

Summary statistics - quantitative results

(Groups: system)

Filter: minimal size of the groups n = 5

EQA round: ABR1/22 - Acid-base Status and Electrolytes

Deadline: 25.03.2022

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					397							397	383	96%
Samples and groups														
Sample A		7,61	0,0150	20	397	CVP	7,61	,0018	0,8%	7,54	7,68	397	384	97%
(405) Siemens Rapidlab 348		7,63	0,0110	14	10	0						10		
(410) Siemens Rapidlab (series 1200)		7,64	0,0150	19	7	0						7		
(411) IL GEM (all types)		7,66	0,0080	11	28	0						28		
(416) Nova Stat Profile CCX, pHox Ultra		7,61	0,0020	03	20	0						20		
(433) Radiometer ABL (series 700 and 800)		7,60	0,0030	04	140	0						140		
(448) Roche OMNI C / cobas b121		7,59	0,0050	06	6	0						6		
(449) Roche OMNI SI-6 / cobas b221		7,59	0,0040	06	47	0						47		
(451) Radiometer ABL 80		7,59	0,0070	09	9	0						9		
(452) Radiometer ABL 90		7,61	0,0060	08	74	0						74		
(454) Siemens RapidPoint (series 400, 500)		7,61	0,0130	17	24	0						24		
(455) Abbott i-STAT		7,69	0,0010	02	11	0						11		
(999) another system		7,63	0,0370	49	6	0						6		
Other					15	0						15		

Sample B		7,41	0,0110	15	397	CVP	7,41	,0014	0,8%	7,35	7,47	397	395	99%
(405) Siemens Rapidlab 348		7,43	0,0090	12	10	0						10		
(410) Siemens Rapidlab (series 1200)		7,43	0,0150	20	7	0						7		
(411) IL GEM (all types)		7,43	0,0000	00	28	0						28		
(416) Nova Stat Profile CCX, pHox Ultra		7,42	0,0020	03	20	0						20		
(433) Radiometer ABL (series 700 and 800)		7,40	0,0050	07	140	0						140		
(448) Roche OMNI C / cobas b121		7,41	0,0050	07	6	0						6		
(449) Roche OMNI SI-6 / cobas b221		7,41	0,0040	06	47	0						47		
(451) Radiometer ABL 80		7,40	0,0070	10	9	0						9		
(452) Radiometer ABL 90		7,41	0,0050	08	74	1						74		
(454) Siemens RapidPoint (series 400, 500)		7,41	0,0110	15	24	0						24		
(455) Abbott i-STAT		7,45	0,0060	09	11	0						11		
(999) another system		7,40	0,0300	40	6	0						6		
Other					15	0						15		

(132) pCO2					397							397	387	97%
Samples and groups														
Sample A		2,79	0,13	4,6	397	CVP	2,79	0,016	12%	2,45	3,13	397	390	98%
(405) Siemens Rapidlab 348		2,93	0,13	4,5	10	0						10		
(410) Siemens Rapidlab (series 1200)		2,72	0,12	4,4	7	0						7		
(411) IL GEM (all types)		2,66	0,064	2,4	28	0						28		
(416) Nova Stat Profile CCX, pHox Ultra		2,83	0,076	2,7	20	0						20		
(433) Radiometer ABL (series 700 and 800)		2,75	0,084	3,1	139	0						139		
(448) Roche OMNI C / cobas b121		2,83	0,089	3,1	6	0						6		
(449) Roche OMNI SI-6 / cobas b221		2,85	0,066	2,3	47	0						47		
(451) Radiometer ABL 80		2,71	0,19	6,9	9	0						9		
(452) Radiometer ABL 90		2,88	0,076	2,6	74	0						74		
(454) Siemens RapidPoint (series 400, 500)		2,87	0,14	4,7	24	0						24		
(455) Abbott i-STAT		2,61	0,10	3,9	11	0						11		
(999) another system		2,57	0,15	5,8	6	0						6		
Other					16	0						16		

Sample B		5,59	0,22	4,0	397	CVP	5,59	0,028	12%	4,91	6,27	397	390	98%
(405) Siemens Rapidlab 348		5,70	0,18	3,1	10	0						10		
(410) Siemens Rapidlab (series 1200)		5,33	0,10	1,9	7	0						7		
(411) IL GEM (all types)		5,69	0,16	2,9	28	0						28		
(416) Nova Stat Profile CCX, pHox Ultra		5,56	0,15	2,7	20	0						20		
(433) Radiometer ABL (series 700 and 800)		5,47	0,13	2,4	139	0						139		
(448) Roche OMNI C / cobas b121		5,86	0,12	2,0	6	0						6		
(449) Roche OMNI SI-6 / cobas b221		5,84	0,094	1,6	47	0						47		
(451) Radiometer ABL 80		5,73	0,17	3,0	9	0						9		
(452) Radiometer ABL 90		5,70	0,097	1,7	74	1						74		
(454) Siemens RapidPoint (series 400, 500)		5,64	0,31	5,4	24	0						24		

