

Summary statistics - quantitative results

(Groups: system)

Filter: minimal size of the groups n = 5

EQA round: ABR3/21 - Acid-base Status and Electrolytes

Deadline: 26.11.2021

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							
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(131) pH					368							368	357	97%
----- Samples and groups -----	----- [-] -----													
Sample A		7,42	0,0140	1,9	368	CVP	7,42	,0018	0,8%	7,36	7,48	368	360	98%
(405) Siemens Rapidlab 348		7,44	0,0090	1,3	9	0						9		
(410) Siemens Rapidlab (series 1200)		7,44	0,0110	1,5	6	0						6		
(411) IL GEM (all types)		7,47	0,0120	1,6	27	0						27		
(416) Nova Stat Profile CCX, pHox Ultra		7,43	0,0020	0,3	20	0						20		
(433) Radiometer ABL (series 700 and 800)		7,41	0,0050	0,7	138	0						138		
(449) Roche OMNI S1-6 / cobas b221		7,42	0,0060	0,8	46	0						46		
(451) Radiometer ABL 80		7,45	0,0190	2,6	10	0						10		
(452) Radiometer ABL 90		7,42	0,0030	0,4	59	0						59		
(454) Siemens RapidPoint (series 400, 500)		7,43	0,0050	0,7	20	0						20		
(999) another system		7,47	0,0170	2,3	14	0						14		
Other					19	0						19		
							2x 0, 1x 404, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450					368	363	99%
Sample B		7,33	0,0120	1,7	368	CVP	7,33	,0015	0,8%	7,27	7,39	368	363	99%
(405) Siemens Rapidlab 348		7,35	0,0070	1,0	9	0						9		
(410) Siemens Rapidlab (series 1200)		7,35	0,0070	1,0	6	0						6		
(411) IL GEM (all types)		7,35	0,0130	1,7	27	0						27		
(416) Nova Stat Profile CCX, pHox Ultra		7,34	0,0020	0,3	20	0						20		
(433) Radiometer ABL (series 700 and 800)		7,32	0,0050	0,8	138	0						138		
(449) Roche OMNI S1-6 / cobas b221		7,33	0,0060	0,8	46	0						46		
(451) Radiometer ABL 80		7,35	0,0130	1,8	10	0						10		
(452) Radiometer ABL 90		7,33	0,0050	0,7	59	0						59		
(454) Siemens RapidPoint (series 400, 500)		7,33	0,0080	1,1	20	0						20		
(999) another system		7,37	0,0120	1,7	14	0						14		
Other					19	1						19		
							2x 0, 1x 404, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450					368	356	97%
(132) pCO2					368							368	356	97%
----- Samples and groups -----	----- [kPa] -----													
Sample A		4,92	0,21	4,2	368	CVP	4,92	0,026	12%	4,32	5,52	368	360	98%
(405) Siemens Rapidlab 348		5,02	0,13	2,5	9	0						9		
(410) Siemens Rapidlab (series 1200)		4,76	0,096	2,0	6	0						6		
(411) IL GEM (all types)		5,01	0,13	2,6	27	0						27		
(416) Nova Stat Profile CCX, pHox Ultra		5,01	0,15	3,1	20	0						20		
(433) Radiometer ABL (series 700 and 800)		4,84	0,13	2,6	138	0						138		
(449) Roche OMNI S1-6 / cobas b221		5,10	0,12	2,4	46	0						46		
(451) Radiometer ABL 80		4,81	0,37	7,6	10	0						10		
(452) Radiometer ABL 90		5,03	0,096	1,9	59	0						59		
(454) Siemens RapidPoint (series 400, 500)		4,65	0,20	4,3	19	0						19		
(999) another system		4,58	0,21	4,5	14	0						14		
Other					20	0						20		
							2x 0, 2x 404, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450					368	361	98%
Sample B		6,15	0,25	4,0	368	CVP	6,15	0,032	12%	5,41	6,89	368	361	98%
(405) Siemens Rapidlab 348		6,31	0,19	2,9	9	0						9		
(410) Siemens Rapidlab (series 1200)		5,92	0,089	1,5	6	0						6		
(411) IL GEM (all types)		6,40	0,21	3,3	27	0						27		
(416) Nova Stat Profile CCX, pHox Ultra		6,20	0,15	2,5	20	0						20		
(433) Radiometer ABL (series 700 and 800)		6,06	0,14	2,4	138	0						138		
(449) Roche OMNI S1-6 / cobas b221		6,45	0,14	2,2	46	0						46		
(451) Radiometer ABL 80		6,33	0,29	4,6	10	0						10		
(452) Radiometer ABL 90		6,19	0,099	1,6	59	0						59		
(454) Siemens RapidPoint (series 400, 500)		5,68	0,27	4,7	19	0						19		
(999) another system		5,73	0,29	5,1	14	0						14		
Other					20	1						20		
							2x 0, 2x 404, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450					368	351	95%
(133) pO2					368							368	351	95%
----- Samples and groups -----	----- [kPa] -----													
Sample A		17,2	0,76	4,4	368	CVP	17,2	0,097	12%	15,1	19,3	368	356	97%

