

EQA round: TE1/24 - Trace Elements

Deadline: 5.3.2024

Setup: groups - M (measurement principle); minimal size of the groups n = 5

RoM = robust average	AV = assigned value	D _{max} = acceptable difference
SD = standard deviation	CVE = consensus of the experts	LL = lower limit
CV = coefficient of variation	U _{AV} = expanded uncertainty of the assigned value (k = 2)	UL = upper limit
N _{tot} = total number of the results		N _{eva} = number of the results assessed
N _{out} = number of the results removed before calculation		N _{suc} = number of successful results
		S _{rel} = relative success

Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					N _{eva}	N _{suc}	S _{rel} [%]	
							AV	U _{AV}	D _{max}	LL	UL				
Set 1 (plasma)															
(360) Co - plasma	[nmol/L]				1							1	1	100	
Sample A1												1	1	100	
Other					1	0						1			
														1x 2	
Sample B1												1	1	100	
Other					1	0						1			
														1x 2	
(357) Cr - plasma	[nmol/L]				1							1	1	100	
Sample A1												1	1	100	
Other					1	0						1			
														1x 2	
Sample B1												1	1	100	
Other					1	0						1			
														1x 2	
(351) Cu - plasma	[µmol/L]				24							24	23	96	
Sample A1		13	1,5	12	24		CVE	13,4	1,1	25%	10	16,8	24	23	96
(2) ET-AAS		13,6	1,3	9,8	5	0							5		
(5) Spectrophotometry		12,5	1,7	13	12	0							12		
Other					7	0							7		
														4x 1, 3x 7	
Sample B1		22,4	2,5	11	24		CVE	22,4	1,6	25%	16,8	28	24	24	100
(2) ET-AAS		23,9	0,74	3,1	5	0							5		
(5) Spectrophotometry		21,1	2,9	13	12	0							12		
Other					7	0							7		
														4x 1, 3x 7	
(359) Mg - plasma	[mmol/L]				5							5	5	100	
Sample A1												5	5	100	
Other					5	0						5			
														1x 1, 4x 5	
Sample B1												5	5	100	
Other					5	0						5			
														1x 1, 4x 5	
(352) Mn - plasma	[nmol/L]				3							3	3	100	
Sample A1												3	3	100	
Other					3	0						3			
														2x 2, 1x 7	
Sample B1												3	3	100	
Other					3	0						3			
														2x 2, 1x 7	
(355) Se - plasma	[µmol/L]				4							4	4	100	
Sample A1												4	4	100	
Other					4	0						4			
														2x 2, 1x 4, 1x 7	
Sample B1												4	4	100	
Other					4	0						4			
														2x 2, 1x 4, 1x 7	
(350) Zn - plasma	[µmol/L]				23							23	22	96	
Sample A1		20	2	10	23		CVE	20,8	1,8	25%	15,6	26	23	22	96
(1) F-AAS		19,2	2,7	14	9	0							9		
(5) Spectrophotometry		20,6	2,4	12	11	0							11		
Other					3	0							3		
														3x 7	
Sample B1		31,4	3,4	11	23		CVE	33	2,4	25%	24,7	41,3	23	22	96
(1) F-AAS		30,8	3,9	13	9	0							9		
(5) Spectrophotometry		31,9	4	13	11	0							11		
Other					3	0							3		
														3x 7	
Set 2 (blood)															
(353) Cd - blood	[nmol/L]				2							2	2	100	
Sample A2												2	2	100	
Other					2	0						2			
														1x 2, 1x 7	

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Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					N _{eva}	N _{suc}	S _{rel} [%]
							AV	U _{AV}	D _{max}	LL	UL			
Sample B2												2	2	100
Other					2	0						2		
(354) Pb - blood	[nmol/L]				4							4	4	100
Sample A2												4	4	100
Other					4	0						4		
Sample B2												4	4	100
Other					4	0						4		
Set 3 (urine)														
(343) Cd - urine	[nmol/L]				2							2	2	100
Sample A3												2	2	100
Other					2	0						2		
Sample B3												2	2	100
Other					2	0						2		
(347) Cr - urine	[nmol/L]				1							1	1	100
Sample A3												1	1	100
Other					1	0						1		
Sample B3												1	1	100
Other					1	0						1		
(341) Cu - urine	[μmol/L]				6							6	4	67
Sample A3												6	4	67
Other					6	0						6		
Sample B3												6	5	83
Other					6	0						6		
(362) I - urine	[μmol/L]				1							1	1	100
Sample A3												1	1	100
Other					1	0						1		
Sample B3												1	1	100
Other					1	0						1		
(342) Mn - urine	[nmol/L]				1							1	1	100
Sample A3												1	1	100
Other					1	0						1		
Sample B3												1	1	100
Other					1	0						1		
(358) Ni - urine	[nmol/L]				1							1	1	100
Sample A3												1	1	100
Other					1	0						1		
Sample B3												1	1	100
Other					1	0						1		
(344) Pb - urine	[nmol/L]				2							2	1	50
Sample A3												2	1	50
Other					2	0						2		
Sample B3												2	2	100
Other					2	0						2		
(340) Zn - urine	[μmol/L]				3							3	2	67
Sample A3												3	2	67
Other					3	1						3		
Sample B3												3	3	100
Other					3	0						3		