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EQA round: ABR1/22 - 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				
(132) pCO₂					397								397	387	97%
— Samples and groups	[kPa]														
Sample B		5,59	0,22	4,0	397		CVP	5,59	0,028	12%	4,91	6,27	397	390	98%
(455) Abbott i-STAT		5,05	0,19	3,7	11	0									11
(999) another system		5,17	0,30	5,9	6	0									6
Other					16	0									16
								3x 0, 2x 414, 2x 418, 1x 420, 3x 421, 1x 424, 4x 450							
(133) pO₂					397								397	383	96%
— Samples and groups	[kPa]														
Sample A		18,8	0,68	3,6	397		CVP	18,8	0,084	12%	16,5	21,1	397	386	97%
(405) Siemens Rapidlab 348		17,9	0,62	3,5	10	0									10
(410) Siemens Rapidlab (series 1200)		18,2	0,24	1,3	7	0									7
(411) IL GEM (all types)		18,4	0,57	3,1	28	0									28
(416) Nova Stat Profile CCX, pHox Ultra		18,7	0,32	1,7	20	0									20
(433) Radiometer ABL (series 700 and 800)		18,8	0,56	3,0	139	0									139
(448) Roche OMNI C / cobas b121		19,3	0,26	1,3	6	0									6
(449) Roche OMNI SI-6 / cobas b221		19,3	0,61	3,1	47	0									47
(451) Radiometer ABL 80		19,3	0,96	5,0	9	0									9
(452) Radiometer ABL 90		18,7	0,58	3,1	74	0									74
(454) Siemens RapidPoint (series 400, 500)		18,4	0,57	3,1	23	0									23
(455) Abbott i-STAT		19,9	0,50	2,5	11	0									11
(999) another system		18,7	0,30	1,6	6	0									6
Other					17	0									17
								3x 0, 1x 406, 2x 414, 2x 418, 1x 420, 3x 421, 1x 424, 4x 450							
Sample B		14,3	1,1	7,8	397		CVP	14,3	0,14	17%	11,8	16,8	397	390	98%
(405) Siemens Rapidlab 348		12,9	0,68	5,2	10	0									10
(410) Siemens Rapidlab (series 1200)		13,7	0,86	6,3	7	0									7
(411) IL GEM (all types)		13,9	0,55	3,9	28	0									28
(416) Nova Stat Profile CCX, pHox Ultra		13,6	0,31	2,3	20	0									20
(433) Radiometer ABL (series 700 and 800)		14,5	0,45	3,1	139	0									139
(448) Roche OMNI C / cobas b121		15,6	0,81	5,2	6	0									6
(449) Roche OMNI SI-6 / cobas b221		16,0	0,47	2,9	47	0									47
(451) Radiometer ABL 80		14,3	0,52	3,6	9	0									9
(452) Radiometer ABL 90		13,3	0,50	3,8	74	1									74
(454) Siemens RapidPoint (series 400, 500)		13,9	0,49	3,5	23	0									23
(455) Abbott i-STAT		16,2	0,54	3,3	11	0									11
(999) another system		14,5	0,86	5,9	6	0									6
Other					17	0									17
								3x 0, 1x 406, 2x 414, 2x 418, 1x 420, 3x 421, 1x 424, 4x 450							
(134) Sodium cation (ISE)					276								276	272	99%
— Samples and groups	[mmol/L]														
Sample A		161	1,8	1,1	276		CVP	161	0,26	5%	152	170	276	273	99%
(411) IL GEM (all types)		158	0,85	0,54	27	0									27
(416) Nova Stat Profile CCX, pHox Ultra		161	0,66	0,41	19	0									19
(433) Radiometer ABL (series 700 and 800)		160	0,95	0,59	95	0									95
(449) Roche OMNI SI-6 / cobas b221		160	2,0	1,2	16	0									16
(452) Radiometer ABL 90		162	0,56	0,35	69	0									69
(454) Siemens RapidPoint (series 400, 500)		159	2,7	1,7	21	0									21
(455) Abbott i-STAT		163	0,00	0,00	9	0									9
Other					20	0									20
								2x 0, 4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 1x 450, 1x 451, 4x 999							
Sample B		133	1,10	0,86	276		CVP	133	0,17	5%	126	140	276	274	99%
(411) IL GEM (all types)		132	0,68	0,51	27	0									27
(416) Nova Stat Profile CCX, pHox Ultra		132	0,32	0,25	19	0									19
(433) Radiometer ABL (series 700 and 800)		133	0,80	0,60	95	0									95
(449) Roche OMNI SI-6 / cobas b221		133	0,91	0,69	16	0									16
(452) Radiometer ABL 90		133	0,00	0,00	69	1									69
(454) Siemens RapidPoint (series 400, 500)		131	2,2	1,7	21	0									21
(455) Abbott i-STAT		135	0,00	0,00	9	0									9
Other					20	0									20
								2x 0, 4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 1x 450, 1x 451, 4x 999							
(135) Potassium cation (ISE)					278								278	273	98%
— Samples and groups	[mmol/L]														
Sample A		6,09	0,11	1,8	278		CVP	6,09	0,016	8%	5,6	6,58	278	274	99%
(411) IL GEM (all types)		6,08	0,074	1,2	27	0									27

