

The ClinMass® Complete Kits with order nos. MS7000 and MS7100 enable a fast on-line SPE LC-MS/MS analysis of 25-OH-Vitamin D (D2, D3) with an injection interval of 3 min only. The sample pretreatment can be performed manually (MS7000) or automated with liquid handling systems of several device manufacturers (MS7100). The C-3 epimer of 25-OH vitamin D3 (3-epi-25-OH vitamin D3) is separated reliably from the analyte peak. An analytical column with a run time of 4 min (order no. MS7035) is additionally available in order to obtain base line separation.

Vitamin Status

25-OH Vitamin D2 / D3 in Plasma and Serum

– on-line Analysis

– automated on-line Analysis

Test Data

Linearity:	1.4 - 250 µg/l (D2)
	2.3 - 250 µg/l (D3)
LOD:	0.4 µg/l (D2)
	0.7 µg/l (D3)
LLOQ:	1.4 µg/l (D2)
	2.3 µg/l (D3)
Intraassay precision:	6.8/3.9 % (D2)
	4.7/3.3 % (D3)
Interassay precision:	7.6/4.3 % (D2)
	6.6/4.2 % (D3)

LC-MS/MS Parameters

LC-Parameters

Pump 1:	SPE-Buffer (0.1 - 5.0 ml/min)
Pump 2:	Mobile Phase (0.5 ml/min)
Injection volume:	10 - 50 µl
Injection interval:	3 min (4 min)
Switching valve:	6-port/3-channel
	(order no. FK1102)

Column heater: 40 °C

MS-Parameters

Ion source:	Heated Nebulizer (APCI), positive
MS/MS-Mode:	MRM

Sample Pretreatment

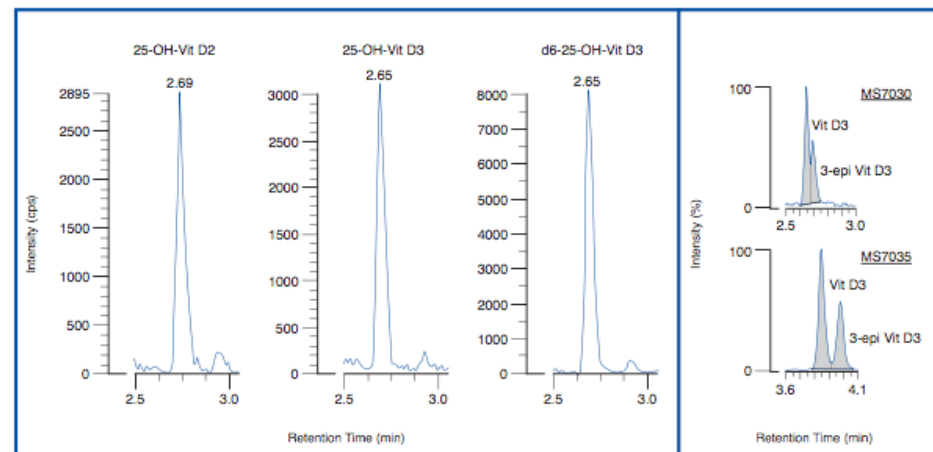
Precipitation:

150 µl mixture IS/P	50 µl sample (calibrator, control, patient)
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- ↓
1. mix, incubate (4 °C)
 2. mix, centrifuge

on-line Analysis:

Inject 10 - 50 µl



left: ClinCal® Serum Calibrator, order no. MS7013, level 2 (25-OH vitamin D2 and D3) and ClinMass® Internal Standard, order no. MS7012 (d6-25-OH vitamin D3)

right: Human serum with 25-OH vitamin D3 and 3-epi-25-OH vitamin D3, measured with the 3-min method (top) and 4-min method (bottom)

Ordering Information

Order No.	Description	Quantity
MS7000	ClinMass® Complete Kit for 25-OH Vitamin D2 / D3 in Plasma and Serum for 300 assays	1 pce.
	Kit Components (order no. MS7000):	
MS7005	Autosampler Washing Solution	1000 ml
MS7009	SPE-Buffer	2 x MS7009 (2 x 1000 ml)
MS7010	Mobile Phase	700 ml
MS7012	Internal Standard IS	30 ml
MS7013	Serum Calibrator Set, lyophil. (Level 0 - 3)	4 x 1 x 1 ml
MS7020	Sample Pretreatment Vials	3 x MS7020 (3 x 100 pcs.)
MS7021	Precipitant P	15 ml
	Manual	1 pce.
MS7100	ClinMass® Complete Kit for 25-OH Vitamin D2 / D3 in Plasma and Serum for 1200 assays	1 pce.
	Kit Components (order no. MS7100):	
	4-fold amount of kit components with order no. MS7000 (MS7005, ... , MS7021)	4 x MS7000*
	- without MS7020 (but with FK6513 instead)*	
FK6513	96-Well-Plates (600 µl)	3 x FK6513 (3 x 5 pcs.)
	Manual	1 pce.
	Additional Components:	
MS7014	Optimisation Mix	2 ml
MS7015	Optimisation Mix 3-epi	1 ml
	Start Accessories:	
MS7030	Analytical Column with test chromatogram	1 pce.
MS7035	Analytical Column 3-epi with test chromatogram (for the additional analysis of 3-epi-25-OH Vitamin D3)	1 pce.
MS7031	SPE-Column	1 pce.
	Accessories:	
FK6501	Protective Sheets for 96-Well-Plates (PE/PP foil, 80 x 140 mm)	50 pcs.
FK6514	96-Well Plates (300 µl)	5 pcs.
FK7340	Sealings and sieves for order no. FK7400	4 pcs. each
FK7400	Inline-Filter (stainless steel sieve, free of dead volume)	1 pce.
	ClinChek® Controls:	
MS7080	Serum Control, lyophil., Level I	10 x 1 ml
MS7081	Serum Control, lyophil., Level II	10 x 1 ml
MS7082	Serum Control, lyophil., Level I, II	2 x 5 x 1 ml

→ Fast on-line analysis
(injection interval: 3 min)

→ Separation of the
C-3 epimer

→ Traceable to NIST
standard SRM 972a