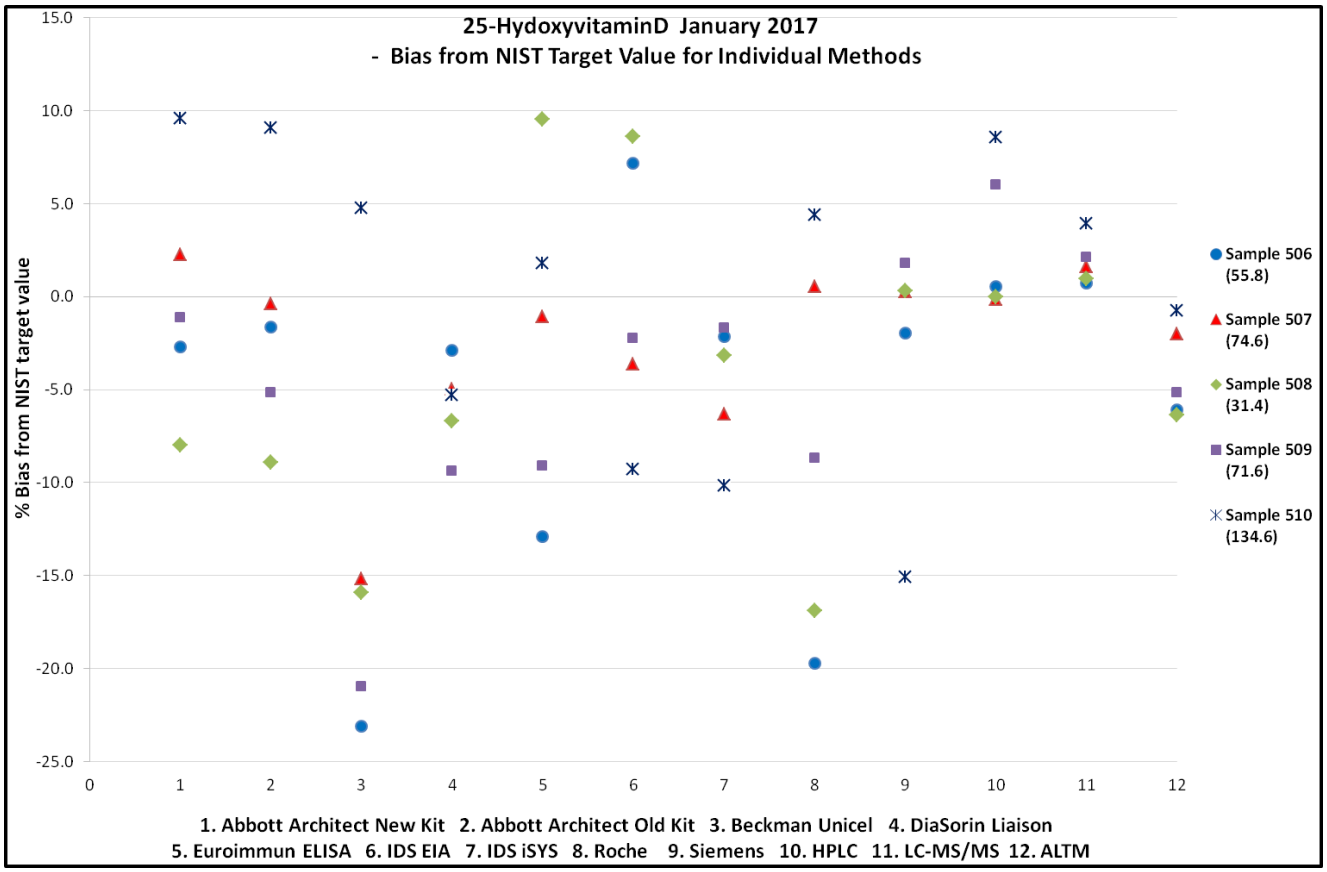
Chart showing inter-sample variability of % bias from the target value



Sample numbers with target values in nmol/L in parenthesis

Sample 510

Sample 510 contained a high concentration of 25-OHD (NIST assigned value 134.6 nmol/L) and, with the exception of the Siemens assay which was negatively biased (-15.1%), the other major ligand binding assays were within 10% of the Target Value.

Samples with high levels of 25-OHD generally contain relatively high concentrations of 24,25(OH)2D. Since this metabolite cross reacts strongly in many ligand binding assays, its presence may contribute to any observed positive bias.

Similarly, the level of 3-epi-25-OHD3 was high in sample 510 (12.1 nmol/L) and will have contributed to the total 25-OHD in those HPLC/UV and LC-MS/MS assays unable to resolve the two metabolites. Immunoassays do not cross react with the 3-epimer.

24,25-dihydroxyvitamin D results for samples 506 - 510

DEQAS Lab No.	Method	Sample 506 24,25OH-D3 nmol/L	Sample 507 24,25OH-D3 nmol/L	Sample 508 24,25OH-D3 nmol/L	Sample 509 24,25OH-D3 nmol/L	Sample 510 24,25OH-D3 nmol/L
52	LC-MS/MS	3.3	4.4	1.3	4.3	9.9
112	LC-MS/MS	3.5	5.5	1.1	4.8	9.7
528	LC-MS/MS	5.0	6.7	1.9	7.4	17.8
1455	LC-MS/MS	4.4	5.8	2.0	5.5	13.6
1479	LC-MS/MS	4.1	6.9	2.3	5.1	18.6
1864	LC-MS/MS	2.0	3.8	<1	3.4	7.5
1920	LC-MS/MS	3.2	5.0	1.4	5.3	11.3
2123	LC-MS/MS	3.9	5.5	1.5	5.4	12.6
2211	LC-MS/MS	2.6	4.0	1.1	4.2	11.9
Median		3.5	5.5	1.4	5.1	11.9
Mean		3.6	5.3	1.6	5.0	12.5
SD		0.92	1.10	0.44	1.12	3.67
CV%		25.8	20.8	28.1	22.1	29.3
n		9	9	8	9	9

Comment:

The statistics were calculated on untrimmed data. Clearly, with such a small number of results the summary statistics are very unreliable.

This data is for information purposes only.

Free 25-hydroxyvitamin D results for samples 506 - 510 in pmol/L

DEQAS Lab No.	Method	Sample 506	Sample 507	Sample 508	Sample 509	Sample 510
368	DIASource ELISA	14	20	5	17	40
2215	In-house ELISA	12.3	17.0	7.0	15.0	36.3

Comment:

This data is for information purposes only.