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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]				278								278	273	98%
Samples and groups															
Sample A		6,09	0,11	1,8	278		CVP	6,09	0,016	8%	5,6	6,58	278	274	99%
(416) Nova Stat Profile CCX, pHox Ultra		6,37	0,0620	0,97	19	0									19
(433) Radiometer ABL (series 700 and 800)		6,12	0,0610	0,99	95	0									95
(449) Roche OMNI S1-6 / cobas b221		6,26	0,12	1,9	16	0									16
(452) Radiometer ABL 90		6,00	0,000	0,00	71	0									71
(454) Siemens RapidPoint (series 400, 500)		6,07	0,10	1,6	21	0									21
(455) Abbott i-STAT		6,05	0,074	1,2	9	0									9
Other					20	0									20
							2x 0, 4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 2x 450, 4x 999								
Sample B		4,33	0,071	1,6	278		CVP	4,33	0,011	8%	3,98	4,68	278	276	99%
(411) IL GEM (all types)		4,30	0,000	0,00	27	0									27
(416) Nova Stat Profile CCX, pHox Ultra		4,42	0,0180	0,40	19	0									19
(433) Radiometer ABL (series 700 and 800)		4,38	0,0310	0,70	95	0									95
(449) Roche OMNI S1-6 / cobas b221		4,27	0,11	2,7	16	0									16
(452) Radiometer ABL 90		4,30	0,000	0,00	71	1									71
(454) Siemens RapidPoint (series 400, 500)		4,30	0,049	1,1	21	0									21
(455) Abbott i-STAT		4,30	0,000	0,00	9	0									9
Other					20	0									20
							2x 0, 4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 2x 450, 4x 999								
(136) Chloride anion (ISE)	[mmol/L]				255								255	251	98%
Samples and groups															
Sample A		128	1,5	1,2	255		CVP	128	0,23	7%	119	137	255	254	100%
(411) IL GEM (all types)		129	1,8	1,4	23	0									23
(416) Nova Stat Profile CCX, pHox Ultra		131	1,00	0,77	14	0									14
(433) Radiometer ABL (series 700 and 800)		129	1,10	0,85	94	0									94
(449) Roche OMNI S1-6 / cobas b221		122	1,20	0,99	15	0									15
(452) Radiometer ABL 90		128	0,620	0,48	71	0									71
(454) Siemens RapidPoint (series 400, 500)		127	2,3	1,8	21	0									21
Other					17	0									17
							4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 1x 450, 4x 999								
Sample B		95,6	1,9	2,0	255		CVP	95,6	0,29	7%	88,9	103	255	252	99%
(411) IL GEM (all types)		97,6	0,610	0,62	23	1									23
(416) Nova Stat Profile CCX, pHox Ultra		99,8	0,740	0,74	14	0									14
(433) Radiometer ABL (series 700 and 800)		95,7	1,2	1,2	94	0									94
(449) Roche OMNI S1-6 / cobas b221		93,5	2,2	2,3	15	0									15
(452) Radiometer ABL 90		94,0	0,000	0,00	71	1									71
(454) Siemens RapidPoint (series 400, 500)		96,3	1,2	1,3	21	0									21
Other					17	0									17
							4x 410, 1x 420, 3x 421, 1x 424, 3x 448, 1x 450, 4x 999								
(137) Calcium cation (ISE)	[mmol/L]				319								319	314	98%
Samples and groups															
Sample A		0,535	0,051	9,5	319		CVP	0,535	0,0070	24%	0,406	0,664	319	316	99%
(411) IL GEM (all types)		0,446	0,012	2,7	28	0									28
(416) Nova Stat Profile CCX, pHox Ultra		0,549	0,008	1,5	16	0									16
(433) Radiometer ABL (series 700 and 800)		0,577	0,026	4,5	121	0									121
(448) Roche OMNI C / cobas b121		0,483	0,016	3,4	5	0									5
(449) Roche OMNI S1-6 / cobas b221		0,495	0,015	3,0	27	0									27
(452) Radiometer ABL 90		0,525	0,006	1,2	70	0									70
(454) Siemens RapidPoint (series 400, 500)		0,505	0,039	7,6	23	0									23
(455) Abbott i-STAT		0,480	0,000	0,00	9	0									9
Other					20	0									20
							2x 0, 3x 405, 4x 410, 1x 420, 3x 421, 1x 424, 2x 450, 4x 999								
Sample B		1,11	0,036	3,2	319		CVP	1,11	0,0049	10%	0,999	1,23	319	317	99%
(411) IL GEM (all types)		1,09	0,028	2,5	28	0									28
(416) Nova Stat Profile CCX, pHox Ultra		1,11	0,011	1,0	16	0									16
(433) Radiometer ABL (series 700 and 800)		1,15	0,014	1,2	121	0									121
(448) Roche OMNI C / cobas b121		1,11	0,037	3,4	5	0									5
(449) Roche OMNI S1-6 / cobas b221		1,09	0,015	1,3	27	0									27
(452) Radiometer ABL 90		1,09	0,008	0,82	70	1									70
(454) Siemens RapidPoint (series 400, 500)		1,08	0,015	1,4	23	0									23

