

Summary statistics - quantitative results

(Groups: measurement principle)

Filter: minimal size of the groups n = 5

EQA round: AM1/21 - Basic Clinical Chemistry - Urine

Deadline: 09.04.2021

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 the 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					253							253	253	100%									0
Samples and groups	[mmol/L]																						
Sample A		69,3	1,5	2,1	253	CVP	69,3	0,22	11%	61,6	77	253	253	100%									0
(2) Indirect ISE		69,3	1,5	2,1	240	0						240											
(3) Direct ISE		68,9	1,7	2,4	12	0						12											
Other					1	0						1											
Sample B		168	2,7	1,6	253	CVP	168	0,42	11%	149	187	253	253	100%									0
(2) Indirect ISE		168	2,7	1,6	240	0						240											
(3) Direct ISE		166	4,1	2,5	12	0						12											
Other					1	0						1											
(62) Potassium					253							253	252	100%									0
Samples and groups	[mmol/L]																						
Sample A		25,8	0,66	2,6	253	CVP	25,8	0,10	15%	21,9	29,7	253	253	100%									0
(2) Indirect ISE		25,8	0,67	2,6	240	0						240											
(3) Direct ISE		25,6	0,64	2,5	12	0						12											
Other					1	0						1											
Sample B		64,8	2,6	4,0	253	CVP	64,8	0,40	15%	55	74,6	253	252	100%									0
(2) Indirect ISE		64,7	2,6	4,0	240	0						240											
(3) Direct ISE		65,5	3,1	4,7	12	0						12											
Other					1	0						1											
(63) Chloride					252							252	246	98%									0
Samples and groups	[mmol/L]																						
Sample A		69,9	2,9	4,1	252	CVP	69,9	0,44	14%	60,1	79,7	252	247	98%									0
(3) Indirect ISE		69,9	2,8	4,0	239	0						239											
(4) Direct ISE		69,0	5,7	8,3	12	0						12											
Other					1	0						1											
Sample B		195	4,8	2,4	252	CVP	195	0,74	14%	167	223	252	251	100%									0
(3) Indirect ISE		196	4,7	2,4	239	0						239											
(4) Direct ISE		194	8,4	4,3	12	0						12											
Other					1	0						1											
(64) Calcium					255							255	254	100%									0
Samples and groups	[mmol/L]																						
Sample A		2,06	0,10	5,0	255	CVP	2,06	0,016	18%	1,68	2,44	255	254	100%									0
(2) Phot. with o-cresol.		2,09	0,08	3,8	34	0						34											
(3) Phot. with arsenazo		2,03	0,11	5,2	150	0						150											

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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	[mmol/L]				255							255	254	100%									0
Samples and groups																							
Sample A		2,06	0,10	5,0	255	CVP	2,06	0,016	18%	1,68	2,44	255	254	100%									0
(4) Photomet. with NM-BAPTA		2,12	0,05	2,5	66	0						66											
Other					5	0						5											
							2x 6, 3x 99																
Sample B		3,04	0,13	4,4	255	CVP	3,04	0,020	18%	2,49	3,59	255	255	100%									0
(2) Phot. with o-cresol.		3,12	0,09	3,1	34	0						34											
(3) Phot. with arsenazo		3,00	0,14	4,8	150	0						150											
(4) Photomet. with NM-BAPTA		3,10	0,07	2,2	66	0						66											
Other					5	0						5											
							2x 6, 3x 99																
(73) Magnesium	[mmol/L]				218							218	217	100%									0
Samples and groups																							
Sample A		2,60	0,11	4,3	218	CVP	2,6	0,019	20%	2,08	3,12	218	217	100%									0
(2) Photometry with coloured dyes		2,61	0,11	4,2	167	0						167											
(4) Enzymatic UV method		2,59	0,12	4,5	48	0						48											
Other					3	0						3											
							2x 1, 1x 99																
Sample B		4,94	0,18	3,5	218	CVP	4,94	0,029	20%	3,95	5,93	218	218	100%									0
(2) Photometry with coloured dyes		4,95	0,16	3,3	167	0						167											
(4) Enzymatic UV method		4,94	0,20	4,1	48	0						48											
Other					3	0						3											
							2x 1, 1x 99																
(65) Inorganic phosphate	[mmol/L]				246							246	242	98%									0
Samples and groups																							
Sample A		7,17	0,32	4,4	246	CVP	7,17	0,050	18%	5,87	8,47	246	242	98%									0
(1) UV-molybdate method		7,17	0,32	4,4	237	0						237											
(3) Molybdate-vanadate		7,16	0,36	5,0	6	0						6											
Other					3	0						3											
							2x 2, 1x 99																
Sample B		14,2	0,54	3,8	246	CVP	14,2	0,084	18%	11,6	16,8	246	246	100%									0
(1) UV-molybdate method		14,2	0,54	3,8	237	0						237											
(3) Molybdate-vanadate		14,3	0,52	3,6	6	0						6											
Other					3	0						3											
							2x 2, 1x 99																
(66) Osmolality	[mmol/kg]				127							127	125	98%									0
Samples and groups																							
Sample A		337	3,5	1,0	127	CVP	337	0,75	4%	323	351	127	126	99%									0
(1) Osmometer		337	3,4	1,0	126	0						126											
Other					1	0						1											
							1x 99																
Sample B		782	7,1	0,91	127	CVP	782	1,5	4%	750	814	127	125	98%									0
(1) Osmometer		782	7,0	0,90	126	0						126											
Other					1	0						1											
							1x 99																

