

AM1

Fast Alcohol Analyser

for Clinical and Research Applications

MAIN APPLICATION AREA

- Alcoholism Research
- Cell Cultures
- Fermentations
- Alcohol Effluent Measurement



MAIN FEATURES

- Plasma, serum samples, and other aqueous solutions
- Small sample sizes from 2.5 - 10 μ l
- Printed results in under 20 seconds
- No sample turbidity or opacity errors
- Simple YES/NO operation
- Fully sterilizable fluid pathways
- Data output facility
- Compact size
- Fully portable version available

PRINCIPLE OF OPERATION

In the presence of molecular oxygen, ethanol is oxidised by the enzyme alcohol oxidase (AOD) to acetaldehyde and hydrogen peroxide,



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

ANALYTICAL PERFORMANCE

	Accuracy	Linearity	Precision (Within Run)
Alcohol	<p>i) Method comparison for whole blood (neutralised PCA extract) vs GC: $y(\text{Analox}) = 1.039x + 0.28 \text{ mmol/L}$, $r = 0.991$, $n = 27$</p> <p>ii) Urine Recovery Data: $y(\text{Analox}) = 0.981x + 0.19 \text{ mmol/L}$, $r = 0.999$, $n = 17$</p>	<p>43.0 mmol/L (ca. 200 mg/dl) for 5 μl samples; 86.0 mmol/L (ca. 400 mg/dl) for 2.5 μl samples</p>	<p>C.V. of 2.5 % @ 18.5 mmol/L (ca. 85 mg/dl) (whole blood)</p>

INSTRUMENT SPECIFICATIONS

Method	> Enzymatic oxygen-rate	Statistical Programmes	> Sequential, giving mean, S.D and C.V.
Sensor	> Clark-type amperometric oxygen electrode	Interface	> Serial data port, optional Windows software available
Sensitivity	> 0.1, or 0.01, selectable	Power	> 100-250V AC, 50-60Hz, 12-15V DC, 60VA
Reaction Temperature	> 30°C	Dimensions	> Width 23cm, (9 ins) x Depth 29cm, (11¼ ins) x Height 15cm, 6¼ ins
Display	> 32 character backlit LCD	Weight	> 3.8 kg, 8 lb 6 oz Portable Model 5.9 kg, 13 lb