

A fast enzymatic analysis for plasma Ammonia.

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| Bulletin Reference | TB – Ammonia – Clinical – GMRD-162 – V.01 |
| Order Code(s) | GMRD-162 |
| Reagent Kit Size(s) | 100 ml (140 analyser cycles) |
| Instruments | All GM7 series analysers |
| Samples | Plasma (Heparinised) |
| Sample Volume | 200 µl |
| Analysis Time | 20 seconds (from injection) |
| Linearity | 800 µmol/L (13.5 µg/ml) |
| Detection Limit | 18 µmol/L (ca. 0.3 µg/ml) |
| Precision (Within Run) | C.V. of 2 % @ 500 µmol/L (ca. 8.5 µg/ml) |
| Accuracy | Method comparison vs Spectrophotometric UV (Sigma): y (Analox) = 0.97x + 0.28 µg/ml, r = 0.968, n = 33 |
| Reagent Stability | Shelf-life unopened: 9 months stored at 0 - 5°C. Shelf-life reconstituted: NADH/α-ketoglutarate, 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. A sample blank allows for interference by endogenous NADH consuming reactions. |

Principle

i) Ammonia forms L-glutamate with α-ketoglutarate in the presence of glutamate dehydrogenase (GLDH) and 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 ammonia concentration.

