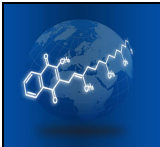


Batch 72 Report - Final

Analysis period: April 2018
Report distribution date: 1st June 2018

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Batch 72 - Final

Vitamin K ₁ (ug/L)							
	Serum A	Serum B	EtOH std				
ALTM	0.84	1.80	3.25				
Standard uncertainty	0.05	0.08	0.22				
	Serum A	Serum B	EtOH std	Z scores			
Group	K ₁ (ug/L)	K ₁ (ug/L)	K ₁ (ug/L)	Group	Serum A	Serum B	EtOH std
9	0.840	2.110	3.430	9	0.0	0.6	0.2
11	0.790	1.990	4.290	11	0.2	0.3	1.1
14	0.710	1.810	2.710	14	0.5	0.0	0.5
16	0.798	1.759	4.467	16	0.2	0.1	1.2
20	0.920	2.050	NA	20	0.3	0.5	
21	1.290	2.700	NA	21	1.8	1.6	
26	0.640	1.560	NA	26	0.8	0.4	
37	0.900	1.620	3.111	37	0.2	0.3	0.1
38	0.757	1.756	NA	38	0.3	0.1	
41	0.640	1.230	2.620	41	0.8	1.0	0.6
42	0.629	1.370	3.010	42	0.8	0.8	0.2
43	0.913	3.608	NA	43	0.3	3.3	
45	0.690	1.490	3.700	45	0.6	0.6	0.5
46	0.740	1.710	NA	46	0.4	0.2	
47	0.640	1.550	2.130	47	0.8	0.5	1.1
48	1.310	2.440	NA	48	1.8	1.2	
49	1.070	2.430	NA	49	0.9	1.2	
51	0.840	1.900	3.100	51	0.0	0.2	0.2
52	0.820	1.860	NA	52	0.1	0.1	
53	0.743	1.697	4.010	53	0.4	0.2	0.8
55	2.570	1.640	2.300	55	6.8	0.3	1.0
56	1.050	2.390	NA	56	0.8	1.1	
57	0.701	1.676	NA	57	0.5	0.2	
59	0.599	1.348	2.585	59	0.9	0.8	0.7
61	0.640	1.570	NA	61	0.8	0.4	
63	0.920	2.460	4.560	63	0.3	1.2	1.3
65	1.550	3.590	NA	65	2.8	3.3	
66	0.730	2.130	3.110	66	0.4	0.6	0.1
67	0.600	1.180	2.570	67	0.9	1.1	0.7
69	1.980	1.000	6.460	69	4.5	1.5	3.3
71	0.540	1.550	2.680	71	1.2	0.5	0.6
72	1.070	2.090	2.890	72	0.9	0.5	0.4
73	0.713	2.240	5.220	73	0.5	0.8	2.0
75	0.618	1.547	2.649	75	0.9	0.5	0.6
76	0.810	1.740	3.100	76	0.1	0.1	0.2
77	1.350	1.610	10.250	77	2.0	0.3	7.1
ALTM	0.84	1.80	3.25				
Median	0.79	1.75	3.10				
SD	0.24	0.40	0.83				
CV (%)	28.8	22.2	25.5				
In-house calibrator mean	0.74	1.70	3.2				
Commercial calibrator mean	1.17	2.26	*				
Fluorescence mean	0.90	1.89	3.16				
LC-MS/MS mean	0.76	1.69	3.35				

Abbreviations and definitions

NA: Not analysed
 ALTM: All Laboratory Trimmed Mean
 BLD: Below Limit of Detection
 * *insufficient data*

Outlier

Traffic Light Z Scores

Z < 2.....Satisfactory-**GREEN**
 2 < Z < 3.....Questionable-**AMBER**
 Z > 3.....Unsatisfactory-**RED**



Batch 72 - Final

Information for participants

Batch contents and homogeneity testing

Batch 72 consisted of two single donor serum samples and one ethanolic standard. KEQAS samples have been evaluated for stability during transit, see www.keqas.com for more details.

Homogeneity was assessed by duplicate measurement of vitamin K1 concentrations in six randomly selected samples in their final manufactured state. One way ANOVA testing indicated that the samples were homogenous. Screening and homogeneity testing of KEQAS EQA material is subcontracted to The Nutristasis Unit, St. Thomas' Hospital, London.

Calculation of target value and criteria for evaluation of performance

The ALTM value is calculated as the mean value of all results received for that batch not including any obvious gross errors or results identified as outliers using Grubbs test. Results from ethanolic standard samples are not used to assess performance. Uncertainty calculated according to ISO13528 indicated that the target value (ALTM) and performance targets used by KEQAS are reliable.

Performance is assessed using the following criteria; outliers are identified using Grubbs test and Z scores are calculated as set out below using the standard deviation of proficiency testing (SDPT) as the target. The SDPT is derived from a rolling window of three years previous data from serum sample results. Current SDPT (expressed as CV) = 30.3%.

$$Z = \frac{(X_i - X)}{SDPT}$$

Z: Z Score, X: ALTM, Xi: Result

Outwith consensus results are defined by Grubbs test and by the Z scoring system. If a result is defined as an outlier by Grubbs test or if a Z score is greater than three then the performance is defined as outwith consensus.

A group is defined as persistently outwith consensus thus; being classified as an outlier by Grubbs test or attaining a Z score greater than three for two consecutive batches or attaining a Z score greater than two for three consecutive batches.

Organisation, planning and design

The operation and implementation of KEQAS was designed according to planning procedures and is authorised by the KEQAS Steering Committee. Viapath Analytics LLP, operating KEQAS, is a UKAS accredited proficiency testing provider No. 8595.

Report verification and authorisation

Reports prepared by David Card - KEQAS Manger
Verified by Parmilla Dhamrait - KEQAS Quality Manager
Authorised by Parmilla Dhamrait - KEQAS Quality Manager

The KEQAS host organisation is Viapath Analytics LLP
KEQAS is a UKNEQAS affiliated EQA scheme



8595

