

Testosterone, LC/MS/MS

LIQUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY

- LC/MS/MS provides highly sensitive detection of testosterone (1 ng/dL).
- LC/MS/MS is a very specific assay that directly measures testosterone, unlike immunoassays, that detect testosterone with antibodies.
- Quest Diagnostics offers this test six days per week and reports the next day to reduce anxiety time for your patients.
- Physicians and hospital staff can consult with our Endocrinologists to discuss complex cases.

Ultra-Specific with Triple Selection

Traditional Enzyme Immunoassays (EIA) and radioimmunoassays (RIA) are unable to accurately quantitate the low serum testosterone concentrations found in women, children, men with androgen deficiencies, and in patients undergoing antiandrogenic therapies and are therefore not preferred for use in these situations. Immunoassays also have potential cross-reactivity with therapeutic drugs.

Quest Diagnostics' new assay, that uses High Turbulence Liquid Chromatography and LC-MS/MS, requires lower sample volumes and provides greater sensitivity than liquid/liquid LC-MS/MS or derivatization GC/MS. Interfering substances may influence High Performance Liquid Chromatography (HPLC) results. In mass spectrometry, a substance is bombarded with an electron beam that has sufficient energy to fragment the molecule. The positive fragments (cations and radical cations) are accelerated in a vacuum through a magnetic field and are sorted on the basis of mass-to-charge ratio. Since the bulk of the ions produced in the mass spectrometer carry a unit positive charge, the m/e value is equivalent to the molecular weight of the fragment.

HOW IS IT USED?

- To diagnose and monitor hyperandrogenic disorders such as polycystic ovary syndrome in women with alopecia, acne, and hirsutism
- To diagnose and monitor therapy in patients with androgen secreting neoplasms and congenital or non-classical (late-onset) adrenal hyperplasia
- To determine androgen status in children with precocious or delayed puberty, ambiguous genitalia, or unexplained virilization
- To diagnose testosterone deficiency in men
- To monitor prostate cancer therapies (gonadotropin-releasing hormone analogs and antiandrogens)

Test Code	15983X Total (Women and Children) 36170X Free and Total 14966X Free, Bioavailable, and Total
Specimen Requirements	Serum (no-additive red-top tube) is preferred or heparinized plasma (green-top tube). Total Testosterone (Women and Children): 1 mL (minimum: 0.18 mL) Free and Total Testosterone: 1 mL (minimum: 0.5 mL) Free, Bioavailable, and Total Testosterone: 2.5 mL (minimum: 1.1 mL)
Transport Temperature	Refrigerated
Set up and reporting	Monday-Saturday; report available: Next day
Client Services Contacts	San Juan Capistrano, California (800) NICHOLS x4721 or (949) 728-4721 Chantilly, Virginia (800) 336-3718 x3011 or (703) 802-6900 x3011

Nichols Institute



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