



# SAMPLE REPORT

09-May-1990 Female

P: 1300 688 522  
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16 HARKER STREET  
BURWOOD VIC 3125

Dr.SAMPLE REPORT  
TEST HEALTH CENTRE  
123 TEST STREET  
BURWOOD VIC 3125

LAB ID : 3814076  
UR NO. :  
Collection Date : 09-May-2022  
Received Date:09-May-2022



3814076

## MICRO SAMPLE ASSAYS

BLOOD SPOT	Result	Range	Units	
<b>Vitamin D Profile, LC/MS/MS</b>				
Vitamin D Total, LC/MS/MS	92.4	75.0 - 250.0	nmol/L	
Vitamin D2, LC/MS/MS	<13.0	< 13.0	nmol/L	
Vitamin D3, LC/MS/MS	92.4	75.0 - 250.0	nmol/L	



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### Micro Sample Assays Comments

#### VITAMIN D LC-MS/MS SUMMARY:

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

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

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 using immunoassay technology. In individuals taking D2 this can result in suppression of endogenous D3 and "apparent" vitamin D deficiency.

This Vitamin D LC-MS/MS Profile assay is performed using liquid chromatography/tandem mass spectrometry, 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 immunoassay technology. 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

Tests ordered: 1117