Brigham Research Assay Core (BRAC)
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25-hydroxyvitamin D3 and D2, Serum

Method:	Liquid Chromatography-Tandem Mass Spectrometry (LC/MS/MS)
Description:	25-Hydroxyvitamin D3/D2 in human serum are extracted by Solid Phase Extraction (SPE), separated and eluted by High Performance of Liquid Chromatography (HPLC), and determinated by Mass Spectrometry (MS) in Atmospheric-Pressure Chemical Ionization (APCI) source at positive ionization mode and multiple reaction monitoring (MRM) of transition. Deuterated stable isotope 25-Hydroxy Vitamine D3-d6 or 25-hydroxy Vitamine D2-d6 is utilized as internal standard for the calibrations of 25-hydroxyvitamin D3/D2 respectively.

Collection and Performance Characteristics

Tube type:	Preferred: SST Alternate:
Minimum Volume:	0.3 mL
Lowest Reportable Value (Limit of Quantification):	1ng/mL
Dynamic Range:	1-100ng/mL (25-hydroxyvitamin D2 or D3)
Precision:	25-OH Vit D3 Intra-assay variation is <7% RSD Inter-assay variation is <8% RSD 25-OH Vit D2 Intra-assay variation is <8% RSD Inter-assay variation is <10% RSD
Reference Range:	30-74 ng/mL