

GM8 Micro-Stat

Rapid Multiassay Analyzer



Assays include:

Glucose
Glycerol
Methanol
Ammonia
Glutamine
Lactate
Ethanol
Sucrose
Lactose
Urea
Pyruvate

Offers total off-line flexibility

Suitable for key nutrients and by-products in fermentation, cell culture, microbial and bioprocess applications

Printed results in 20-25 seconds

Additional user-defined channels for novel assays

Analog
INSTRUMENTS

Range of Analytes

The Analox Model GM8 fast off-line laboratory analyzer enables researchers to obtain fast, accurate results for key nutrients and by-products in both cell culture and microbial applications. Its unique analysis menu includes programs for:

Glucose	Lactate	Ethanol	Sucrose
Glycerol	Ammonia	Glutamine	Lactose
Methanol	Urea	Pyruvate	

Individual Technical Bulletins are available for all assays.

Analytical Principle

In oxidase enzyme reactions, the analyzer measures the rate of oxygen uptake and under the appropriate controlled conditions, this is directly proportional to the concentration of the analyte.

Substrates for dehydrogenase enzymes are measured using a pre-reaction in which the oxidation of NADH (produced or consumed) is monitored. The NADH concentration will then be either directly or inversely proportional to the concentration of the analyte.

Analyser Operation

For many assays, the simple injection of a sample is all that is needed to obtain a result and prepare the analyzer for the next measurement. Sample injection via an accurate positive displacement pipette triggers the complete analytical cycle and a hard-copy result is then printed within 20-25 seconds. Samples can be any culture fluid, aqueous media, fermentation broth, etc.

Analyses are menu-driven via the display which guides the operator through the complete procedure. Subsidiary menus are reached via the keypad which enables the user to change analysis type, optimize operational modes and perform statistical data analysis. The calibration procedure ensures that the researcher has full control of the analysis at all times. Reagent changeover between analytes is performed quickly and simply and all fluid pathways inside the analyzer can be rapidly sterilised without compromising performance.

Typical Analytical Performance

	Linearity/Range	Repeatability, SD
Glucose	0 - 0.5%W/V (5g/L) direct injection; 0-14%W/V with 1:25 dilution*	±0.01g/L @ 2g/L
Lactate	0 - 0.09W/V (0.9g/L) direct injection; 0-2%W/V with 1:25 dilution*	±0.005g/L @ 0.9g/L
Ethanol	0 - 0.3%W/V (5g/L) direct injection; 0-8%W/V with 1:25 dilution*	±0.2g/L @ 40g/L

* higher concentrations by increased dilution

Instrument Specifications

Model	GM8 Micro-Stat
Method	Enzymatic oxygen-rate
Sensor	Clark-type amperometric oxygen electrode
Reaction Temp	30°C
Printer	16 column dot matrix, 1 line/sec
Interface	Serial data port, optional Windows software available
Power	100-250V AC, 50-60Hz, 12-15V DC, 60VA
Dimensions/Weight	27cm (width) x 35cm (depth) x 25cm (height) - 5.8Kg

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