



**Client Communication**

# Change in Instrumentation & Methodology: Vitamin D, 25 OH

**Effective January 9, 2023**, Clinical Pathology Laboratories (CPL) is pleased to announce a change in the method and analytic platform for Vitamin D, 25 OH (Hydroxyvitamin D). This change provides increased efficiency, optimized handling of low-volume specimens, and improved turnaround time and test capacity.

The new methodology is competitive electrochemiluminescence binding assay with cross-reactivity to Dihydroxyvitamin D blocked by a specific monoclonal antibody. CPL has extensively validated the method including correlation with the laboratory’s Hydroxyvitamin D by liquid chromatography-tandem mass spectrometry (LC-MS/MS) method. In addition, the new method has been standardized against and is traceable to the National Institute of Standards and Technology Standard Reference Material 2972.

The change in instrumentation and methodology will not affect the current interpretive ranges used by CPL.

Age	Range (ng/mL)	Interpretation
Pediatric (<17 Years Old)	20-100	N/A
	< 20	Insufficient
Adult (> 17 Years Old)	20-29	Suboptimal
	30-100	Optimal

The new methodology will allow for an analytical measuring range of 6 - 120 ng/mL without dilution, and clinical reporting range up to 240 ng/mL with an automatic dilution by the instrumentation. The current methodology has an analytical measuring range of 4 - 150 ng/mL. 99.9 % of results fall within the 6 - 240 ng/mL range.



## Client Communication

Vitamin D is a fat-soluble hormone precursor that is biologically inert and must undergo two successive hydroxylations in the liver and kidney to form the 1,25-Dihydroxyvitamin D form that affects calcium metabolism and bone mineralization. The determination of the vitamin D sufficiency status is performed using a 25-Hydroxyvitamin D (Vitamin D, 25 OH) assay while 1,25-Dihydroxyvitamin D assessment is primarily indicated for evaluation of hypercalcemia and for assessing patients with renal failure.

The two main forms of Vitamin D are D<sub>2</sub> and D<sub>3</sub>. Vitamin D<sub>2</sub> cannot be synthesized by the human body and must be taken in with food or supplements. In contrast, Vitamin D<sub>3</sub> is produced in the skin by exposure to sunlight. Vitamin D deficiency can lead to bone-malformation (rickets), underutilization of dietary calcium, muscle weakness, and reduced bone mass.

Name	Order Code
COMPREHENSIVE CARDIOVASCULAR RISK PROFILE WITH VITAMIN D	165
VITAMIN D, 25 OH	4958