

# Overall Report

Round 77 of  
**Blood gas analysis**  
External Quality Assessment

Vienna, 16.09.2021

Dear Colleague,

The distribution of samples for round 77 of the external quality assessment scheme Blood gas analysis was started on 30.08.2021. The return deadline was 11.09.2021. Statistical analysis and evaluation of results were performed on 16.09.2021.

The following samples were circulated:

Sample option	Name	Manufacturer
A	BG 459 88	RfB
B	BG 459 87	RfB

#### **Explanatory notes on the table columns**

Sample                    respective sample

AnzE                    number of reported results

#### **Metric results**

Collective                collective of methods to which your results were assigned

\*                          collective not evaluated (either because the number of results in the collective is less than 6 or the number of results within the acceptance limits is less than 5); results are given for informative purposes only

Target value             target value assigned to the sample in this round [method used to determine the target value]:

- [a] Reference value
- [b] Consensus value

%-Dev                    acceptable deviation from target value in %

ALimits                  acceptance interval

Inside                    number and proportion of results that lie within the acceptance interval

Outside                  number and proportion of results that lie outside the acceptance interval

MV                        mean

Median                  median

SD                        Standard deviation

CV                        coefficient of variation

#### **Nominal results**

Result                    results reported by participants

Reference                the result(s) assigned to the sample in the respective round [method used to determine the reference]:

- [a] Reference value
- [b] Consensus value

Proportion              Number and proportion of results that correspond to the reference(s)

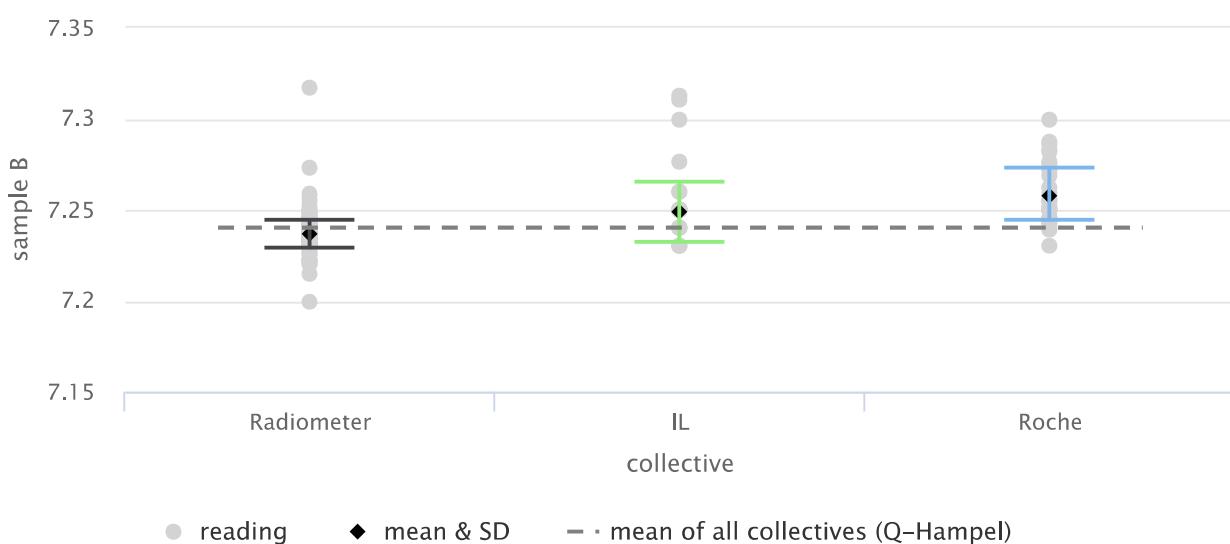
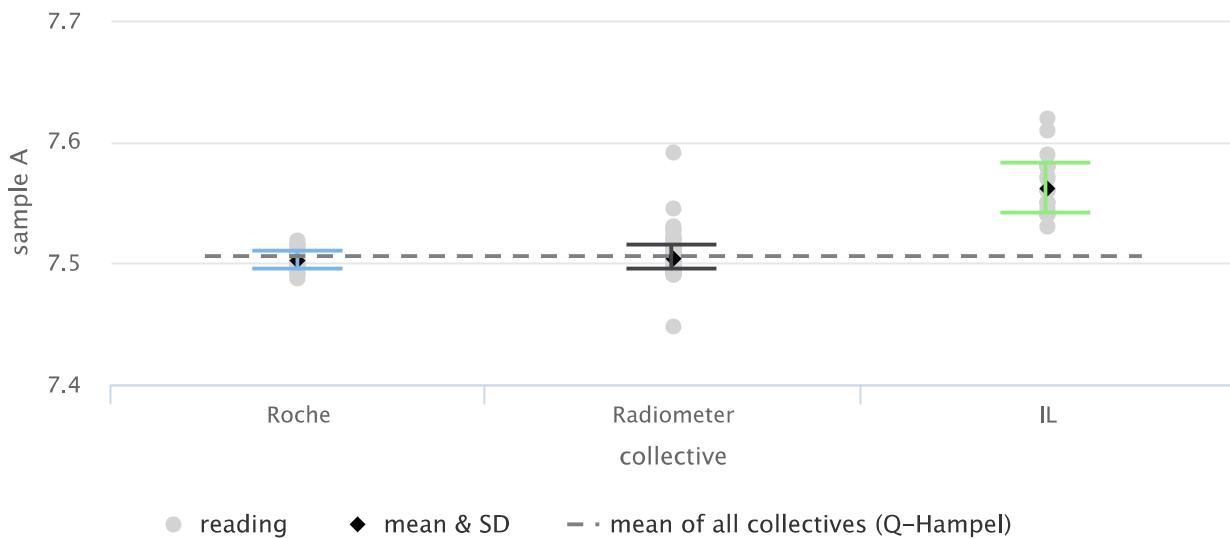
The following results were obtained:

## pH

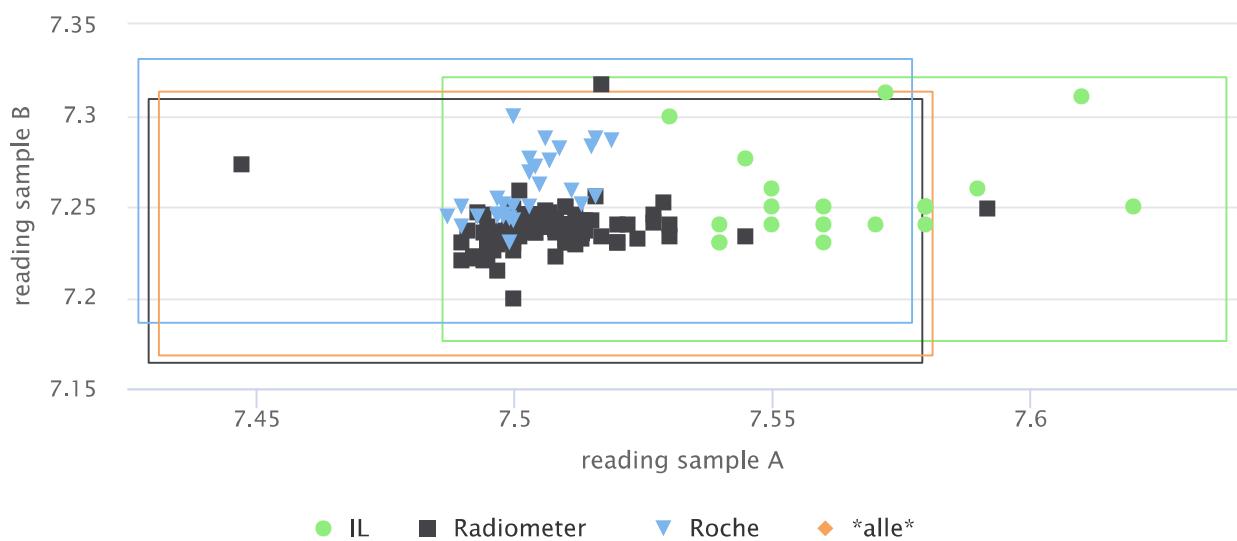
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
*all*	A	149	7.506 [b]	1	[7.431...7.581]	145 (97%)	4 (3%)	7.506	7.505	0.013	0.17
	B	148	7.240 [b]	1	[7.168...7.313]	147 (99%)	1 (1%)	7.240	7.240	0.012	0.17
IL	A	21	7.562 [b]	1	[7.486...7.638]	21 (100%)	0 (0%)	7.562	7.560	0.021	0.27
	B	20	7.249 [b]	1	[7.176...7.321]	20 (100%)	0 (0%)	7.249	7.250	0.016	0.23
Radiometer	A	99	7.504 [b]	1	[7.429...7.579]	98 (99%)	1 (1%)	7.504	7.503	0.010	0.13
	B	99	7.236 [b]	1	[7.164...7.309]	98 (99%)	1 (1%)	7.236	7.236	0.008	0.11
Roche	A	29	7.502 [b]	1	[7.427...7.577]	29 (100%)	0 (0%)	7.502	7.500	0.008	0.11
	B	29	7.258 [b]	1	[7.186...7.331]	29 (100%)	0 (0%)	7.258	7.251	0.015	0.20