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Deadline: 25.03.2022

Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability						N _{eva}	N _{suc}	S _{rel}
							AV	U _{AV}	D _{max}	LL	UL				
(137) Calcium cation (ISE)	[mmol/L]				319								319	314	98%
Samples and groups															
Sample B		1,11	0,036	3,2	319		CVP	1,11	0,0049	10%	0,999	1,23	319	317	99%
(455) Abbott i-STAT		1,11	0,0070	6,7	9	0							9		
Other					20	0							20		
2x 0, 3x 405, 4x 410, 1x 420, 3x 421, 1x 424, 2x 450, 4x 999															
(139) Glucose	[mmol/L]				254								254	252	99%
Samples and groups															
Sample A		15,6	0,53	3,4	254		CVP	15,6	0,082	15%	13,2	18	254	254	100%
(411) IL GEM (all types)		16,3	0,62	3,8	26	0							26		
(416) Nova Stat Profile CCX, pHox Ultra		15,9	0,46	2,9	18	0							18		
(433) Radiometer ABL (series 700 and 800)		15,4	0,46	3,0	94	0							94		
(452) Radiometer ABL 90		15,3	0,22	1,5	71	0							71		
(454) Siemens RapidPoint (series 400, 500)		16,1	0,33	2,1	21	0							21		
(455) Abbott i-STAT		15,2	0,30	2,0	9	0							9		
Other					15	0							15		
2x 0, 1x 410, 1x 420, 3x 421, 1x 448, 4x 449, 3x 999															
Sample B		10,8	0,37	3,4	254		CVP	10,8	0,057	15%	9,18	12,5	254	252	99%
(411) IL GEM (all types)		10,8	0,27	2,5	26	1							26		
(416) Nova Stat Profile CCX, pHox Ultra		10,6	0,42	4,0	18	0							18		
(433) Radiometer ABL (series 700 and 800)		10,9	0,29	2,6	94	0							94		
(452) Radiometer ABL 90		10,4	0,15	1,4	71	1							71		
(454) Siemens RapidPoint (series 400, 500)		11,0	0,19	1,7	21	0							21		
(455) Abbott i-STAT		10,6	0,0740	7,0	9	0							9		
Other					15	0							15		
2x 0, 1x 410, 1x 420, 3x 421, 1x 448, 4x 449, 3x 999															
(169) Lactate	[mmol/L]				247								247	244	99%
Samples and groups															
Sample A		6,89	0,29	4,2	247		CVP	6,89	0,045	18%	5,64	8,14	247	246	100%
(411) IL GEM (all types)		7,07	0,19	2,7	26	0							26		
(416) Nova Stat Profile CCX, pHox Ultra		7,30	0,37	5,1	18	0							18		
(433) Radiometer ABL (series 700 and 800)		6,76	0,29	4,3	98	0							98		
(452) Radiometer ABL 90		6,86	0,12	1,8	70	0							70		
(454) Siemens RapidPoint (series 400, 500)		6,82	0,51	7,5	20	0							20		
Other					15	0							15		
2x 410, 1x 420, 3x 421, 1x 448, 4x 449, 1x 450, 3x 999															
Sample B		2,48	0,11	4,5	247		CVP	2,48	0,017	18%	2,03	2,93	247	245	99%
(411) IL GEM (all types)		2,50	0,027	1,1	26	0							26		
(416) Nova Stat Profile CCX, pHox Ultra		2,58	0,068	2,6	18	0							18		
(433) Radiometer ABL (series 700 and 800)		2,51	0,09	3,6	98	0							98		
(452) Radiometer ABL 90		2,39	0,06	2,5	70	1							70		
(454) Siemens RapidPoint (series 400, 500)		2,52	0,13	5,2	20	0							20		
Other					15	0							15		
2x 410, 1x 420, 3x 421, 1x 448, 4x 449, 1x 450, 3x 999															

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End of report

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