

## Summary statistics - quantitative results

(Groups: measurement principle)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: AKS4/18 - Basic Clinical Chemistry - Serum

Dead line: 12.10.2018

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 <sub>AV</sub> = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability										Traceability										
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>
<b>(1) Sodium</b>	[mmol/L]				63							63	60	95%								0
Samples and groups																						
<b>Sample A</b>		133	2,1	1,6	63		CVP	133	0,27	4%	127	139	63	61	97%							0
(2) Indirect ISE		132	1,8	1,4	52	0							52									
(3) Direct ISE		135	3,5	2,6	11	0							11									
<b>Sample B</b>		136	2,4	1,8	63		CVP	136	0,26	4%	130	142	63	62	98%							0
(2) Indirect ISE		135	2,3	1,7	52	0							52									
(3) Direct ISE		136	3,2	2,4	11	0							11									
<b>(2) Potassium</b>	[mmol/L]				63								63	62	98%							0
Samples and groups																						
<b>Sample A</b>		5,80	0,13	2,2	63		CVP	5,82	0,017	6%	5,47	6,17	63	62	98%							0
(2) Indirect ISE		5,78	0,10	1,8	52	0							52									
(3) Direct ISE		5,95	0,19	3,2	11	0							11									
<b>Sample B</b>		6,84	0,14	2,1	63		CVP	6,86	0,018	6%	6,44	7,28	63	62	98%							0
(2) Indirect ISE		6,81	0,13	1,9	52	0							52									
(3) Direct ISE		6,97	0,19	2,7	11	0							11									
<b>(3) Chloride</b>	[mmol/L]				63								63	62	98%							0
Samples and groups																						
<b>Sample A</b>		114	2,3	2,0	63		CVP	114	0,37	7%	106	122	63	62	98%							0
(3) Indirect ISE		114	2,1	1,8	52	0							52									
(4) Direct ISE		114	3,0	2,6	11	0							11									
<b>Sample B</b>		121	2,3	1,9	63		CVP	122	0,36	7%	113	131	63	63	100%							0
(3) Indirect ISE		121	2,0	1,6	52	0							52									
(4) Direct ISE		120	3,7	3,1	11	0							11									
<b>(4) Calcium</b>	[mmol/L]				59								59	59	100%							0
Samples and groups																						
<b>Sample A</b>		2,80	0,05	2,0	59		CVP	2,8	,0079	7%	2,6	3	59	59	100%							0
(2) Phot. with o-cresolftalexon		2,79	0,06	2,4	9	0							9									
(3) Photom. with arsenazo III		2,81	0,06	2,1	33	0							33									
(4) Complex Ca-NM-BAPTA		2,79	0,03	1,3	17	0							17									
<b>Sample B</b>		2,97	0,06	2,2	59		CVP	2,98	,0083	7%	2,77	3,19	59	59	100%							0
(2) Phot. with o-cresolftalexon		2,97	0,08	3,0	9	0							9									
(3) Photom. with arsenazo III		2,96	0,07	2,5	33	0							33									
(4) Complex Ca-NM-BAPTA		2,99	0,05	1,8	17	0							17									
<b>(5) Inorganic phosphate</b>	[mmol/L]				59								59	56	95%							0
Samples and groups																						
<b>Sample A</b>		1,34	0,04	3,1	59		CVP	1,34	,0058	10%	1,2	1,48	59	57	97%							0
(1) UV-molybdate method		1,34	0,04	3,1	58	0							58									

## Summary statistics - quantitative results

(Groups: measurement principle)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: AKS4/18 - Basic Clinical Chemistry - Serum