S-Curves of all samples



## Youden-Plots of all sample pairs

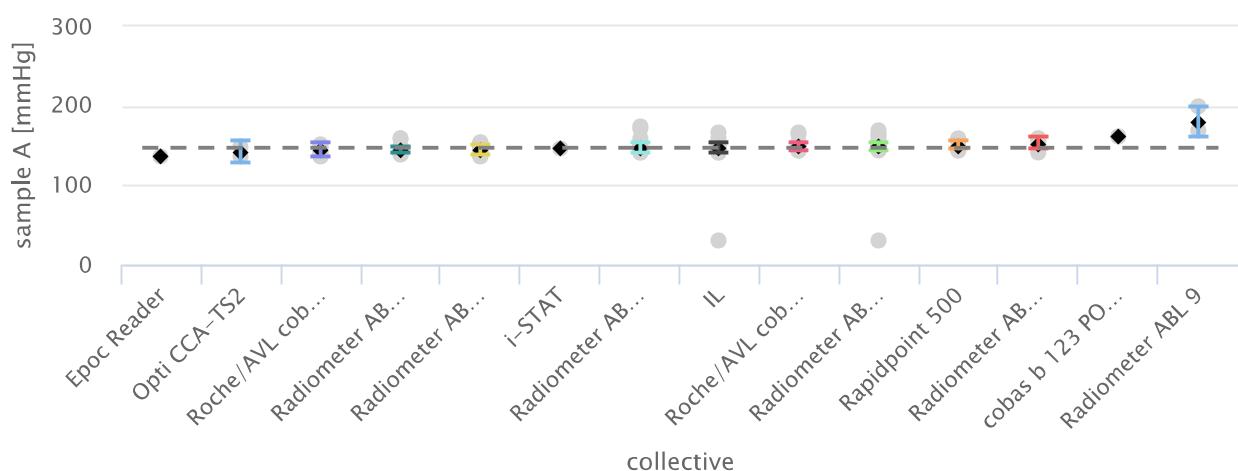


## pO<sub>2</sub> mmHg

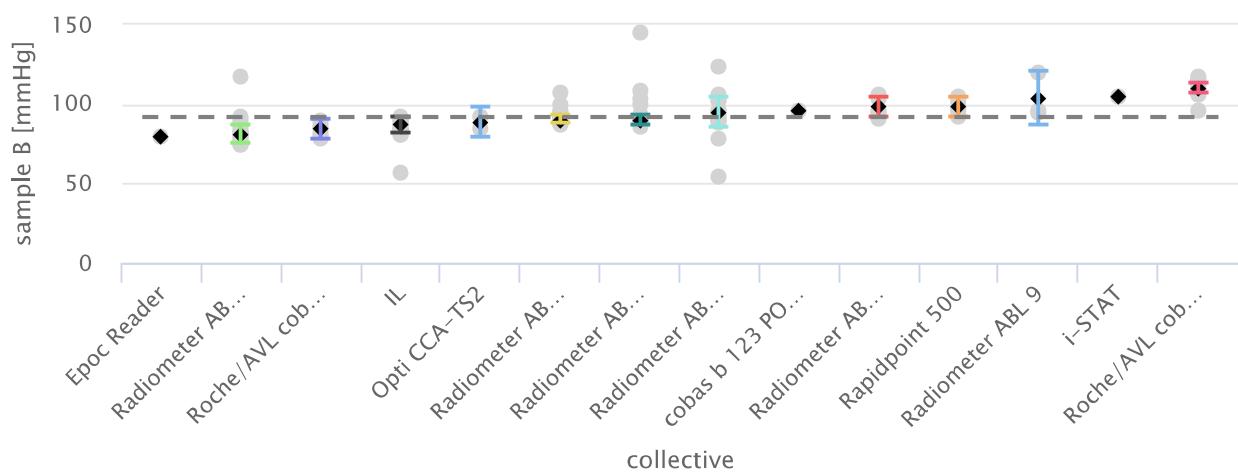
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
Radiometer ABL 815 Flex	A	7	152.3 [b]	12	[134.0...170.6]	7 (100%)	0 (0%)	152.3	155.0	8.3	5.46
	B	7	98.0 [b]	12	[86.2...109.8]	7 (100%)	0 (0%)	98.0	95.5	6.5	6.62
Radiometer ABL 835 Flex	A	15	146.8 [b]	12	[129.2...164.4]	13 (87%)	2 (13%)	146.8	146.0	6.0	4.08
	B	15	94.7 [b]	12	[83.4...106.1]	12 (80%)	3 (20%)	94.7	91.6	9.1	9.65
*all*	A	148	146.9 [b]	12	[129.2...164.5]	137 (93%)	11 (7%)	146.9	146.3	6.2	4.25
	B	147	91.9 [b]	12	[80.8...102.9]	96 (65%)	51 (35%)	91.9	90.3	9.7	10.57
Epoc Reader	A	1	136.3 [b]*	12*	[119.9...152.7]*	1 (100%)*	0 (0%)*	136.3*	136.3*	*	*
	B	1	79.9 [b]*	12*	[70.3...89.5]*	1 (100%)*	0 (0%)*	79.9*	79.9*	*	*
IL	A	18	147.0 [b]	12	[129.4...164.7]	16 (89%)	2 (11%)	147.0	145.0	6.6	4.47
	B	17	86.4 [b]	12	[76.0...96.7]	16 (94%)	1 (6%)	86.4	85.0	5.3	6.19
Opti CCA-TS2	A	2	142.3 [b]*	12*	[125.2...159.4]*	2 (100%)*	0 (0%)*	142.3*	142.3*	*	*
	B	2	88.2 [b]*	12*	[77.7...98.8]*	2 (100%)*	0 (0%)*	88.3*	88.3*	*	*
Radiometer ABL 800 Basic	A	20	143.8 [b]	12	[126.6...161.1]	20 (100%)	0 (0%)	143.8	142.0	5.5	3.83
	B	20	89.9 [b]	12	[79.1...100.7]	19 (95%)	1 (5%)	89.9	89.2	2.5	2.75
Radiometer ABL 800 Flex	A	20	143.2 [b]	12	[126.0...160.3]	20 (100%)	0 (0%)	143.2	142.5	4.0	2.77
	B	20	90.0 [b]	12	[79.2...100.8]	17 (85%)	3 (15%)	90.0	89.5	3.2	3.56
Radiometer ABL 9	A	3	179.0 [b]*	12*	[157.5...200.0]*	3 (100%)*	0 (0%)*	179.0*	169.0*	18.9*	10.54*
	B	3	103.3 [b]*	12*	[90.9...115.7]*	2 (67%)*	1 (33%)*	103.3*	96.0*	16.6*	16.11*
Radiometer ABL 90 Flex	A	25	148.6 [b]	12	[130.7...166.4]	23 (92%)	2 (8%)	148.6	147.0	4.9	3.32
	B	25	81.0 [b]	12	[71.3...90.7]	23 (92%)	2 (8%)	81.0	81.1	5.7	7.09
Rapidpoint 500	A	8	149.8 [b]	12	[131.8...167.7]	8 (100%)	0 (0%)	149.8	147.4	5.8	3.85
	B	8	98.1 [b]	12	[86.3...109.8]	8 (100%)	0 (0%)	98.1	97.0	6.2	6.34
Roche/AVL cobas b 123	A	8	142.9 [b]	12	[125.7...160.0]	8 (100%)	0 (0%)	142.9	141.8	8.4	5.90
	B	8	84.0 [b]	12	[73.9...94.1]	8 (100%)	0 (0%)	84.0	84.3	5.9	7.00
Roche/AVL cobas b 221 (OMNI S)	A	19	147.7 [b]	12	[130.0...165.4]	18 (95%)	1 (5%)	147.7	148.6	4.2	2.82
	B	19	109.5 [b]	12	[96.4...122.7]	18 (95%)	1 (5%)	109.5	108.6	3.2	2.89
cobas b 123 POC System	A	1	161.7 [b]*	12*	[142.3...181.1]*	1 (100%)*	0 (0%)*	161.7*	161.7*	*	*
	B	1	95.8 [b]*	12*	[84.3...107.3]*	1 (100%)*	0 (0%)*	95.8*	95.8*	*	*
i-STAT	A	1	145.0 [b]*	12*	[127.6...162.4]*	1 (100%)*	0 (0%)*	145.0*	145.0*	*	*
	B	1	105.0 [b]*	12*	[92.4...117.6]*	1 (100%)*	0 (0%)*	105.0*	105.0*	*	*