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EQA round: ABR3/21 - Acid-base Status and Electrolytes

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Test	[unit]	ROM	SD	CV [%]	N _{tot}	N _{out}	Comparability						N _{eva}	N _{suc}	S _{rel}	
							AV	U _{AV}	D _{max}	LL	UL					
(133) pO₂					368								368	351	95%	
----- Samples and groups -----	[kPa]															
Sample A							CVP									
(405) Siemens Rapidlab 348		17,2	0,76	4,4	368			17,2	0,097	12%	15,1	19,3	368	356	97%	
(410) Siemens Rapidlab (series 1200)		15,9	0,43	2,7	9	0							9			
(411) IL GEM (all types)		16,6	0,85	5,1	6	0							6			
(416) Nova Stat Profile CCX, pHox Ultra		16,9	0,52	3,1	27	0							27			
(433) Radiometer ABL (series 700 and 800)		17,2	0,53	3,1	20	0							20			
(449) Roche OMNI SI-6 / cobas b221		17,2	0,52	3,0	138	0							138			
(451) Radiometer ABL 80		17,9	0,58	3,2	46	0							46			
(452) Radiometer ABL 90		16,8	1,0	5,9	10	0							10			
(454) Siemens RapidPoint (series 400, 500)		16,9	0,64	3,8	59	0							59			
(999) another system		16,7	0,32	1,9	18	0							18			
Other		18,3	1,0	5,4	14	0							14			
					21	0							21			
							2x 0, 2x 404, 1x 406, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450									
Sample B		15,2	0,90	5,9	368		CVP	15,2	0,12	17%	12,6	17,8	368	360	98%	
(405) Siemens Rapidlab 348		14,3	0,39	2,7	9	0							9			
(410) Siemens Rapidlab (series 1200)		15,0	1,4	9,3	6	0							6			
(411) IL GEM (all types)		14,7	0,53	3,6	27	0							27			
(416) Nova Stat Profile CCX, pHox Ultra		14,9	0,54	3,6	20	0							20			
(433) Radiometer ABL (series 700 and 800)		15,3	0,42	2,7	138	0							138			
(449) Roche OMNI SI-6 / cobas b221		16,6	0,60	3,6	46	0							46			
(451) Radiometer ABL 80		14,7	0,98	6,6	10	0							10			
(452) Radiometer ABL 90		14,5	0,47	3,3	59	0							59			
(454) Siemens RapidPoint (series 400, 500)		14,9	0,49	3,3	18	0							18			
(999) another system		16,5	1,2	7,3	14	0							14			
Other					21	1							21			
							2x 0, 2x 404, 1x 406, 2x 414, 3x 418, 1x 420, 2x 421, 1x 424, 3x 448, 4x 450									
(134) Sodium cation (ISE)					247								247	246	100%	
----- Samples and groups -----	[mmol/L]															
Sample A		143	2,2	1,6	247		CVP	143	0,35	5%	135	151	247	247	100%	
(411) IL GEM (all types)		141	0,82	0,58	25	0							25			
(416) Nova Stat Profile CCX, pHox Ultra		142	0,31	0,22	19	0							19			
(433) Radiometer ABL (series 700 and 800)		144	0,87	0,60	94	0							94			
(449) Roche OMNI SI-6 / cobas b221		142	1,6	1,2	15	0							15			
(452) Radiometer ABL 90		146	0,00	0,00	55	0							55			
(454) Siemens RapidPoint (series 400, 500)		139	1,00	0,75	18	0							18			
(999) another system		143	0,89	0,63	10	0							10			
Other					11	0							11			
							2x 0, 3x 410, 1x 420, 2x 421, 1x 424, 1x 450, 1x 451									
Sample B		134	1,8	1,4	247		CVP	134	0,29	5%	127	141	247	246	100%	
(411) IL GEM (all types)		133	0,81	0,61	25	0							25			
(416) Nova Stat Profile CCX, pHox Ultra		133	0,25	0,19	19	0							19			
(433) Radiometer ABL (series 700 and 800)		135	0,90	0,67	94	0							94			
(449) Roche OMNI SI-6 / cobas b221		133	0,73	0,55	15	0							15			
(452) Radiometer ABL 90		136	0,59	0,43	55	0							55			
(454) Siemens RapidPoint (series 400, 500)		130	1,20	0,92	18	0							18			
(999) another system		134	0,94	0,70	10	0							10			
Other					11	1							11			
							2x 0, 3x 410, 1x 420, 2x 421, 1x 424, 1x 450, 1x 451									
(135) Potassium cation (ISE)					249								249	245	98%	
----- Samples and groups -----	[mmol/L]															
Sample A		4,06	0,062	1,5	249		CVP	4,06	,0097	8%	3,73	4,39	249	249	100%	
(411) IL GEM (all types)		3,96	0,068	1,7	25	0							25			
(416) Nova Stat Profile CCX, pHox Ultra		4,11	0,016	0,39	19	0							19			
(433) Radiometer ABL (series 700 and 800)		4,10	0,000	0,01	94	0							94			
(449) Roche OMNI SI-6 / cobas b221		3,94	0,073	1,9	15	0							15			
(452) Radiometer ABL 90		4,10	0,000	0,00	57	0							57			
(454) Siemens RapidPoint (series 400, 500)		4,03	0,030	0,75	18	0							18			
(999) another system		3,93	0,059	1,5	10	0							10			
Other					11	0							11			
							2x 0, 3x 410, 1x 420, 2x 421, 1x 424, 2x 450									
Sample B		3,28	0,055	1,7	249		CVP	3,28	,0085	8%	3,01	3,55	249	245	98%	
(411) IL GEM (all types)		3,17	0,055	1,7	25	0							25			