Dead line: 12.10.2018

Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(5) Inorganic phosphate</b>	[mmol/L]				59							59	56	95%									0
Samples and groups																							
<b>Sample A</b>		1,34	0,04	3,1	59		CVP	1,34	0,058	10%	1,2	1,48		59	57	97%							0
Other					1	0							1										
							1x 3																
<b>Sample B</b>		1,73	0,03	2,2	59		CVP	1,73	0,065	10%	1,55	1,91		59	57	97%							0
(1) UV-molybdate method		1,73	0,03	2,2	58	0								58									
Other					1	0							1										
							1x 3																
<b>(6) Iron</b>	[µmol/L]				55									55	55	100%							0
Samples and groups																							
<b>Sample A</b>		42,2	0,94	2,2	55		CVP	42,4	0,14	15%	36	48,8		55	55	100%							0
(2) Method with ferrozine/ferene		42,4	1,0	2,4	39	0								39									
(4) Method with TPTZ		41,7	1,1	2,7	16	0								16									
<b>Sample B</b>		32,4	0,96	3,0	55		CVP	32,6	0,12	15%	27,7	37,5		55	55	100%							0
(2) Method with ferrozine/ferene		32,6	0,94	2,9	39	0								39									
(4) Method with TPTZ		32,0	0,90	2,8	16	0								16									
<b>(7) Magnesium</b>	[mmol/L]				57									57	54	95%							0
Samples and groups																							
<b>Sample A</b>		1,61	0,05	3,4	57		CVP	1,61	0,062	11%	1,43	1,79		57	55	96%							0
(2) Photometry		1,61	0,05	3,3	55	0								55									
Other					2	0							2										
							2x 4																
<b>Sample B</b>		1,88	0,06	3,6	57		CVP	1,89	0,081	11%	1,68	2,1		57	55	96%							0
(2) Photometry		1,88	0,06	3,5	55	0								55									
Other					2	0							2										
							2x 4																
<b>(8) Lithium</b>	[mmol/L]				7									7	7	100%							0
Samples and groups																							
<b>Sample A</b>		1,25	0,06	5,4	7		CVP	1,23	0,021	12%	1,08	1,38		7	7	100%							0
Other					7	0							7										
							3x 3, 4x 4																
<b>Sample B</b>		0,780	0,04	5,7	7		CVP	0,768	0,017	12%	0,675	0,861		7	7	100%							0
Other					7	0							7										
							3x 3, 4x 4																
<b>(9) Total protein</b>	[g/L]				63									0							63	58	92%
Samples and groups																							
<b>Sample A</b>		85,4	2,3	2,6	63									0		CRV	86,11	1,0	9%	78,3	93,9		63 62 98%
(1) Biuret		85,4	2,3	2,6	63	0																	63
<b>Sample B</b>		68,9	2,1	3,1	63									0		CRV	69,46	0,82	9%	63,2	75,8		63 58 92%
(1) Biuret		68,9	2,1	3,1	63	0																	63
<b>(10) Albumin</b>	[g/L]				61									61	61	100%							0
Samples and groups																							
<b>Sample A</b>		54,2	1,7	3,1	61		CVP	54,8	0,22	10%	49,3	60,3		61	61	100%							0
(1) BCG		54,2	1,6	2,9	57	0								57									
Other					4	0							4										
							4x 2																
<b>Sample B</b>		44,5	1,7	3,7	61		CVP	45	0,20	10%	40,5	49,5		61	61	100%							0



## Summary statistics - quantitative results

(Groups: measurement principle)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: AKS4/18 - Basic Clinical Chemistry - Serum

