

Determination of testosterone in human saliva by liquid chromatographic tandem mass spectrometry

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A rapid Liquid Chromatographic Tandem Mass Spectrometric (LC-MS/MS) assay for the measurement of testosterone levels in human saliva was developed and validated using lovastatin as internal standard. The components of interest were detected in the positive ion mode of electrospray ionization, no interference from endogenous components of saliva was observed. The retention times of the testosterone and the IS were around 3.2 and 3.8 min, respectively. The relationship between testosterone concentration in saliva and the peak height ratio of testosterone to the IS was linear ≥ 0.98 in the range of 20-400 pg/ml, and the intra- and inter-day coefficient of variations (CV) were 4.7 % to 9.5 % and 6.5 % to 11.3 %, respectively. The quantification limit of testosterone in saliva was 20 pg/ml, whereas its detection limit was 10 pg/ml. Mean extraction recovery of testosterone (normalized for the concentration) and the IS were 84% and 81%, respectively. Stability of testosterone was tested in various conditions generally encountered by clinical laboratory. Method was successfully applied in determination of testosterone levels in healthy volunteer samples.

Biography

Syed N Alvi obtained his Ph.D. in 2001 from Department of Chemistry, Osmania University, Hyderabad, India. He has vast experience in the area of analytical chemistry, particularly liquid chromatography. His research interest includes; method development, validation and application for bioavailability/bioequivalence studies. Currently he is working as Scientist at King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia.

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