

A-06: Evaluation of a colorimetric methods for the estimation of urinary N-acetyl-B-D glucosaminidase (uNAG) and the establishment of clinical norms for Sri Lanka

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The usefulness of the measurement of uNAG for the early detection of renal damage is now well established. The suitability of a colorimetric method described by Maruhn (1976) was evaluated as a technique adaptable for Sri Lanka.

Urine samples for the estimation of uNAG were found to be stable for: 24 h at room temperature, 2 months at 4°C and 3 months at -20°C. Some commonly used antibacterial agents (chloroform, thimerosal and sodium oxide) were found to be unsuitable as preservatives. Lyophilised kidney extracts prepared from Sprague-Dawley rats were used as internal quality control standards and were found to be stable for 5 months at -20°C. When enzyme activities were expressed in terms of urinary creatinine concentrations, a significant variation was not observed over 24 h. Hence random urine samples collected at any time during the day could be used for the estimation. The normal range (mean \pm 2SD) for Sri Lanka established by studying 280 healthy subjects aged 1-70 years was found to be 50-119 U/mg creatinine. Its excretion did not appear to be significantly affected by age or sex of the subjects.