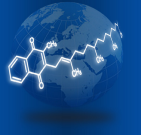


Batch 68 General Report - Final

Analysis period: April 2017
Report distribution date: 1st June 2017

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Batch 68 - Final

Vitamin K ₁ (ug/L)			
	Serum A	Serum B	EtOH std
ALTM	0.96	1.15	-
Standard uncertainty	0.01	0.01	-

Group	Serum A	Serum B	EtOH std	Group	Z scores		
	K ₁ (ug/L)	K ₁ (ug/L)	K ₁ (ug/L)		Serum A	Serum B	EtOH std
3	0.610	0.810	BLD	3	1.0	0.8	
9	0.960	1.040	BLD	9	0.0	0.3	
11	1.060	1.130	NA	11	0.3	0.0	
14	0.760	1.204	BLD	14	0.6	0.1	
16	0.639	0.619	0.012	16	0.9	1.3	
20	0.690	0.930	NA	20	0.8	0.5	
21	1.330	1.430	NA	21	1.1	0.7	
26	0.850	1.170	NA	26	0.3	0.1	
37	1.180	1.370	BLD	37	0.7	0.5	
38	0.882	1.192	NA	38	0.2	0.1	
41	0.980	1.060	BLD	41	0.1	0.2	
42	0.646	0.701	BLD	42	0.9	1.1	
43	1.268	1.693	BLD	43	0.9	1.3	
45	0.840	0.870	BLD	45	0.3	0.7	
47	0.760	0.920	BLD	47	0.6	0.6	
48	1.110	1.370	NA	48	0.5	0.5	
49	1.350	1.280	NA	49	1.2	0.3	
51	0.920	1.200	BLD	51	0.1	0.1	
52	1.200	1.400	NA	52	0.7	0.6	
53	0.658	0.994	BLD	53	0.9	0.4	
56	1.280	1.210	NA	56	1.0	0.2	
57	0.989	1.176	NA	57	0.1	0.1	
59	0.820	1.030	0.510	59	0.4	0.3	
61	1.140	1.330	NA	61	0.5	0.5	
62	0.606	0.850	0.021	62	1.0	0.7	
63	1.180	1.300	0.050	63	0.7	0.4	
65	1.200	1.750	NA	65	0.7	1.5	
66	1.190	1.480	BLD	66	0.7	0.8	
67	0.590	0.730	BLD	67	1.1	1.0	

ALTM	0.96	1.15
Median	0.96	1.18
SD	0.25	0.28
CV (%)	25.8	24.4
In-house calibrator mean	0.88	1.07
Commercial calibrator mean	1.16	1.36
Flourescence mean	0.97	1.16
LC-MS/MS mean	0.93	1.12

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 68 - Final

Information for participants

Batch contents and homogeneity testing

Batch 68 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 results identified as outliers using Grubbs test. Results from ethanolic standard samples are not used to assess performance. Uncertainty analysis carried out 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.

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

Z: Z Score, X: ALTM, X_i: Result

Underperformance is defined by Grubb's test and by the Z scoring system. If a result is defined as an outlier by Grubb's test or if a Z score is greater than three then the performance is defined as poor (single under-performance (SUP)).

Persistent underperformance (PUP) is defined as either: Being classified as an outlier by Grubb's test or attaining a Z score greater than three for two consecutive batches or attaining a Z score between two and three 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. 7586.

Report verification and authorisation

Reports prepared by David Card - KEQAS Manger
Verified by Parmila Dhamrait - KEQAS Deputy Manager
Authorised by David Card - KEQAS Manager

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



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