### S-Curves of all samples

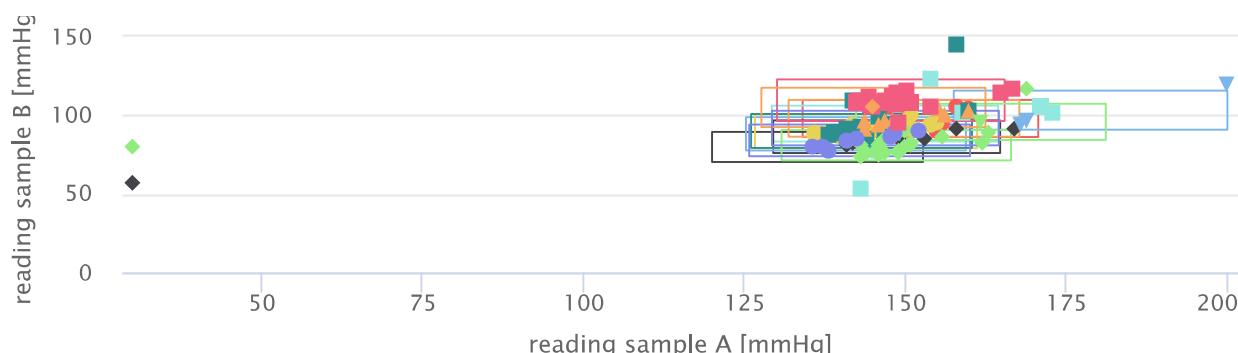


● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)



● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)

### Youden-Plots of all sample pairs



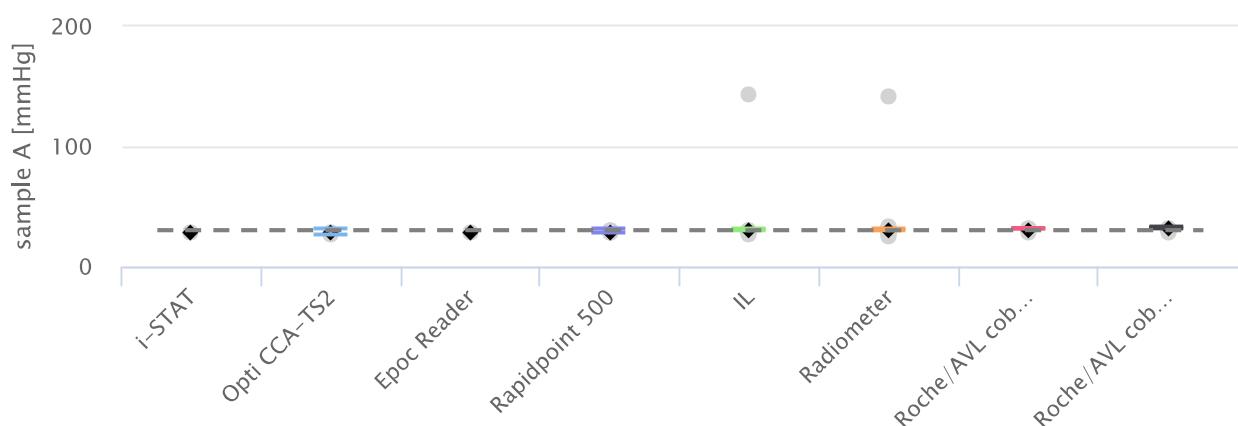
- |                           |                                  |                           |      |
|---------------------------|----------------------------------|---------------------------|------|
| ● Radiometer ABL 815 Flex | ■ Radiometer ABL 835 Flex        | ▼ Epoch Reader            | ◆ IL |
| ▲ Opti CCA-TS2            | ● Radiometer ABL 800 Basic       | ■ Radiometer ABL 800 Flex |      |
| ▼ Radiometer ABL 9        | ▲ Radiometer ABL 90 Flex         | ▲ Rapidpoint 500          |      |
| ● Roche/AVL cobas b 123   | ■ Roche/AVL cobas b 221 (OMNI S) |                           |      |
| ▼ cobas b 123 POC System  | ◆ i-STAT                         | ▲ *alle*                  |      |

## pCO<sub>2</sub> mmHg

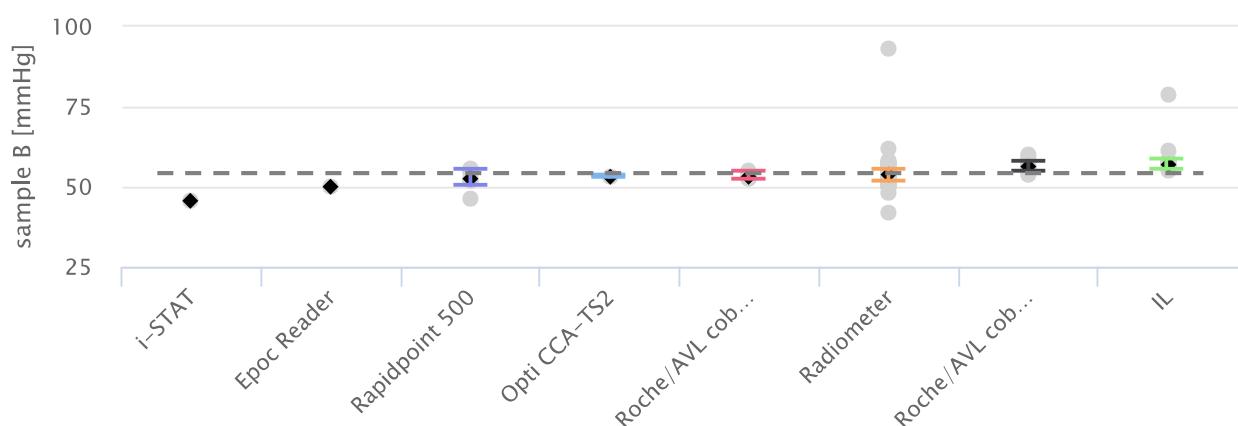
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
*all*	A	149	30.1 [b]	10	[27.1...33.1]	145 (97%)	4 (3%)	30.1	30.0	0.9	3.14
	B	148	54.2 [b]	10	[48.8...59.6]	139 (94%)	9 (6%)	54.2	54.1	2.5	4.61
Epoc Reader	A	1	28.9 [b]*	10*	[26.0...31.8]*	1 (100%)*	0 (0%)*	28.9*	28.9*	*	*
	B	1	50.3 [b]*	10*	[45.3...55.3]*	1 (100%)*	0 (0%)*	50.3*	50.3*	*	*
IL	A	18	29.6 [b]	10	[26.6...32.5]	17 (94%)	1 (6%)	29.6	30.0	1.1	3.82
	B	17	57.2 [b]	10	[51.4...62.9]	16 (94%)	1 (6%)	57.2	57.0	1.5	2.71
Opti CCA-TS2	A	2	28.0 [b]*	10*	[25.2...30.9]*	2 (100%)*	0 (0%)*	28.1*	28.1*	*	*
	B	2	53.0 [b]*	10*	[47.7...58.4]*	2 (100%)*	0 (0%)*	53.1*	53.0*	*	*
Radiometer	A	90	30.1 [b]	10	[27.1...33.1]	88 (98%)	2 (2%)	30.1	30.0	0.8	2.67
	B	90	53.5 [b]	10	[48.1...58.8]	87 (97%)	3 (3%)	53.5	53.5	2.0	3.76
Rapidpoint 500	A	8	29.0 [b]	10	[26.1...32.0]	8 (100%)	0 (0%)	29.0	29.1	1.1	3.95
	B	8	52.8 [b]	10	[47.5...58.0]	7 (88%)	1 (12%)	52.8	52.4	2.3	4.42
Roche/AVL cobas b 123	A	9	30.6 [b]	10	[27.5...33.7]	9 (100%)	0 (0%)	30.6	30.9	0.6	1.86
	B	9	53.3 [b]	10	[48.0...58.7]	9 (100%)	0 (0%)	53.3	53.6	1.0	1.96
Roche/AVL cobas b 221 (OMNI S)	A	20	30.9 [b]	10	[27.8...34.0]	20 (100%)	0 (0%)	30.9	30.9	0.8	2.69
	B	20	56.1 [b]	10	[50.5...61.7]	20 (100%)	0 (0%)	56.1	56.0	1.5	2.65
i-STAT	A	1	28.0 [b]*	10*	[25.2...30.8]*	1 (100%)*	0 (0%)*	28.0*	28.0*	*	*
	B	1	45.4 [b]*	10*	[40.9...49.9]*	1 (100%)*	0 (0%)*	45.4*	45.4*	*	*

