

Supplemental Tables

S1. Table 1. Liquid chromatography gradient for measuring vitamin D metabolites using LC/MS/MS*

Time	Organic phase %
0	30%
2	30%
3	75%
10	80%
11	30%
12	30%

* Mobile phases are (water phase) A-10% v/v acetonitril in water containing 0.1% formic acid; (organic phase) B-100% methanol. Liquid chromatographic column is Waters Acquity 1.7 μ m 150 mm x 2.1 BEH C18 column. 250 μ L/min flow rate.

S2. Table 2. MS/MS parameters for measuring vitamin D metabolites using LC/MS/MS*

Metabolite Name	Q1 Mass (Da)	Q3 Mass (Da)	DP (V)	CE (V)	CXP (V)
25(OH)D2	570.3	298.1	60	32	8
25(OH)D3	558.3	298.1	50	32	8
1,25(OH)2D2	586.3	314	60	35	8
1,25(OH)2D3	574.3	314	60	38	8
d6-(OH)D3	564.3	298.1	55	35	8
d6-(OH)2D3	580.3	314	55	35	8
CUDA	341.2	216.3	60	35	4
24,25(OH)2D3	574.3	298.1	60	30	8
Vit D2	572.3	298.1	60	30	8
Vit D3	560.3	298.1	55	32	6
Calcipotriol	570.3	314.1	55	30	8

* The 4000 QTrap MS/MS system (AB Sciex, Redwood City, CA) was used for this measurement. The instrument was operated under negative electrospray mode with MRM scan mode. The other parameters for the source are nebulise gas 50 psi, turbo gas 60 psi, curtain gas at 25 psi; ion spray voltage is -4500 V, source temperature is 600 °C.