



0036 Fat-Soluble Vitamins Profile - Serum

Methodology: High Performance Liquid Chromatography, LC/Tandem Mass Spectrometry, EIA, Chemiluminescent

Ranges: Ages 13 and over.

Results		QUINTILE DISTRIBUTION					95% Reference Range
		1st	2nd	3rd	4th	5th	
Vitamin A							
1. Vitamin A (Retinol)	0.49	0.36				0.74	0.29 - 1.05 mg/L
2. β-Carotene	0.79	0.15				1.70	0.10 - 2.71 mg/L
Vitamin E							
3. alpha-Tocopherol	18.5	9.8				25.1	6.8 - 31.7 mg/L
4. gamma-Tocopherol	0.14	0.26				2.06	0.06 - 2.99 mg/L
Vitamin K							
5. Undercarboxylated Osteocalcin (ucOC)	3.8					3.8	<= 9.0 ng/mL
Coenzyme Q10							
6. Coenzyme Q10	0.84	0.64				2.16	0.48 - 3.04 mg/L
Vitamin D							
7. 25-Hydroxyvitamin D ♦	50						Reference Range 30 - 100 ng/mL
Deficiency:	<20 ng/mL						
Insufficiency:	20-29 ng/mL						
Sufficient:	30-100 ng/mL						
Recommended:	50-80 ng/mL						
Excessive:	>100 ng/mL						

There is no consensus in the literature regarding optimal levels of 25-Hydroxyvitamin D. Higher levels of 25-Hydroxyvitamin D may be concerning in some patient populations, such as renal failure. Levels below 30 ng/mL are considered insufficient by most medical associations. Treatment is at the discretion of the treating clinician.

Holick MF, et al. *J Clin Endocrinol Metab.* 2011;96(7):1911-1930.
Vitamin D Council: <https://www.vitamindcouncil.org/>



Commentary

25-Hydroxyvitamin D testing performed by Genova Diagnostics, Inc. 63 Zillicoa St., Asheville, NC 28801-0174. A. L. Peace-Brewer, PhD, D(ABMLI), Lab Director - CLIA Lic. #34D0655571 - Medicare Lic. #34-8475.

The Diasorin Liaison 25-Hydroxyvitamin D Total Assay is certified by the CDC Vitamin D Standardization-Certification Program (CDC VDSCP).

Normal or elevated levels of fat-soluble vitamins are indicative of sufficient gut absorption, along with adequate dietary or supplement intake. Low levels of fat-soluble vitamins can be related to low dietary intake or to GI conditions affecting absorption including gluten intolerance, pancreatic or bile insufficiency, IBD, or small-bowel surgery. Ensuring gut health and an adequate intake through diet or supplementation can help to increase blood levels.

The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted with ♦, the assay has not been cleared by the U.S. Food and Drug Administration.