### S-Curves of all samples

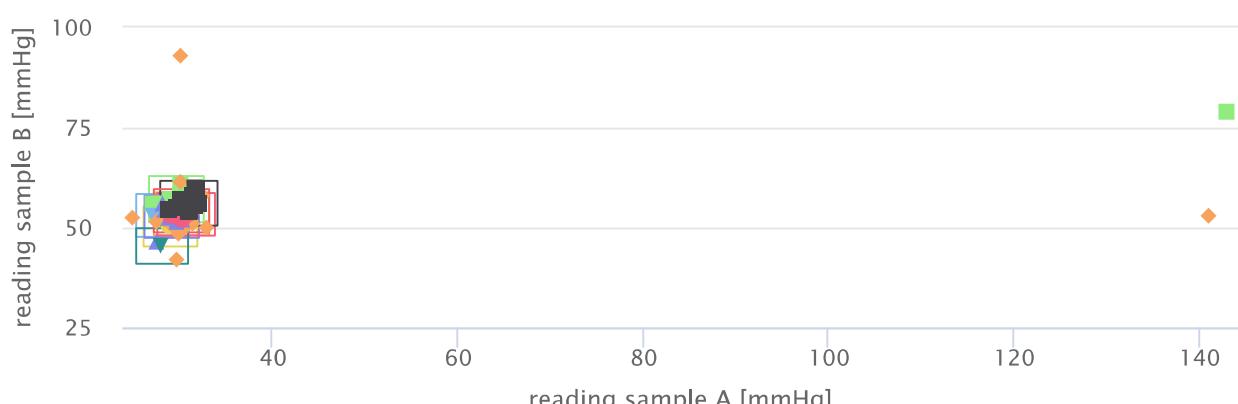


● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)



● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)

### Youden-Plots of all sample pairs



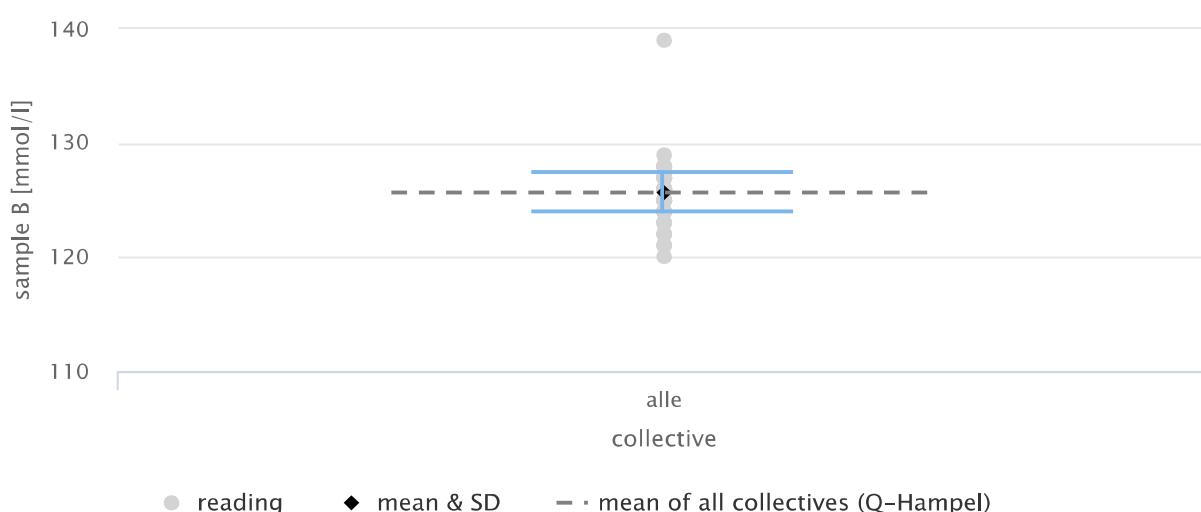
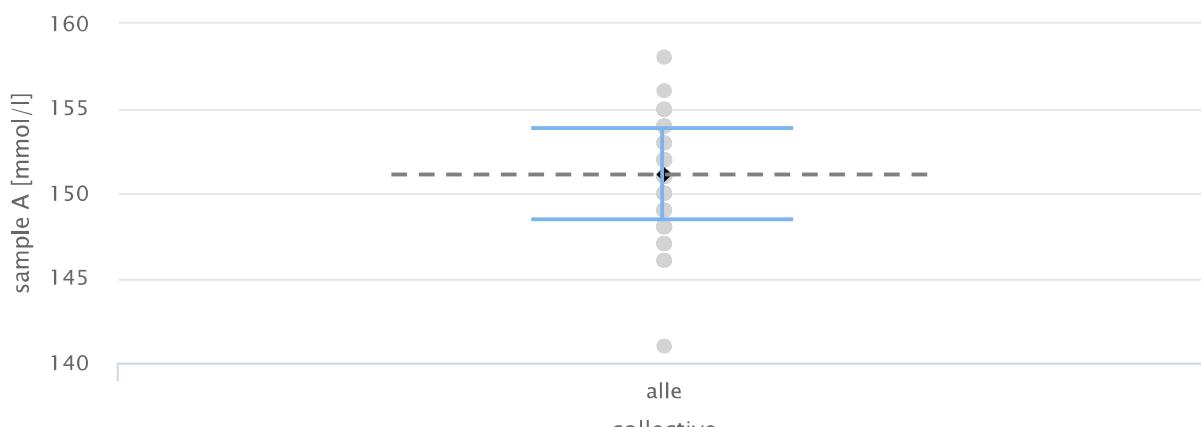
Device	Color
Epoch Reader	Yellow
Roche/AVL cobas b 123	Pink
*alle*	Red
Opti CCA-TS2	Blue
Roche/AVL cobas b 221 (OMNI S)	Black
Rapidpoint 500	Purple
i-STAT	Green

## c-Sodium mmol/l

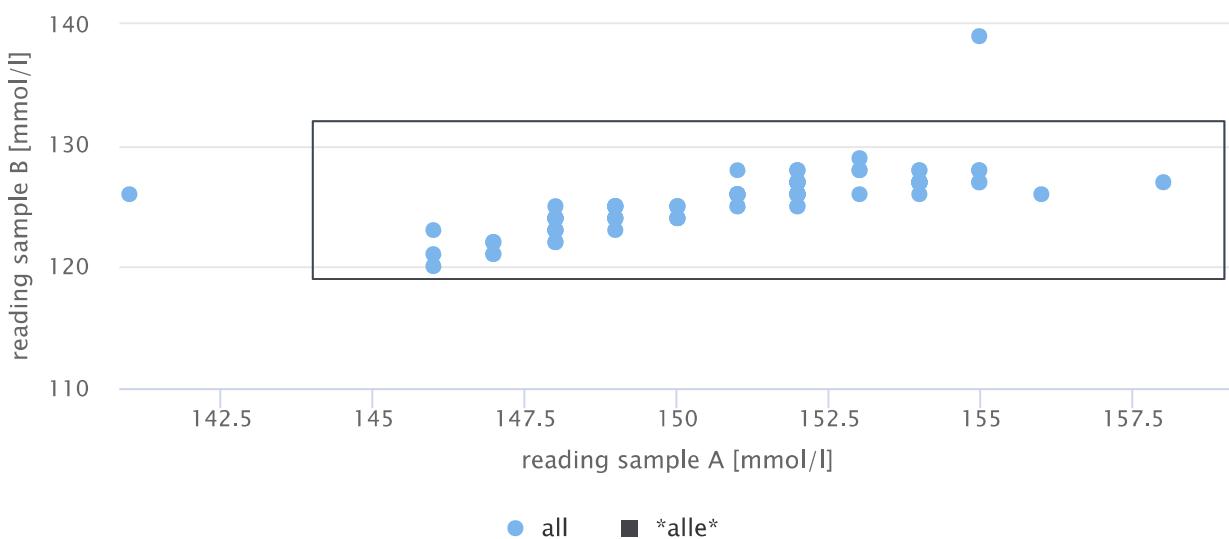
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
alle	A	115	151 [b]	5	[144...159]	114 (99%)	1 (1%)	151	152	3	1.76
	B	114	126 [b]	5	[119...132]	113 (99%)	1 (1%)	126	126	2	1.43

