

Summary statistics - quantitative results

(Groups: measurement principle)

Filter: minimal size of groups n = 5

EQA round: AM1/18 - Basic Clinical Chemistry - Urine

Dead line: 13.04.2018

RoM = robust average	AV = assigned value	Dmax = acceptable percent difference
SD = standard deviation	CRV = certified reference value	LL = lower limit
CV = coefficient of variation	RV = reference value	UL = upper limit
Ntot = total number of participants	CVE = consensus value from experts	Neva = number of evaluated participants
Nout = number of results excluded before calculation	CVP = consensus value from all participants	Nsuc = number of successful participants
	CVPG = consensus value from participants groups	Srel = success (relative)
	U _{AV} = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability										Traceability										
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(61) Sodium					256							256	254	99%								0
Samples and groups	[mmol/L]																					
Sample A		77,4	1,5	1,9	256		CVP	77,4	0,22	11%	68,8	86	256	255	100%							0
(2) Indirect ISE		77,5	1,4	1,8	240	0							240									
(3) Direct ISE		76,0	1,9	2,5	16	0							16									
Sample B		173	2,3	1,4	256		CVP	173	0,36	11%	153	193	256	255	100%							0
(2) Indirect ISE		173	2,2	1,3	240	0							240									
(3) Direct ISE		169	6,0	3,6	16	0							16									
(62) Potassium					256								256	253	99%							0
Samples and groups	[mmol/L]																					
Sample A		30,6	0,83	2,7	256		CVP	30,6	0,13	15%	26	35,2	256	255	100%							0
(2) Indirect ISE		30,6	0,81	2,6	240	0							240									
(3) Direct ISE		30,2	1,2	4,0	16	0							16									
Sample B		69,0	2,2	3,2	256		CVP	69	0,34	15%	58,6	79,4	256	254	99%							0
(2) Indirect ISE		69,0	2,2	3,1	240	0							240									
(3) Direct ISE		67,5	3,9	5,7	16	0							16									
(63) Chloride					254								254	252	99%							0
Samples and groups	[mmol/L]																					
Sample A		96,8	3,8	3,9	254		CVP	96,8	0,59	14%	83,2	111	254	253	100%							0
(3) Indirect ISE		96,9	3,8	3,9	237	0							237									
(4) Direct ISE		96,3	3,6	3,7	15	0							15									
Other					2	0							2									
							2x 2															
Sample B		183	4,0	2,2	254		CVP	183	0,62	14%	157	209	254	253	100%							0
(3) Indirect ISE		183	3,9	2,1	237	0							237									
(4) Direct ISE		183	5,8	3,2	15	0							15									
Other					2	0							2									
							2x 2															
(64) Calcium					258								258	256	99%							0
Samples and groups	[mmol/L]																					
Sample A		1,62	0,06	3,7	258		CVP	1,62	0,092	18%	1,32	1,92	258	256	99%							0
(2) Phot. with o-cresol.		1,61	0,07	4,5	36	0							36									
(3) Phot. with arsenazo		1,61	0,06	3,8	142	0							142									
(4) Complex Ca-NM-BAPTA		1,64	0,04	2,8	69	0							69									
(6) ISE		1,60	0,05	3,7	9	0							9									
Other					2	0							2									
							2x 1															
Sample B		2,39	0,08	3,7	258		CVP	2,39	0,013	18%	1,95	2,83	258	257	100%							0
(2) Phot. with o-cresol.		2,40	0,07	2,9	36	0							36									
(3) Phot. with arsenazo		2,38	0,10	4,4	142	0							142									

