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**Lab Dept:** Chemistry

**Test Name:** VITAMIN D, 1,25 DIHYDROXY

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***General Information***

**Lab Order Codes:** D125

**Synonyms:** 1,25-Dihydroxycholecalciferol; Calcitriol

**CPT Codes:** 82652 – Dihydroxyvitamin D, 1, 25-

**Test Includes:** Vitamin D, 1, 25-Dihydroxy level reported in pg/mL.

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***Logistics***

**Test Indications:** As a second-order test in the assessment of vitamin D status, especially in patients with renal disease and parathyroid dysfunction. The circulating half life is relatively short and therefore it is not ideal for overall vitamin D assessment/nutritional assessment.

Investigation of some patients with clinical evidence of vitamin D deficiency (eg, vitamin D-dependent rickets due to hereditary deficiency of renal 1-alpha hydroxylase or end-organ resistance to 1,25-dihydroxy vitamin D)

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: 8822/DHVD)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 - 4 days, test set up Monday – Friday.

**Special Instructions:** See [Patient Preparation](#)

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***Specimen***

**Specimen Type:** Blood

**Container:** Red top tube

**Draw Volume:** 4.5 mL (Minimum: 2.1 mL) blood

<b>Processed Volume:</b>	1.5 mL (Minimum: 0.7 mL) serum
<b>Collection:</b>	Routine venipuncture. Forward to laboratory promptly.
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at refrigerated temperatures. Forward promptly.  <b>Note:</b> Specimens submitted less than the minimum of 1.2 mL will result in a phone call requesting additional specimen. If more specimen is not available, testing will be canceled.
<b>Patient Preparation:</b>	Patient should be fasting at least 4 hours, recommended but not required.
<b>Sample Rejection:</b>	Gross hemolysis; gross lipemia; grossly icteric; mislabeled or unlabeled specimens

***Interpretive***

**Reference Range:**

<b>Females</b>	
0 – 15 years:	24 – 86 pg/mL
≥16 years:	18 – 78 pg/mL
<b>Males</b>	
0 – 15 years:	24 – 86 pg/mL
≥16 years:	18 – 64 pg/mL
<p>Interpretation: 1,25-Dihydroxy vitamin D concentrations are low in chronic renal failure and hypoparathyroidism and high in sarcoidosis and other granulomatous diseases, some malignancies, primary hyperthyroidism, and physiologic hyperparathyroidism.</p> <p>1,25-Dihydroxy vitamin D concentrations are not a reliable indicator of vitamin D toxicity; normal (or even low) results may be seen in such cases.</p>	

<b>Critical Values:</b>	N/A
<b>Limitations:</b>	N/A
<b>Methodology:</b>	Extraction/Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**References:**

[Mayo Medical Laboratories Web Page](#) July 2013

**Updates:**

7/11/2008: Minimum volume serum increase from 0.65 to 1.2 mL.

11/20/2008: Specimen handling for short specimens.