S-Curves of all samples



Youden-Plots of all sample pairs

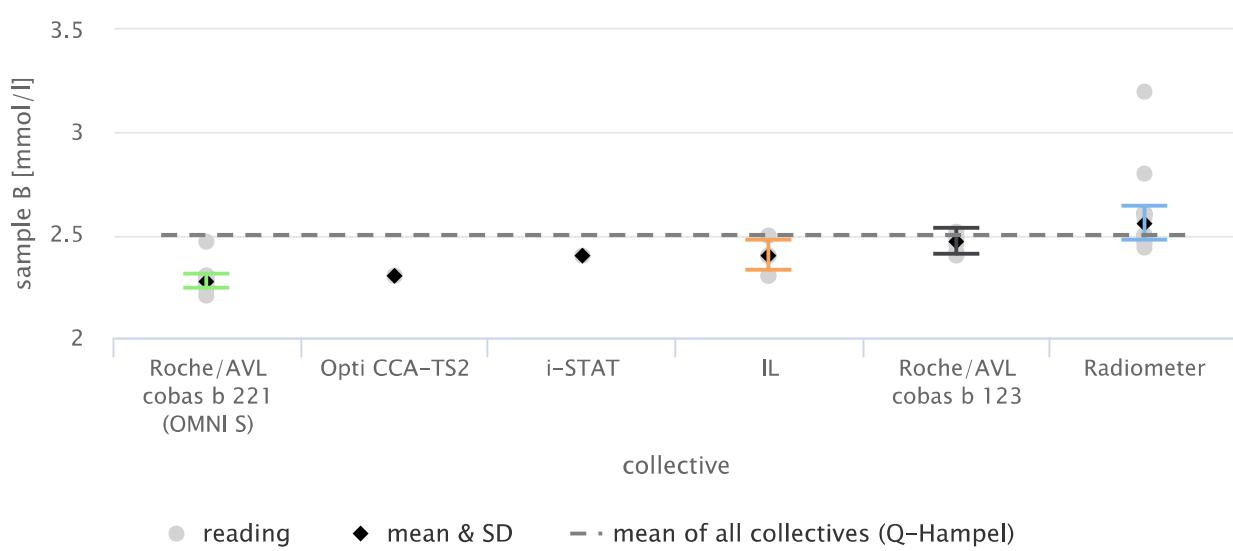
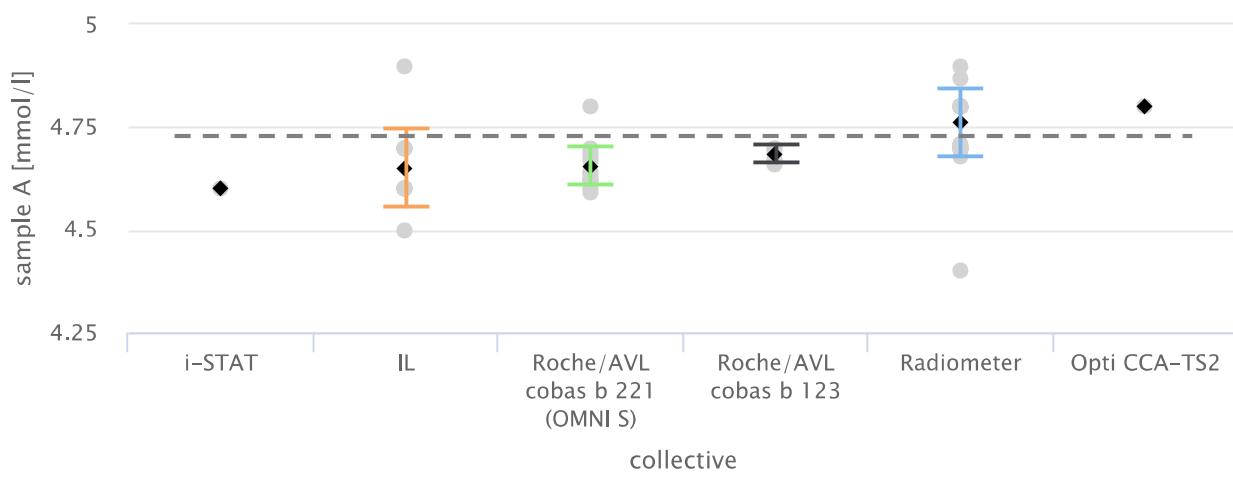


## c-Potassium mmol/l

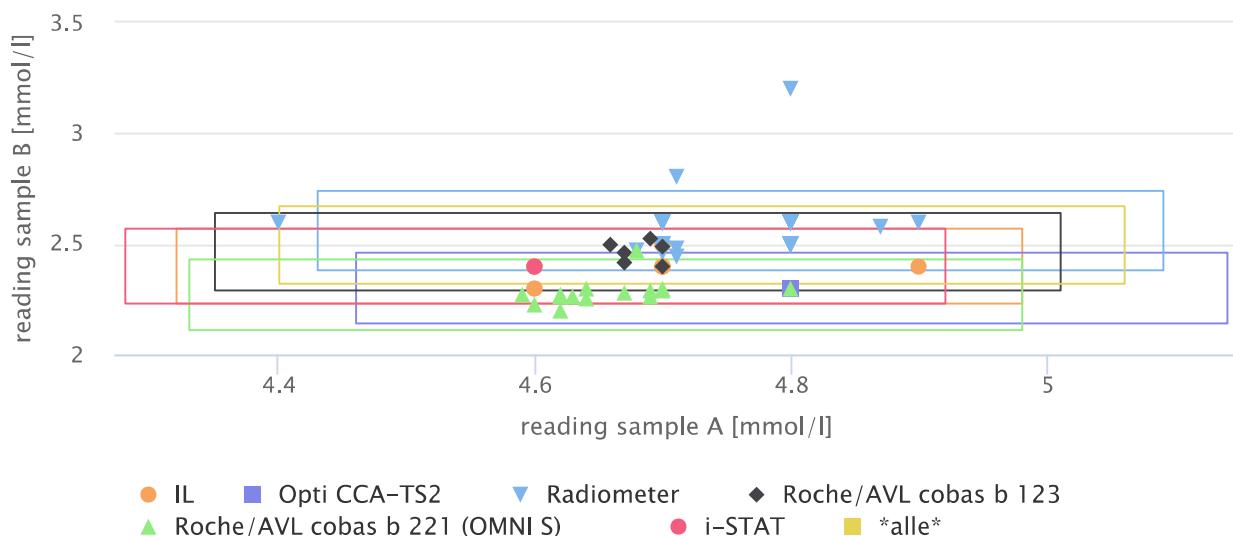
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
*all*	A	115	4.73 [b]	7	[4.40...5.06]	115 (100%)	0 (0%)	4.73	4.70	0.11	2.29
	B	114	2.50 [b]	7	[2.32...2.67]	95 (83%)	19 (17%)	2.50	2.50	0.13	5.02
IL	A	14	4.65 [b]	7	[4.32...4.98]	14 (100%)	0 (0%)	4.65	4.65	0.09	2.01
	B	13	2.40 [b]	7	[2.23...2.57]	13 (100%)	0 (0%)	2.40	2.40	0.07	2.90
Opti CCA-TS2	A	1	4.80 [b]*	7*	[4.46...5.14]*	1 (100%)*	0 (0%)*	4.80*	4.80*	*	*
	B	1	2.30 [b]*	7*	[2.14...2.46]*	1 (100%)*	0 (0%)*	2.30*	2.30*	*	*
Radiometer	A	78	4.76 [b]	7	[4.43...5.09]	77 (99%)	1 (1%)	4.76	4.80	0.08	1.75
	B	78	2.56 [b]	7	[2.38...2.74]	76 (97%)	2 (3%)	2.56	2.60	0.08	3.13
Roche/AVL cobas b 123	A	6	4.68 [b]	7	[4.35...5.01]	6 (100%)	0 (0%)	4.68	4.68	0.02	0.47
	B	6	2.46 [b]	7	[2.29...2.64]	6 (100%)	0 (0%)	2.46	2.48	0.06	2.59
Roche/AVL cobas b 221 (OMNI S)	A	15	4.65 [b]	7	[4.33...4.98]	15 (100%)	0 (0%)	4.65	4.64	0.05	1.01
	B	15	2.27 [b]	7	[2.11...2.43]	14 (93%)	1 (7%)	2.27	2.27	0.03	1.52
i-STAT	A	1	4.60 [b]*	7*	[4.28...4.92]*	1 (100%)*	0 (0%)*	4.60*	4.60*	*	*
	B	1	2.40 [b]*	7*	[2.23...2.57]*	1 (100%)*	0 (0%)*	2.40*	2.40*	*	*