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Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability						N _{eva}	N _{suc}	S _{rel}
							AV	U _{AV}	D _{max}	LL	UL				
(135) Potassium cation (ISE)	[mmol/L]				249								249	245	98%
Samples and groups															
Sample B		3,28	0,055	1,7	249		CVP	3,28	0,085	8%	3,01	3,55	249	245	98%
(416) Nova Stat Profile CCX, pHox Ultra		3,32	0,0190	0,58	19	0							19		
(433) Radiometer ABL (series 700 and 800)		3,30	0,0010	0,04	94	0							94		
(449) Roche OMNI S1-6 / cobas b221		3,14	0,13	4,3	15	0							15		
(452) Radiometer ABL 90		3,30	0,000	0,00	57	0							57		
(454) Siemens RapidPoint (series 400, 500)		3,25	0,0220	0,67	18	0							18		
(999) another system		3,13	0,075	2,4	10	0							10		
Other					11	1							11		
2x 0, 3x 410, 1x 420, 2x 421, 1x 424, 2x 450															
(136) Chloride anion (ISE)	[mmol/L]				228								228	226	99%
Samples and groups															
Sample A		103	2,4	2,3	228		CVP	103	0,38	7%	95,7	111	228	228	100%
(411) IL GEM (all types)		105	1,5	1,4	21	0							21		
(416) Nova Stat Profile CCX, pHox Ultra		107	0,610	0,58	14	0							14		
(433) Radiometer ABL (series 700 and 800)		104	1,1	1,0	93	0							93		
(449) Roche OMNI S1-6 / cobas b221		102	1,3	1,2	14	0							14		
(452) Radiometer ABL 90		101	0,000	0,00	57	0							57		
(454) Siemens RapidPoint (series 400, 500)		102	1,0	1,0	18	0							18		
Other					11	0							11		
3x 410, 1x 420, 2x 421, 1x 424, 1x 450, 3x 999															
Sample B		95,2	2,3	2,4	228		CVP	95,2	0,37	7%	88,5	102	228	226	99%
(411) IL GEM (all types)		96,5	1,2	1,2	21	0							21		
(416) Nova Stat Profile CCX, pHox Ultra		98,6	0,550	0,56	14	0							14		
(433) Radiometer ABL (series 700 and 800)		96,1	0,98	1,0	93	0							93		
(449) Roche OMNI S1-6 / cobas b221		94,3	1,5	1,6	14	0							14		
(452) Radiometer ABL 90		92,6	0,570	0,61	57	0							57		
(454) Siemens RapidPoint (series 400, 500)		94,6	0,670	0,71	18	0							18		
Other					11	1							11		
3x 410, 1x 420, 2x 421, 1x 424, 1x 450, 3x 999															
(137) Calcium cation (ISE)	[mmol/L]				289								289	281	97%
Samples and groups															
Sample A		0,938	0,035	3,8	289		CVP	0,938	0,051	10%	0,844	1,04	289	283	98%
(411) IL GEM (all types)		0,867	0,026	3,0	26	0							26		
(416) Nova Stat Profile CCX, pHox Ultra		0,948	0,0090	0,95	16	0							16		
(433) Radiometer ABL (series 700 and 800)		0,959	0,015	1,6	119	0							119		
(449) Roche OMNI S1-6 / cobas b221		0,889	0,022	2,4	27	0							27		
(452) Radiometer ABL 90		0,953	0,0080	0,90	55	0							55		
(454) Siemens RapidPoint (series 400, 500)		0,900	0,014	1,6	20	0							20		
(999) another system		0,911	0,03	3,3	10	0							10		
Other					16	0							16		
2x 0, 3x 405, 4x 410, 1x 420, 2x 421, 1x 424, 2x 448, 1x 450															
Sample B		1,19	0,035	2,9	289		CVP	1,19	0,050	10%	1,07	1,31	289	287	99%
(411) IL GEM (all types)		1,15	0,032	2,8	26	0							26		
(416) Nova Stat Profile CCX, pHox Ultra		1,20	0,0080	0,73	16	0							16		
(433) Radiometer ABL (series 700 and 800)		1,21	0,017	1,4	119	0							119		
(449) Roche OMNI S1-6 / cobas b221		1,15	0,025	2,2	27	0							27		
(452) Radiometer ABL 90		1,20	0,0110	0,94	55	0							55		
(454) Siemens RapidPoint (series 400, 500)		1,15	0,015	1,3	20	0							20		
(999) another system		1,17	0,026	2,2	10	0							10		
Other					16	0							16		
2x 0, 3x 405, 4x 410, 1x 420, 2x 421, 1x 424, 2x 448, 1x 450															
(139) Glucose	[mmol/L]				221								221	217	98%
Samples and groups															
Sample A		8,87	0,34	3,8	221		CVP	8,87	0,055	15%	7,53	10,2	221	219	99%
(411) IL GEM (all types)		8,89	0,34	3,9	24	0							24		
(416) Nova Stat Profile CCX, pHox Ultra		9,21	0,23	2,5	18	0							18		
(433) Radiometer ABL (series 700 and 800)		8,71	0,35	4,0	93	0							93		
(452) Radiometer ABL 90		8,85	0,13	1,5	57	0							57		
(454) Siemens RapidPoint (series 400, 500)		9,08	0,18	2,0	18	0							18		
Other					11	0							11		
2x 0, 1x 410, 1x 420, 2x 421, 3x 449, 2x 999															