Dead line: 12.10.2018

Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(15) Cholesterol</b>					61							2	2	100%							59	58	98%
Samples and groups	[mmol/L]																						
<b>Sample B</b>		3,91	0,17	4,3	61							2	2	100%							59	58	98%
Other					3	0						2									1		
						2x 1/149																	
<b>(16) Glucose</b>					66							0									66	64	97%
Samples and groups	[mmol/L]																						
<b>Sample A</b>		5,64	0,19	3,4	66							0		CRV	5,467	0,055	asym.	5,02	6,02		66	64	97%
(1) GOD photometry		5,73	0,23	3,9	27	0															27		
(3) Method with hexokinase		5,58	0,12	2,2	39	0															39		
<b>Sample B</b>		11,6	0,32	2,7	66							0		CRV	11,32	0,11	asym.	10,4	12,5		66	65	98%
(1) GOD photometry		11,7	0,41	3,5	27	0															27		
(3) Method with hexokinase		11,6	0,24	2,1	39	0															39		
<b>(17) Uric acid</b>					62							0									62	61	98%
Samples and groups	[µmol/L]																						
<b>Sample A</b>		620	13	2,1	62							0		CRV	612	6,1	12%	538	686		62	62	100%
(2) Enzyme-photomet. m.		620	13	2,1	62	0															62		
<b>Sample B</b>		369	11	3,1	62							0		CRV	361,2	3,6	12%	317	405		62	61	98%
(2) Enzyme-photomet. m.		369	11	3,1	62	0															62		
<b>(18) Urea</b>					66							0									66	64	97%
Samples and groups	[mmol/L]																						
<b>Sample A</b>		15,1	0,64	4,2	66							0		CRV	15,3	0,15	15%	13	17,6		66	65	98%
(1) UV enzymatic m.(GMD)		15,1	0,65	4,3	65	0															65		
Other					1	0															1		
<b>Sample B</b>		19,8	0,79	4,0	66							0		CRV	19,92	0,20	15%	16,9	23		66	64	97%
(1) UV enzymatic m.(GMD)		19,8	0,80	4,1	65	0															65		
Other					1	0															1		
<b>(19) Creatinine</b>					65							0									65	57	88%
Samples and groups	[µmol/L]																						
<b>Sample A</b>		153	11	7,0	65							0		CRV	146,6	1,7	13%	127	166		65	58	89%
(2) Jaffé without depro. (with corr.)		156	11	7,3	41	0															41		
(3) Enzyme		147	3,8	2,6	20	0															20		
Other					4	0															4		
<b>Sample B</b>		345	12	3,5	65							0		CRV	343,3	3,4	13%	298	388		65	64	98%
(2) Jaffé without depro. (with corr.)		344	14	3,9	41	0															41		
(3) Enzyme		346	9,9	2,9	20	0															20		
Other					4	0															4		
<b>(20) Triglycerides</b>					61							0									61	55	90%
Samples and groups	[mmol/L]																						
<b>Sample A</b>		1,32	0,04	3,6	61							0		CRV	1,318	0,013	15%	1,12	1,52		61	60	98%
(1) Photometric enzyme (GPO-PAP)		1,32	0,04	3,4	59	0															59		



## Summary statistics - quantitative results

(Groups: measurement principle)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: AKS4/18 - Basic Clinical Chemistry - Serum