### S-Curves of all samples



### Youden-Plots of all sample pairs

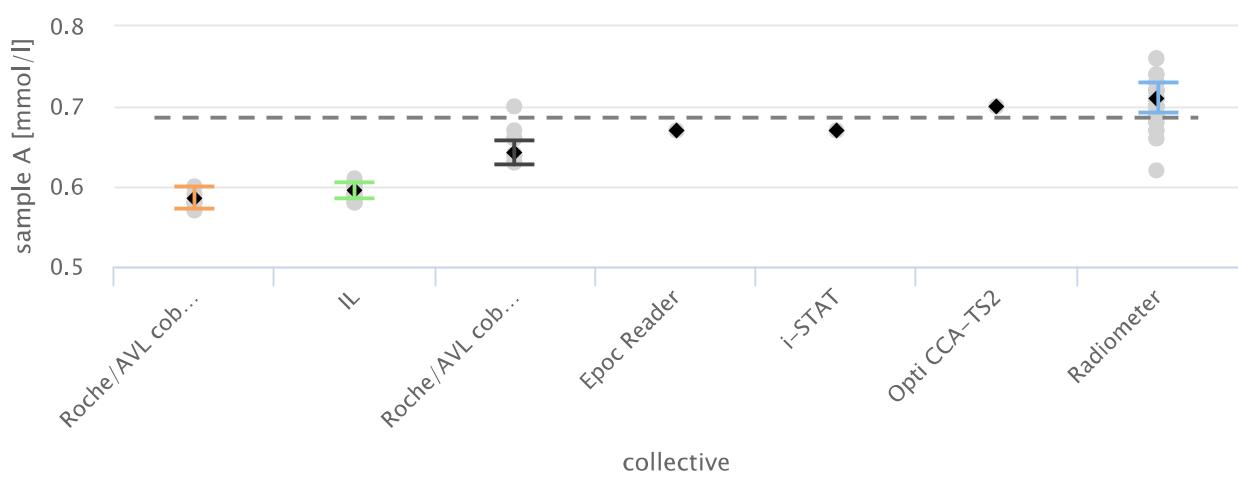


## c- ionized calcium mmol/l

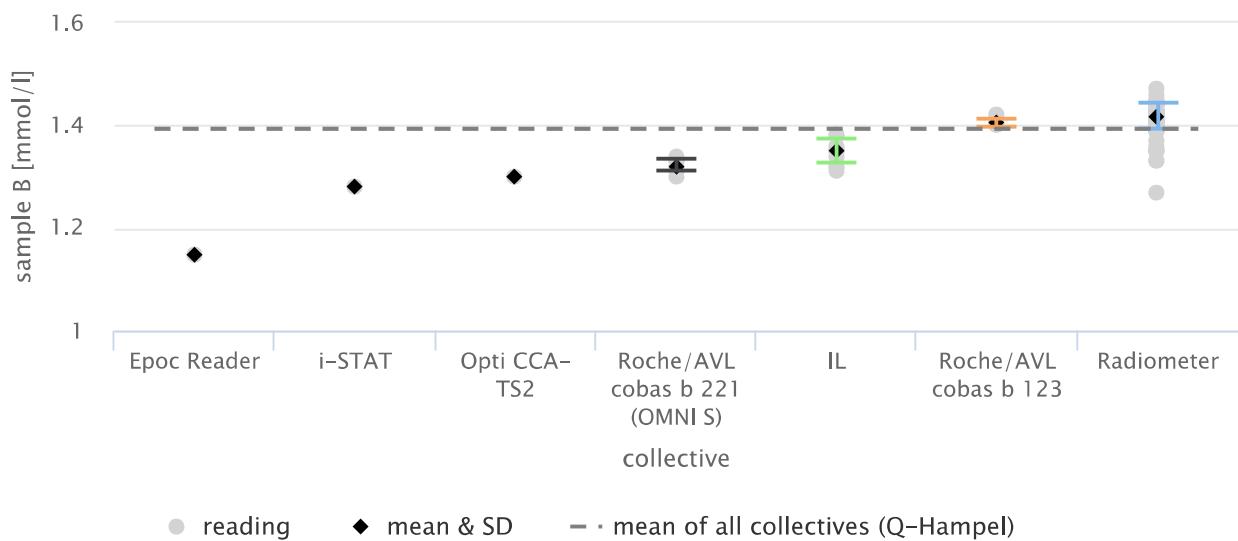
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
*all*	A	115	0.69 [b]	7	[0.64...0.73]	83 (72%)	32 (28%)	0.69	0.70	0.04	5.31
	B	114	1.39 [b]	7	[1.30...1.49]	111 (97%)	3 (3%)	1.39	1.40	0.04	2.84
Epoc Reader	A	1	0.67 [b]*	7*	[0.62...0.72]*	1 (100%)*	0 (0%)*	0.67*	0.67*	*	*
	B	1	1.15 [b]*	7*	[1.07...1.23]*	1 (100%)*	0 (0%)*	1.15*	1.15*	*	*
IL	A	14	0.59 [b]	7	[0.55...0.64]	14 (100%)	0 (0%)	0.59	0.60	0.01	1.78
	B	13	1.35 [b]	7	[1.26...1.44]	13 (100%)	0 (0%)	1.35	1.35	0.02	1.74
Opti CCA-TS2	A	1	0.70 [b]*	7*	[0.65...0.75]*	1 (100%)*	0 (0%)*	0.70*	0.70*	*	*
	B	1	1.30 [b]*	7*	[1.21...1.39]*	1 (100%)*	0 (0%)*	1.30*	1.30*	*	*
Radiometer	A	77	0.71 [b]	7	[0.66...0.76]	76 (99%)	1 (1%)	0.71	0.71	0.02	2.58
	B	77	1.42 [b]	7	[1.32...1.51]	76 (99%)	1 (1%)	1.42	1.42	0.03	1.79
Roche/AVL cobas b 123	A	7	0.59 [b]	7	[0.54...0.63]	7 (100%)	0 (0%)	0.59	0.58	0.01	2.43
	B	7	1.40 [b]	7	[1.31...1.50]	7 (100%)	0 (0%)	1.40	1.40	0.01	0.58
Roche/AVL cobas b 221 (OMNI S)	A	14	0.64 [b]	7	[0.60...0.69]	13 (93%)	1 (7%)	0.64	0.64	0.02	2.40
	B	14	1.32 [b]	7	[1.23...1.41]	14 (100%)	0 (0%)	1.32	1.32	0.01	0.93
i-STAT	A	1	0.67 [b]*	7*	[0.62...0.72]*	1 (100%)*	0 (0%)*	0.67*	0.67*	*	*
	B	1	1.28 [b]*	7*	[1.19...1.37]*	1 (100%)*	0 (0%)*	1.28*	1.28*	*	*

### S-Curves of all samples

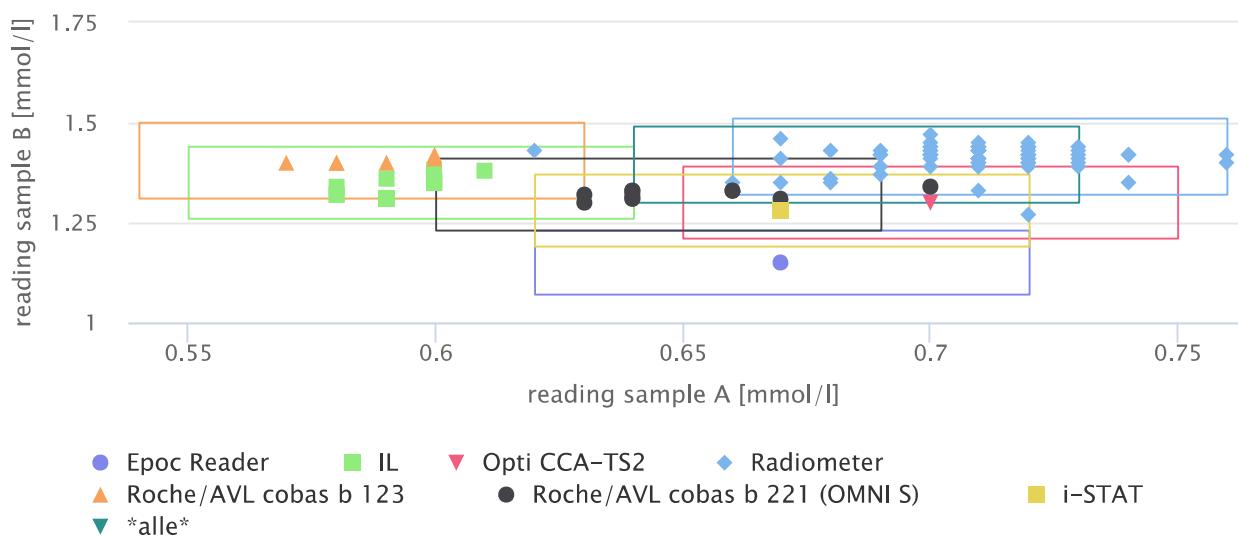


● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)



