

An ultra fast enzymatic assay for haemolysed whole blood glucose in clinical or research applications, e.g. clamp experiments. Where appropriate, blood may be transferred from the sampling site directly to the analyser with no collection or pre-treatment system.

Bulletin Reference	TB – Glucose (Direct whole blood) – Clinical – GMRD-020 – V.01
Order Code(s)	GMRD-020
Reagent Kit Size(s)	2 x 250 ml (720 analyser cycles)
Instruments	All GM9D Series analysers
Samples	Whole blood samples transferred directly from the sampling site or via common anticoagulation systems containing heparin, oxalate or EDTA. No special Analox collection vessels are required as all additives are contained within the analyser reagent system. Plasma, serum, C.S.F., urine and other aqueous media samples may also be used.
Sample Volume	10 µl (variable 2 - 10 µl)
Analysis Time	35 - 55 seconds
Linearity	30.0 mmol/L (540 mg/dl) for 10 µl samples; 50.0 mmol/L (900 mg/dl) for 5 µl samples
Detection Limit	ca. 0.55 mmol/L (ca. 10 mg/dl)
Precision (Within Run)	C.V. of 2 % @ 5 mmol/L (whole blood)
Reagent Stability	Shelf-life unopened: 18 months stored at 0 - 5°C.
Note	Glucose standards at 2.5, 5.0, 8.0, 25.0, 30.0 and 50.0 mmol/L are available to order as required.

Principle

In the presence of molecular oxygen, β-D-glucose is oxidised by the enzyme glucose oxidase (GOD) to gluconic acid and hydrogen peroxide,



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