

LM5

Fast Lactate Analyser

for Clinical and Research Applications

APPLICATION AREAS

- Clinical Research
- Metabolic Studies
- Biochemical Research
- Sports Medicine Research



MAIN FEATURES

- Plasma, serum and other aqueous solutions or whole blood via Analox collection systems
- 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, lactate is oxidised by the enzyme Lactate Oxidase (LOD) to pyruvate and hydrogen peroxide,



Under the conditions of the assay, the rate of oxygen consumption is directly proportional to the L-lactate concentration.

ANALYTICAL PERFORMANCE

	Accuracy	Linearity	Precision (Within Run)
Lactate	<p>i) Method comparison for whole blood vs YSI 23L: $y (\text{Analox}) = 0.98x + 0.055 \text{ mmol/L}$, $r = 0.9991$, $n = 56$</p> <p>ii) Method comparison for lysed whole blood vs classical PCA extract spectrophotometric: $y (\text{Analox}) = 0.99x - 0.05 \text{ mmol/L}$, $r = 0.992$, $n = 24$</p>	<p>10 mmol/L (ca. 90 mg/dl) for 7 μl samples; 14 mmol/L (ca. 126 mg/dl) for 5 μl samples</p>	<p>C.V. of 2 % @ 2.5 mmol/L</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
Printer	> 16 column dot matrix, 1 line/sec		
