

## Abstract

Research Title : Comparison of blood chemistry for renal function test, blood urea nitrogen (BUN) and creatinine from serum and Lithium-heparinized (LH) plasma from normal volunteers

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Aims of this study were established reference values of biochemical analytes, blood urea nitrogen (BUN) and creatinine for renal function test from Lithium-heparinized (LH) plasma samples, which were collected from 120 healthy volunteers and then analyzed with Cobas c111 automatic analyzer (Roche diagnostics), and compared new reference values with manufacturer reference values. Finding was revealed that reference values for creatinine (male = 0.71-1.02 mg/dL, female = 0.48-0.87 mg/dL) and BUN (6.2-17.0 mg/dL) were significantly corresponded to manufacturer reference values ( $p < 0.0001$ ) and also significantly corresponded to reference values from different principle of tests, Olympus AU640 automatic analyzer in other laboratories ( $p < 0.0001$ ). However, reference values may concerning by effects of various factors, such as, number of healthy volunteers, sample collection, sample preparation, etc. Thus, each laboratory should has own reference values for accurate clinical diagnosis, support patient's care and laboratory standard.

**Keyword:** reference values, renal function test, Clinical chemistry, creatinine, blood urea nitrogen (BUN)