● reading      ◆ mean & SD      - - - mean of all collectives (Q-Hampel)

### Youden-Plots of all sample pairs

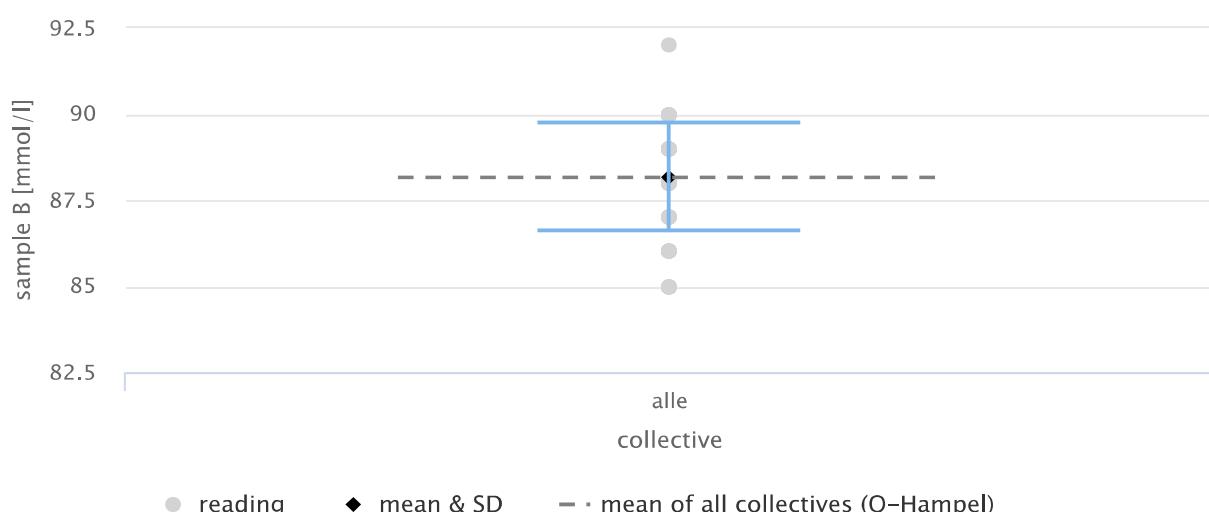
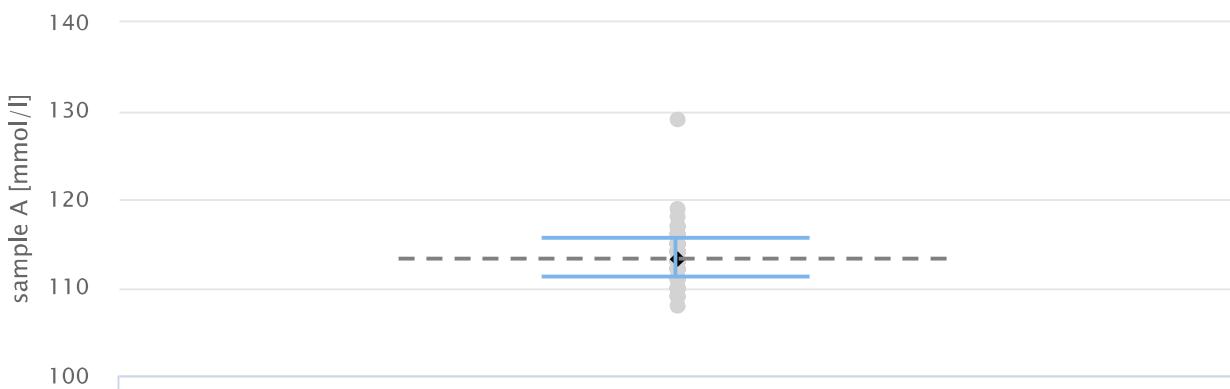


## c-Chloride mmol/l

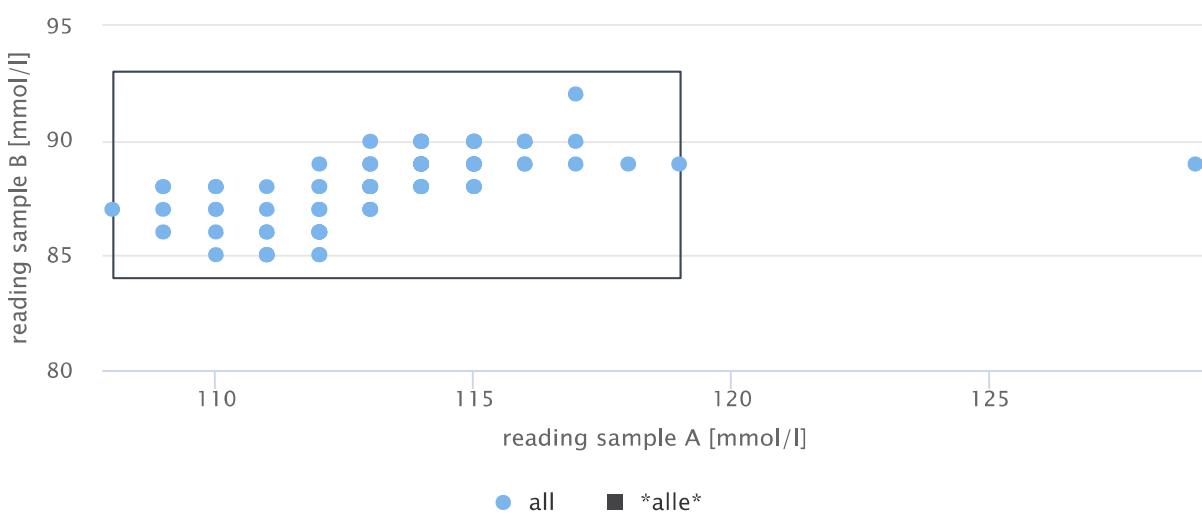
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
alle	A	108	113 [b]	5	[108...119]	107 (99%)	1 (1%)	113	114	2	1.92
	B	107	88 [b]	5	[84...93]	107 (100%)	0 (0%)	88	88	2	1.78