Dead line: 12.10.2018

Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(26) CK</b>					59							0									59	57	97%
Samples and groups	[µkat/L]																						
<b>Sample B</b>		8,44	0,54	6,4	59							0		CRV	8,555	0,098	20%	6,84	10,3	59	58	98%	
(1) IFCC method		8,44	0,54	6,4	59	0															59		
<b>(27) gamma-GT</b>					64							0									64	64	100%
Samples and groups	[µkat/L]																						
<b>Sample A</b>		2,11	0,06	3,1	64							0		CRV	2,175	,0080	15%	1,84	2,51	64	64	100%	
(1) IFCC method		2,11	0,06	3,1	64	0															64		
<b>Sample B</b>		3,11	0,10	3,3	64							0		CRV	3,176	,0080	15%	2,69	3,66	64	64	100%	
(1) IFCC method		3,11	0,10	3,3	64	0															64		
<b>(28) LD</b>					48							0									48	46	96%
Samples and groups	[µkat/L]																						
<b>Sample A</b>		7,54	0,20	2,6	48							0		CRV	7,378	0,033	18%	6,05	8,71	48	47	98%	
(3) IFCC method		7,54	0,20	2,6	48	0															48		
<b>Sample B</b>		4,35	0,17	3,9	48							0		CRV	4,343	0,023	18%	3,56	5,13	48	46	96%	
(3) IFCC method		4,35	0,17	3,9	48	0															48		
<b>(29) Lipase</b>					26							22	22	100%									0
Samples and groups	[µkat/L]																						
<b>Sample A</b>		1,67	0,26	15	26							22	22	100%									0
(0) Not specified; (58) Beckman Coulter (Olympus)		1,86	0,07	4,0	10	0	CVPG	1,81	0,026	24%	1,37	2,25	10										
(0) Not specified; (60) Roche		1,56	0,17	11	11	0	CVPG	1,62	0,050	24%	1,23	2,01	11										
Other					5	0						1											
<b>Sample B</b>		2,20	0,37	17	26							22	22	100%									0
(0) Not specified; (58) Beckman Coulter (Olympus)		2,45	0,08	3,3	10	0	CVPG	2,42	0,031	24%	1,83	3,01	10										
(0) Not specified; (60) Roche		2,04	0,26	13	11	0	CVPG	2,11	0,077	24%	1,6	2,62	11										
Other					5	0						1											
<b>(30) Cholinesterase</b>					25							25	24	96%									0
Samples and groups	[µkat/L]																						
<b>Sample A</b>		170	6,2	3,6	25							25	24	96%									0
(1) ECCLS method 37°C		170	6,2	3,6	25	0	CVP	172	1,5	12%	151	193	25										
<b>Sample B</b>		138	4,7	3,4	25							25	24	96%									0
(1) ECCLS method 37°C		138	4,7	3,4	25	1	CVP	140	1,1	12%	123	157	25										
<b>(31) Albumin (elpho)</b>					14							14	14	100%									0
Samples and groups	[-]																						
<b>Sample A</b>		0,610	0,02	4,3	14		CVP	0,624	0,014	15%	0,53	0,718	14	14	100%								0
(0) Not specified		0,610	0,02	4,3	14	0							14										
<b>Sample B</b>		0,625	0,03	5,3	14		CVP	0,636	0,012	15%	0,54	0,732	14	14	100%								0
(0) Not specified		0,625	0,03	5,3	14	0							14										
<b>(32) gamma-globuline (elpho)</b>					14							14	14	100%									0
Samples and groups	[-]																						
<b>Sample A</b>		0,139	0,00	6,0	14		CVP	0,131	,0050	30%	0,091	0,171	14	14	100%								0

## Summary statistics - quantitative results

(Groups: measurement principle)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: AKS4/18 - Basic Clinical Chemistry - Serum

Dead line: 12.10.2018

Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(32) gamma-globuline (elpho)</b>					14							14	14	100%									0
Samples and groups	[-]																						
<b>Sample A</b>		0,139	0,00	6,0	14	CVP	0,131	0,050	30%	0,091	0,171	14	14	100%									0
(0) Not specified		0,139	0,00	6,0	14							14											
<b>Sample B</b>		0,134	0,01	10	14	CVP	0,127	0,041	30%	0,088	0,166	14	14	100%									0
(0) Not specified		0,134	0,01	10	14							14											
<b>(35) alpha-amylase pancreatic</b>					11							11	11	100%									0
Samples and groups	[µkat/L]																						
<b>Sample A</b>		7,30	0,12	1,7	11	CVP	7,35	0,067	10%	6,61	8,09	11	11	100%									0
(1) With IFCC calibration		7,30	0,12	1,7	11							11											
<b>Sample B</b>		4,30	0,09	2,1	11	CVP	4,34	0,043	10%	3,9	4,78	11	11	100%									0
(1) With IFCC calibration		4,30	0,09	2,1	11							11											
<b>(36) Calcium ionised</b>					7							7	6	86%									0
Samples and groups	[mmol/L]																						
<b>Sample A</b>		1,65	0,09	5,9	7	CVP	1,66	0,019	10%	1,49	1,83	7	6	86%									0
(2) Direct ISE		1,67	0,06	4,1	6							6											
Other					1							1											
<b>Sample B</b>		1,78	0,10	5,8	7	CVP	1,83	0,022	10%	1,64	2,02	7	6	86%									0
(2) Direct ISE		1,81	0,06	3,7	6							6											
Other					1							1											

st\_kn\_np

End of report

Printed: 19.10.2018