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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}			
(67) Urea	[mmol/L]				247							247	245	99%									0		
Samples and groups																									
Sample A		139	6,4	4,6	247	CVP	139	0,99	17%	115	163	247	245	99%									0		
(1) UV enzymatic m.(GMD)		139	6,4	4,6	242	0						242													
Other					5	0						5													
						3x 2, 2x 5																			
Sample B		295	13	4,3	247	CVP	295	2,0	17%	244	346	247	246	100%									0		
(1) UV enzymatic m.(GMD)		295	13	4,3	242	0						242													
Other					5	0						5													
						3x 2, 2x 5																			
(68) Creatinine	[mmol/L]				265																		265	265	100%
Samples and groups																									
Sample A		5,95	0,27	4,6	265							0		RV	6,02	0,11	21%	4,75	7,29			265	265	100%	
(1) Jaffe		5,91	0,25	4,3	124	0																			124
(3) Enzyme		5,99	0,29	4,8	140	0																			140
Other					1	0																			1
														1x 99											
Sample B		12,6	0,53	4,2	265							0		RV	12,59	0,17	21%	9,94	15,3			265	265	100%	
(1) Jaffe		12,5	0,45	3,6	124	0																			124
(3) Enzyme		12,7	0,58	4,6	140	0																			140
Other					1	0																			1
														1x 99											
(69) Uric acid	[mmol/L]				243							243	234	96%											0
Samples and groups																									
Sample A		0,325	0,02	9,0	243	CVP	0,325	,0046	23%	0,25	0,4	243	235	97%											0
(2) Enzyme-photomet. m.		0,325	0,02	9,0	243	0						243													
Sample B		0,698	0,04	5,7	243	CVP	0,698	,0062	23%	0,537	0,859	243	241	99%											0
(2) Enzyme-photomet. m.		0,698	0,04	5,7	243	1						243													
(70) Glucose	[mmol/L]				240							240	238	99%											0
Samples and groups																									
Sample A		1,54	0,06	4,0	240	CVP	1,54	,0099	22%	1,2	1,88	240	238	99%											0
(1) GOD photometry		1,55	0,07	4,5	38	0						38													
(2) GOD electrochemical		1,63	0,19	11	8	0						8													
(3) Method with hexokinase		1,54	0,06	3,9	194	0						194													
Sample B		16,4	0,45	2,7	240	CVP	16,4	0,071	22%	12,7	20,1	240	240	100%											0
(1) GOD photometry		16,5	0,51	3,1	38	0						38													
(2) GOD electrochemical		16,3	0,37	2,3	8	0						8													
(3) Method with hexokinase		16,5	0,44	2,7	194	0						194													
(71) Total protein	[g/L]				232							214	192	90%											0
Samples and groups																									
Sample A		0,189	0,07	42	232							214	196	92%											0
(1) Biuret; (58) Beckman Coulter (AU)		0,255	0,02	8,7	8	0	CVPG	0,259	,0037	30%	0,181	0,337	8												
(2) Pyrogallol red; (58) Beckman Coulter (AU)		0,259	0,00	3,6	39	0	CVPG	0,259	,0037	30%	0,181	0,337	39												
(2) Pyrogallol red; (60) Roche		0,121	0,02	21	5	0	CVPG	0,106	,0037	30%	0,074	0,138	5												
(2) Pyrogallol red; (162) Siemens (Atellica)		0,194	0,03	19	12	0	CVPG	0,198	0,024	30%	0,138	0,258	12												

