	**a) 0-500 mg/L (Direct injection for DMDC dosage monitoring)** **b) 0-4%W/V (40g/L) (aqueous dilution)**
Units	**%, g/L, mg/L**
Typical Precision (Repeatability)	**S.D. = 0.2g/L @ 20g/L; 1mg/L @ 100mg/L**
Sensitivity (analyser)	**0.001%, 0.01g/L, 0.1mg/L**

ANALOX INSTRUMENTS LTD **REPRESENTED BY:**

IMLAB
Centre d'Affaires de l'Horlogerie
48 rue des Canonniers
F-59000 LILLE
Tél 03 20 55 19 11
Fax 03 20 55 20 85
www.imlab.com
imlab@wanadoo.fr