NOTES TO ACCOMPANY THE OCTOBER 2017 1,25-DIHYDROXYVITAMIN D REPORT

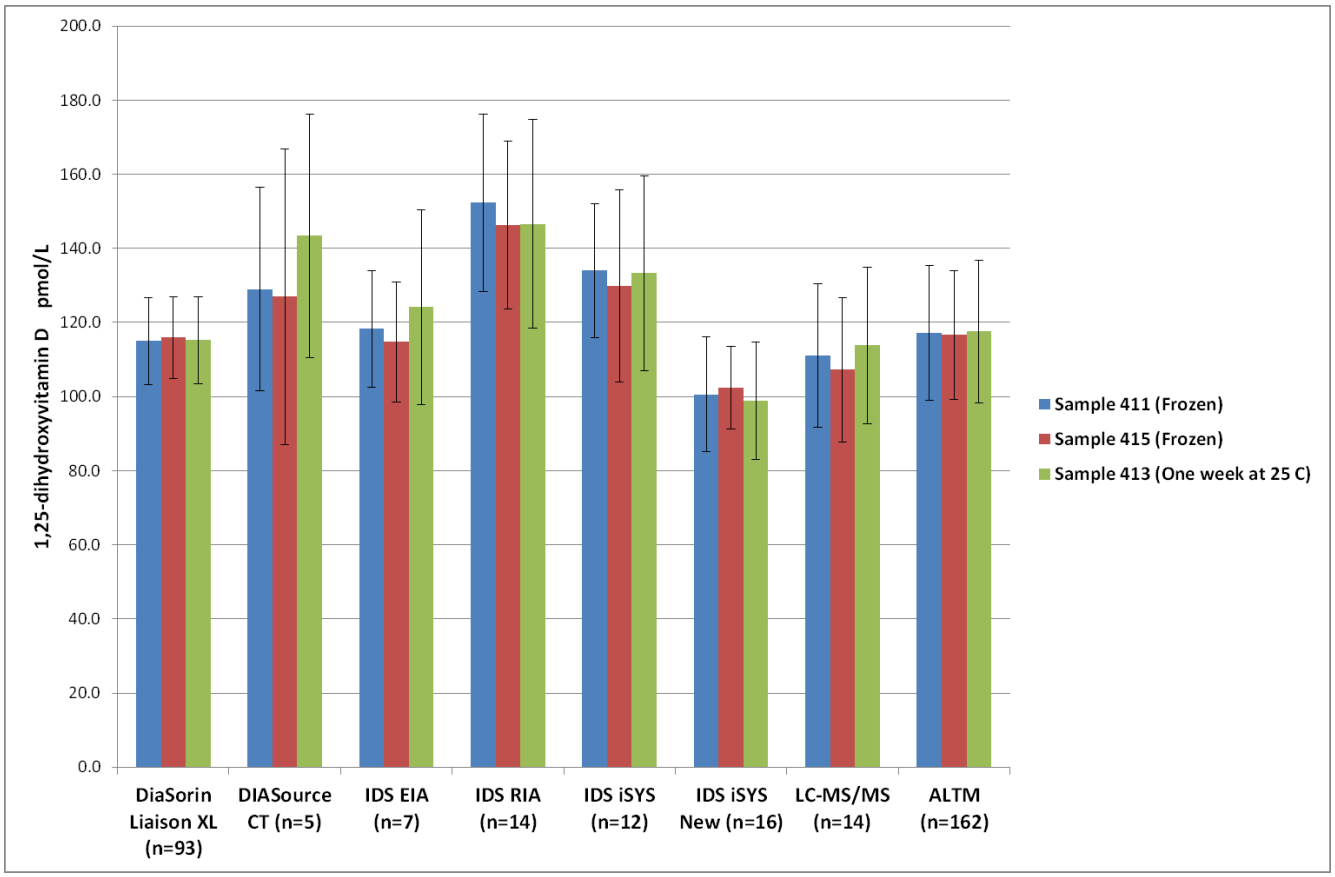
STABILITY of 1,25-DIHYDROXYVITAMIN D

Sample numbers 411, 413 and 415 were prepared from the same pool of serum. Sample numbers 411 and 415 were frozen immediately after preparation and sample 413 was incubated for one week at 25°C before freezing at -40°C. All the samples were then kept frozen until the day of dispatch.

The histogram and table of results below show the mean results for each of the samples for each method where 5 or more results have been returned.

Histogram comparing the 1,25-dihydroxyvitamin D results for samples 411, 413 and 415

Method means ± 1 SD



Method	Sample 411 Method Mean (pmol/L)	Sample 415 Method Mean (pmol/L)	Mean of method means for 411 & 415	% Difference of 415 from 411	Sample 413 Method Mean (pmol/L)	% Difference
DiaSorin Liaison XL (n=93)	115.0	115.9	**115.5**	0.8	**115.2**	-0.2
DIASource CT (n=5)	129.0	127.0	**128.0**	-1.6	**143.4**	12.0
IDS EIA (n=7)	118.3	114.8	**116.6**	-3.0	**124.2**	6.6
IDS RIA (n=14)	152.3	146.3	**149.3**	-3.9	**146.6**	-1.8
IDS iSYS (n=12)	134.0	129.9	**132.0**	-3.1	**133.3**	1.0
IDS iSYS New (n=16)	100.6	102.4	**101.5**	1.8	**98.9**	-2.6
LC-MS/MS (n=14)	111.1	107.3	**109.2**	-3.4	**113.8**	4.2
ALTM (n=162)	117.2	116.6	**116.9**	-0.5	**117.6**	0.6

Comment:

1. Comparison of the results for the sample 413 (incubated at 25^{o}C for one week) with the mean of the method means for samples 411 and 415 (frozen immediately after preparation) showed both positive and negative changes ranging from -3.0% to +12%. Apart from the DiaSorce CT and IDS EIA method groups, all other method means were within ± 5% of the mean result for the frozen samples. There appears to be no significant difference between the mean results of the samples for the DiaSorin Liaison XL method group.

2. The data from method means should be interpreted with caution as they conceal the variation in results that may be seen in individual laboratories.

3. Data for methods where there are a small number of users should be interpreted with caution as the statistics may be unreliable and influenced by spurious results or laboratories reporting in the incorrect units.

   Please note that we email laboratories who we think may have reported their results in pg/ml instead of pmol/L. Please do reply to our emails so that we can amend your results if necessary.