

TEST PATIENT**Dr.TEST DOCTOR**

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Date of Birth : 01-Jan-1956
 Sex : F
 Collected : 27/Jan/2022
 Received: 27/Jan/2022
 123 EXAMPLE STREET
 MELBOURNE VIC 3000
 Lab id : **3793202** UR#:

TEST HEALTH CENTRE
 123 TEST STREET
 BURWOOD VIC 3125

MICRO SAMPLE ASSAYS

BLOOD SPOT	Result	Range	Units	
Vitamin D Profile, LC/MS/MS				
Vitamin D Total, LC/MS/MS	149.8	75.0 - 250.0	nmol/L	
Vitamin D2, LC/MS/MS	3.0	< 13.0	nmol/L	
Vitamin D3, LC/MS/MS	149.8	75.0 - 250.0	nmol/L	

Comments**VITAMIN D SUMMARY:**

Vitamin D3 (cholecalciferol) is produced endogenously from the action of ultraviolet light on the skin.

Vitamin D2 (ergocalciferol) is not found in humans/animals, but is manufactured commercially.

Both D2 and D3 are hydroxylated in the liver to form their 25-hydroxy metabolites; the commonly accepted measure of vitamin D status.. These represent the major circulating form of the prohormone, and the form which reflects total body bioavailability of the prohormone.

It has long been assumed that supplementation with Vitamin D2 was equivalent to/as effective as Vitamin D3. However, more recently it has been found that 25-hydroxyvitamin D2 has a lower affinity than D3 for vitamin D binding protein, which results in a shorter half-life for D2 in the blood stream. This makes vitamin D2 less bioactive than D3 therefore D2 must be given in much larger doses, than originally determined.

Most commonly used vitamin D assays only measure D3 and not D2. In individuals taking D2 this can result in suppression of endogenous D3 and "apparent" vitamin D deficiency.

The Vitamin D Profile assay is performed using liquid chromatography/tandem mass spectrometry (LC-MS/MS), which allows for measurement of Vitamin D2, Vitamin D3 and Total Vitamin D.

Most published studies, on which currently accepted physicians' recommendations for blood levels are based, have used a radioimmunoassay test from DiaSorin. This test, despite a high correlation with LC-MS/MS for the same samples, usually gives values 20-30% lower than LC-MS/MS.

The Working Group of the Australian and New Zealand Bone and Mineral Society, Endocrine Society of Australia and Osteoporosis Australia have recommended that the Vitamin D level should be greater than 50 nmol/L.

Recommended Target Range:	125 - 200	nmol/l
Deficient Level:	< 50	nmol/l
Insufficient Level:	50 - 74	nmol/l
Sufficient Level:	75 - 250	nmol/l
Excessive Level:	> 250	nmol/l

COMMENT:

25-hydroxy Vitamin represents the body's stores/reserves level. Where levels are deemed sub-optimal, consider assessing 1-25-dihydroxy Vitamin D3 (the active form of the molecule). This may be tested off the existing specimen at the laboratory within 7 days. If you wish to proceed with this test, please forward a new request form for this patient.

