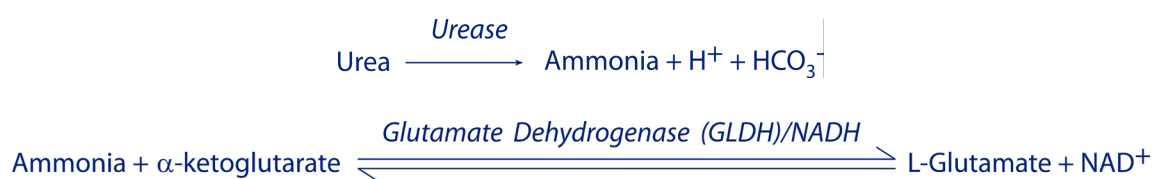


An enzymatic analysis for blood Urea.

Bulletin Reference	TB – Urea – Clinical – GMRD-086 – V.01
Order Code(s)	GMRD-086
Reagent Kit Size(s)	100 ml (140 analyser cycles)
Instruments	All GM7 series analysers
Samples	Plasma (Heparinised), serum, whole blood, urine
Sample Volume	10 µl
Analysis Time	20 seconds (from injection)
Linearity	45 mmol/L (ca. 270 mg/dl)
Detection Limit	0.3 mmol/L (ca. 1.8 mg/dl)
Precision (Within Run)	C.V. of 1.1 % @ 14.0 mmol/L (ca. 85 mg/dl)
Accuracy	i) Method comparison vs Beckman urease conductimetric procedure: y (Analox) = 0.993x + 0.15 mmol/L, r = 0.998, n = 100 ii) Method comparison vs Urease/Berthelot method: y (Analox) = 1.01x - 0.108 mmol/L, r = 0.999, n = 93
Reagent Stability	Shelf-life unopened: 12 months stored at 0 - 5°C. Shelf-life reconstituted: Urease/NADH/GLDH, 7 - 10 days stored at 0 - 5°C; POD reagent 5 - 6 weeks at 0 - 5°C.
Note	2 vials of enzyme reagent are provided to maximise kit life.

Principle

i) Ammonia liberated from urea by urease is converted into L-glutamate by glutamate dehydrogenase (GLDH) in the presence of excess NADH in a brief pre-reaction,



ii) Under the conditions of the assay, the rate of oxidation of excess NADH by peroxidase (POD) is inversely proportional to urea concentration.