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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}	
(71) Total protein	[g/L]				232							214	192	90%									0
Samples and groups																							
Sample A		0,189	0,07	42	232							214	196	92%								0	
(2) Pyrogallol red; (179) Siemens		0,148	0,06	45	13	0	CVPG	0,151	0,043	30%	0,105	0,197										13	
(4) Turbidimetry; (1) Abbott		0,242	0,01	5,5	47	0	CVPG	0,243	,0047	30%	0,17	0,316										47	
(4) Turbidimetry; (60) Roche		0,106	0,01	12	66	0	CVPG	0,106	,0037	30%	0,074	0,138										66	
(4) Turbidimetry; (77) Skalab		0,120	0,03	25	6	0	CVPG	0,135	0,050	30%	0,094	0,176										6	
Other					36	0																18	
3x 1/1, 2x 1/12, 3x 1/60, 1x 1/178, 1x 2/1, 4x 2/12, 1x 2/46, 4x 2/49, 3x 2/75, 4x 2/149, 3x 2/158, 2x 2/178, 1x 3/60, 1x 3/77, 1x 3/179, 1x 4/58, 1x 4/162																							
Sample B		0,679	0,14	21	232							214	198	93%								0	
(1) Biuret; (58) Beckman Coulter (AU)		0,774	0,04	5,5	8	0	CVPG	0,776	,0093	30%	0,543	1,01										8	
(2) Pyrogallol red; (58) Beckman Coulter (AU)		0,774	0,02	2,9	39	0	CVPG	0,776	,0093	30%	0,543	1,01										39	
(2) Pyrogallol red; (60) Roche		0,575	0,05	9,2	5	0	CVPG	0,538	0,013	30%	0,376	0,7										5	
(2) Pyrogallol red; (162) Siemens (Atellica)		0,703	0,05	7,3	12	0	CVPG	0,709	0,034	30%	0,496	0,922										12	
(2) Pyrogallol red; (179) Siemens		0,494	0,23	46	13	0	CVPG	0,506	0,15	30%	0,354	0,658										13	
(4) Turbidimetry; (1) Abbott		0,812	0,02	3,5	47	0	CVPG	0,813	,0094	30%	0,569	1,06										47	
(4) Turbidimetry; (60) Roche		0,537	0,04	8,2	66	0	CVPG	0,538	0,013	30%	0,376	0,7										66	
(4) Turbidimetry; (77) Skalab		0,630	0,05	9,4	6	0	CVPG	0,63	0,058	30%	0,441	0,819										6	
Other					36	0																18	
3x 1/1, 2x 1/12, 3x 1/60, 1x 1/178, 1x 2/1, 4x 2/12, 1x 2/46, 4x 2/49, 3x 2/75, 4x 2/149, 3x 2/158, 2x 2/178, 1x 3/60, 1x 3/77, 1x 3/179, 1x 4/58, 1x 4/162																							
(72) pH	[-]				25							25	24	96%								0	
Samples and groups																							
Sample A		6,75	0,09	1,4	25		CVP	6,75	0,046	5%	6,41	7,09										0	
(1) Glass electrode		6,75	0,09	1,4	25	0																25	
Sample B		6,71	0,08	1,2	25		CVP	6,71	0,039	5%	6,37	7,05										0	
(1) Glass electrode		6,71	0,08	1,2	25	0																25	

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End of report

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