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Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability						N _{eva}	N _{suc}	S _{rel}
							AV	U _{AV}	D _{max}	LL	UL				
Sample B		12,2	0,45	3,7	221		CVP	12,2	0,075	15%	10,3	14,1	221	218	99%
(411) IL GEM (all types)		12,2	0,45	3,7	24	0							24		
(416) Nova Stat Profile CCX, pHox Ultra		12,6	0,30	2,4	18	0							18		
(433) Radiometer ABL (series 700 and 800)		12,0	0,50	4,2	93	0							93		
(452) Radiometer ABL 90		12,1	0,19	1,6	57	0							57		
(454) Siemens RapidPoint (series 400, 500)		12,5	0,23	1,8	18	0							18		
Other					11	0							11		
								2x 0, 1x 410, 1x 420, 2x 421, 3x 449, 2x 999							
(169) Lactate					227								227	219	96%
Samples and groups	[mmol/L]														
Sample A		6,98	0,43	6,2	227		CVP	6,98	0,070	18%	5,72	8,24	227	222	98%
(411) IL GEM (all types)		7,16	0,22	3,1	24	0							24		
(416) Nova Stat Profile CCX, pHox Ultra		7,54	0,29	3,8	18	0							18		
(433) Radiometer ABL (series 700 and 800)		6,73	0,37	5,5	102	0							102		
(452) Radiometer ABL 90		7,15	0,17	2,4	56	0							56		
(454) Siemens RapidPoint (series 400, 500)		6,66	0,50	7,5	17	0							17		
Other					10	0							10		
								2x 410, 1x 420, 1x 421, 3x 449, 1x 450, 2x 999							
Sample B		9,81	0,70	7,1	227		CVP	9,81	0,11	18%	8,04	11,6	227	220	97%
(411) IL GEM (all types)		10,2	0,33	3,2	24	0							24		
(416) Nova Stat Profile CCX, pHox Ultra		10,1	0,47	4,7	18	0							18		
(433) Radiometer ABL (series 700 and 800)		9,39	0,63	6,7	102	0							102		
(452) Radiometer ABL 90		10,3	0,34	3,3	56	0							56		
(454) Siemens RapidPoint (series 400, 500)		9,29	0,69	7,5	17	0							17		
Other					10	0							10		
								2x 410, 1x 420, 1x 421, 3x 449, 1x 450, 2x 999							

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End of report

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