

TEST UPDATE: 25 OH VITAMIN D (TOTAL)

ASSAY INFORMATION:

As of November 3, 2009, the Chemistry Laboratory will begin performing a 25-OH Vitamin D (Total) assay. The assay will be performed on the DiaSorin Liaison, which utilizes a direct competitive chemiluminescence immunoassay for the quantitative determination of total 25-OH Vitamin D. If you have any questions regarding this testing, please contact Dr. Greg Sharp in the laboratory (847-5115) or by email (greg.sharp@vtmednet.org).

METHOD:

The DiaSorin Liaison 25-OH Vitamin D assay is a direct competitive chemiluminescence immunoassay. The 25-OH Vitamin D in the patient serum competes with 25-OH Vitamin D conjugated to an isoluminol derivative for binding sites on the anti-25-OH Vitamin D coated magnetic particles. Starter reagents are added to initiate a flash chemiluminescent reaction. The observed light signal is measured by a photomultiplier as relative light units and is inversely proportional to the patient's 25-OH Vitamin D concentration.

CLINICAL APPLICATION:

Vitamin D plays an important role in bone and mineral metabolism and has recently been recognized as a prohormone that has multiple roles in maintaining good health.

Vitamin D₃ (cholecalciferol) and Vitamin D₂ (ergocalciferol) are the most abundant forms of Vitamin D in the body. Vitamin D₃ is synthesized in the skin from 7-dehydrocholesterol in response to sunlight. Dietary sources of Vitamin D₃ are oily fish such as salmon and mackerel. Dietary sources of Vitamin D₂ are from some vegetables, yeast and fungi.

Vitamin D is converted to 25-OH vitamin D in the liver. Measuring 25 OH Vitamin D concentrations in the serum gives the best indication of Vitamin D status.

ASSAY LIMITATIONS:

- The antibody utilized in this assay will demonstrate cross-reactivity to many dihydroxylated metabolites of Vitamin D. These compounds are naturally present in picomolar concentrations in humans.
- Grossly hemolyzed, icteric or lipemic samples are not acceptable for analysis.
- The effect of heterophilic antibodies has not been evaluated.

FLETCHER ALLEN HEALTH CARE

PATHOLOGY & LABORATORY MEDICINE

TEST UPDATE: 25 OH VITAMIN D (TOTAL)

ORDERING INFORMATION:

Test Name: Vitamin D, 25 OH (Total)

Test Code: VITD

CPT Code: 82306

Sample Requirements: Collect 2.5 mL of blood in either a SST or Red Top Tube.
Submit 1.0 mL of serum refrigerated.
The minimum volume is 0.5 mL.

Expected values:

<10 ng/ml	Deficiency
10-30 ng/ml	Insufficiency
30-100 ng/ml	Sufficiency
>100 ng/ml	Toxicity

Test Schedule: Monday-Friday

Analytical Time: Same Day

Price: Contact Laboratory Customer Service for Pricing Information (847-5121 or 1-800-991-2799).

Effective Date: November 3, 2009

References:

Liaison 25 OH Vitamin D Total Assay product insert, DiaSorin Inc., January, 2009.