

TEST UTILITY

VITAMIN D NUTRITIONAL STATUS

Mary M. Mayo, PhD, Medical Director

OVERVIEW AND CLINICAL UTILITY:

PathGroup's 25-Hydroxy Vitamin D assay, test code VD25H, measures both vitamin D2 and D3 forms of 25-hydroxy Vitamin D, which is the major compound produced in the liver. To properly assess and measure vitamin D status, 25-hydroxy Vitamin D is the test of choice.

Vitamin D is a collective term for a number of structurally related compounds. Vitamin D2, or ergocalciferol, is derived from plants and yeast. Vitamin D3, or cholecalciferol, is produced in the skin by the action of UV light on 7-dehydrocholesterol. These two compounds are inactive until activated by two hydroxylation enzymes: 25-hydroxy vitamin D which is produced in the liver, and 1,25-dihydroxy vitamin D which is produced in the kidney. Although 1,25-dihydroxy vitamin D is the active form in the body, measurement of this compound is not recommended as a marker for vitamin D status. The reason for this is due to 25-hydroxy vitamin D being found in approximately 1,000 times greater amounts with a longer half-life in the body. Additionally, 1,25-dihydroxy Vitamin D is effected by kidney function and is lower in patients with renal disease.¹

TEST METHODOLOGY:

Chemiluminescence

ORDERING:

TEST CODE	TEST NAME	CPT CODE	LOINC
VD25H	Vitamin D 25-Hydroxy	82306	1989-3
VI125	Vitamin D 1,25 Dihydroxy	82652	1649-3

REFERENCE RANGE:

TEST CODE	REFERENCE RANGE
VD25H	M/F 30.0 - 100.0 ng/mL
VI125	M/F 19.9 - 79.3 pg/mL*

** New reference range for VI125 due to methodology change*

SPECIMEN COLLECTION AND STORAGE:

IF ORDERING:
<ol style="list-style-type: none"> 1) Collect specimen in a SST (Specimen Type) <ol style="list-style-type: none"> a. Allow serum tube to clot for 30 minutes b. Spin serum separator tube 10-15 minutes @ 3500 rpm 2) Transport 1 mL serum (Min: 0.5 mL) in a standard transport tube 3) Transport refrigerated, specimen stable refrigerated for 5 days

TEST PERFORMED: Monday – Friday

TURNAROUND TIME: 24 – 48 Hours

For further questions, please contact Client Services at 615-562-9300 or 1-888-474-5227