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		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	
(64) Calcium					258		258	256	99%														0
Samples and groups	[mmol/L]																						
Sample B		2,39	0,08	3,7	258	CVP	2,39	0,013	18%	1,95	2,83	258	257	100%									0
(4) Complex Ca-NM-BAPTA		2,41	0,05	2,3	69	0						69											
(6) ISE		2,35	0,03	1,6	9	0						9											
Other					2	0						2											
						2x 1																	
(73) Magnesium					218		218	211	97%														0
Samples and groups	[mmol/L]																						
Sample A		1,66	0,08	5,2	218	CVP	1,66	0,014	20%	1,32	2	218	212	97%									0
(2) Photometry with coloured dyes		1,66	0,09	5,4	187	0						187											
(4) Enzymatic UV method		1,67	0,04	3,0	28	0						28											
Other					3	0						3											
						3x 1																	
Sample B		3,75	0,16	4,3	218	CVP	3,75	0,027	20%	3	4,5	218	215	99%									0
(2) Photometry with coloured dyes		3,75	0,16	4,4	187	0						187											
(4) Enzymatic UV method		3,80	0,13	3,3	28	0						28											
Other					3	0						3											
						3x 1																	
(65) Inorganic phosphate					252		252	250	99%														0
Samples and groups	[mmol/L]																						
Sample A		8,42	0,38	4,5	252	CVP	8,42	0,059	18%	6,9	9,94	252	251	100%									0
(1) UV-molybdate method		8,42	0,38	4,5	243	0						243											
(3) Molybdate-vanadate		8,22	0,17	2,1	5	0						5											
Other					4	0						4											
						4x 2																	
Sample B		16,8	0,66	3,9	252	CVP	16,8	0,10	18%	13,7	19,9	252	251	100%									0
(1) UV-molybdate method		16,8	0,65	3,9	243	0						243											
(3) Molybdate-vanadate		16,6	0,30	1,8	5	0						5											
Other					4	0						4											
						4x 2																	
(66) Osmolality					123		123	118	96%														0
Samples and groups	[mmol/kg]																						
Sample A		433	4,2	0,98	123	CVP	433	0,93	4%	415	451	123	118	96%									0
(1) Osmometer		433	4,1	0,94	121	0						121											
Other					2	0						2											
						2x 99																	
Sample B		792	7,8	0,98	123	CVP	792	1,7	4%	760	824	123	121	98%									0
(1) Osmometer		792	7,5	0,95	121	0						121											
Other					2	0						2											
						2x 99																	
(67) Urea					251		251	248	99%														0
Samples and groups	[mmol/L]																						
Sample A		147	7,1	4,8	251	CVP	147	1,1	17%	122	172	251	249	99%									0
(1) UV enzymatic m.(GMD)		147	7,1	4,8	243	0						243											
Other					8	1						8											
						1x 0, 4x 2, 3x 5																	
Sample B		249	11	4,4	251	CVP	249	1,7	17%	206	292	251	248	99%									0

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(67) Urea					251							251	248	99%							0				
— Samples and groups —	[mmol/L]																								
Sample B		249	11	4,4	251		CVP	249	1,7	17%	206	292		251	248	99%								0	
(1) UV enzymatic m. (GMD)		249	11	4,4	243	0								243											
Other					8	1								8											
							1x 0, 4x 2, 3x 5																		
(68) Creatinine					264									0							264	259	98%		
— Samples and groups —	[mmol/L]																								
Sample A		5,34	0,24	4,5	264									0		RV	5,32	0,100	21%	4,2	6,44		264	261	99%
(2) Jaffé without depro.		5,31	0,25	4,6	134	0																		134	
(3) Enzyme		5,37	0,22	4,1	129	0																		129	
Other					1	0																		1	
							1x 1																		
Sample B		12,3	0,56	4,6	264									0		RV	12,16	0,41	21%	9,6	14,8		264	260	98%
(2) Jaffé without depro.		12,2	0,58	4,7	134	0																		134	
(3) Enzyme		12,4	0,51	4,1	129	0																		129	
Other					1	0																		1	
							1x 1																		
(69) Uric acid					246									246	245	100%									0
— Samples and groups —	[mmol/L]																								
Sample A		0,575	0,04	7,3	246		CVP	0,575	0,066	23%	0,442	0,708		246	245	100%									0
(2) Enzyme-photomet. m.		0,575	0,04	7,3	245	0								245											
Other					1	0								1											
							1x 1																		
Sample B		1,02	0,05	5,6	246		CVP	1,02	0,089	23%	0,785	1,26		246	246	100%									0
(2) Enzyme-photomet. m.		1,02	0,05	5,6	245	0								245											
Other					1	0								1											
							1x 1																		
(70) Glucose					243									243	236	97%									0
— Samples and groups —	[mmol/L]																								
Sample A		1,44	0,07	4,8	243		CVP	1,44	0,011	22%	1,12	1,76		243	237	98%									0
(1) GOD photometry		1,42	0,08	5,8	53	0								53											
(2) GOD electrochemical		1,46	0,11	7,3	16	0								16											
(3) Method with hexokinase		1,44	0,06	4,3	174	0								174											
Sample B		16,3	0,53	3,3	243		CVP	16,3	0,084	22%	12,7	19,9		243	242	100%									0
(1) GOD photometry		16,4	0,53	3,3	53	0								53											
(2) GOD electrochemical		15,9	0,55	3,5	16	0								16											
(3) Method with hexokinase		16,3	0,53	3,2	174	0								174											
(71) Total protein					232									218	215	99%									0
— Samples and groups —	[g/L]																								
Sample A		0,167	0,02	14	232									218	215	99%									0
(1) Biuret; (58) Beckman Coulter (Olympus)		0,183	0,01	6,9	7	0	CVPG	0,184	0,025	30%	0,128	0,24		7											
(1) Biuret; (60) Roche		0,155	0,00	4,8	6	0	CVPG	0,151	0,025	30%	0,105	0,197		6											
(2) Pyrogallol red; (12) Beckman Coulter		0,193	0,01	6,1	11	0	CVPG	0,193	0,080	30%	0,135	0,251		11											
(2) Pyrogallol red; (49) BioVendor		0,175	0,02	16	6	0	CVPG	0,167	0,039	30%	0,116	0,218		6											
(2) Pyrogallol red; (58) Beckman Coulter (Olympus)		0,184	0,00	4,2	49	0	CVPG	0,184	0,025	30%	0,128	0,24		49											