S-Curves of all samples



Youden-Plots of all sample pairs

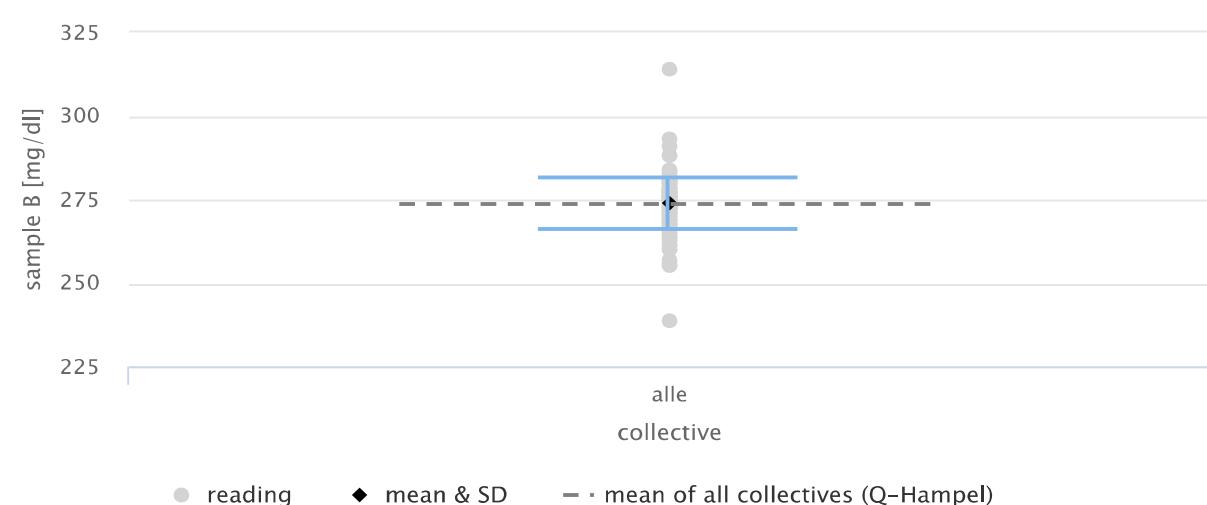
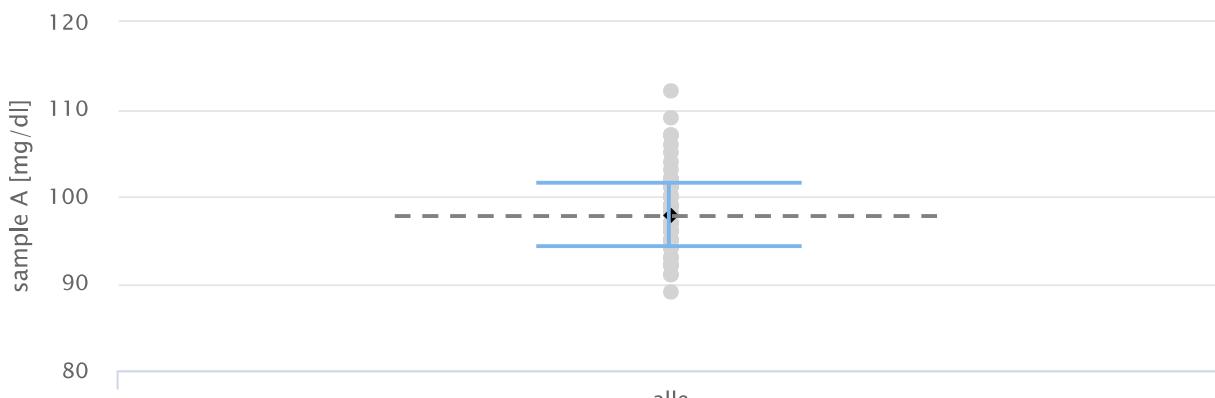


## c-Glucose mg/dl

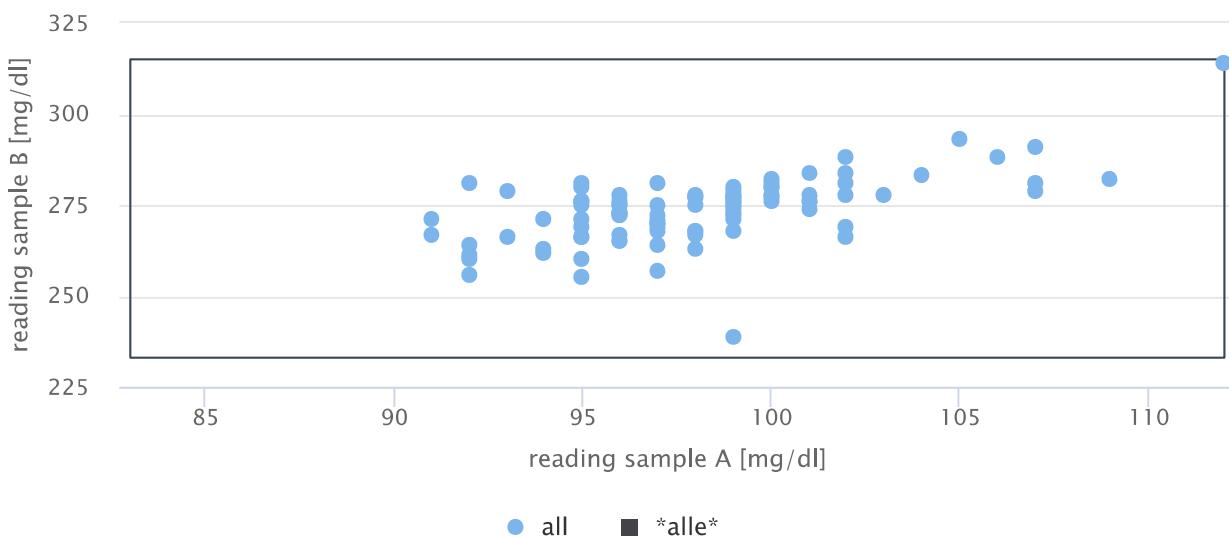
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
alle	A	99	98 [b]	15	[83...112]	99 (100%)	0 (0%)	98	98	4	3.69
	B	97	274 [b]	15	[233...315]	97 (100%)	0 (0%)	274	275	8	2.76

S-Curves of all samples



Youden-Plots of all sample pairs

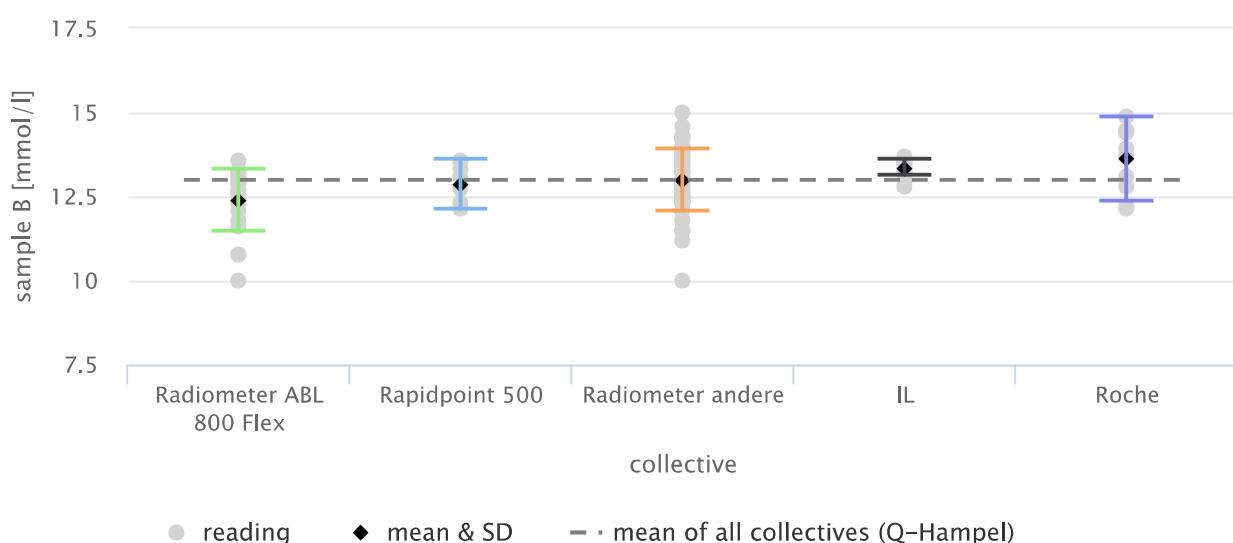
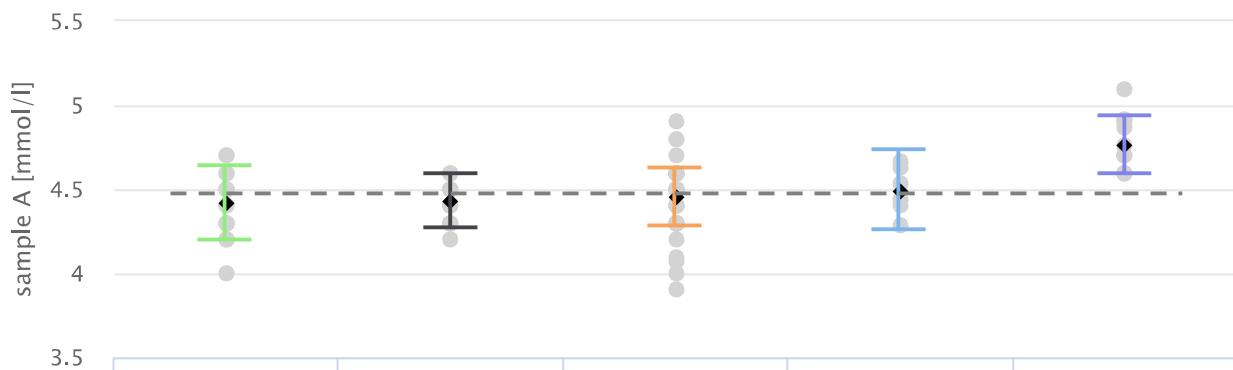


## c-Lactat mmol/l

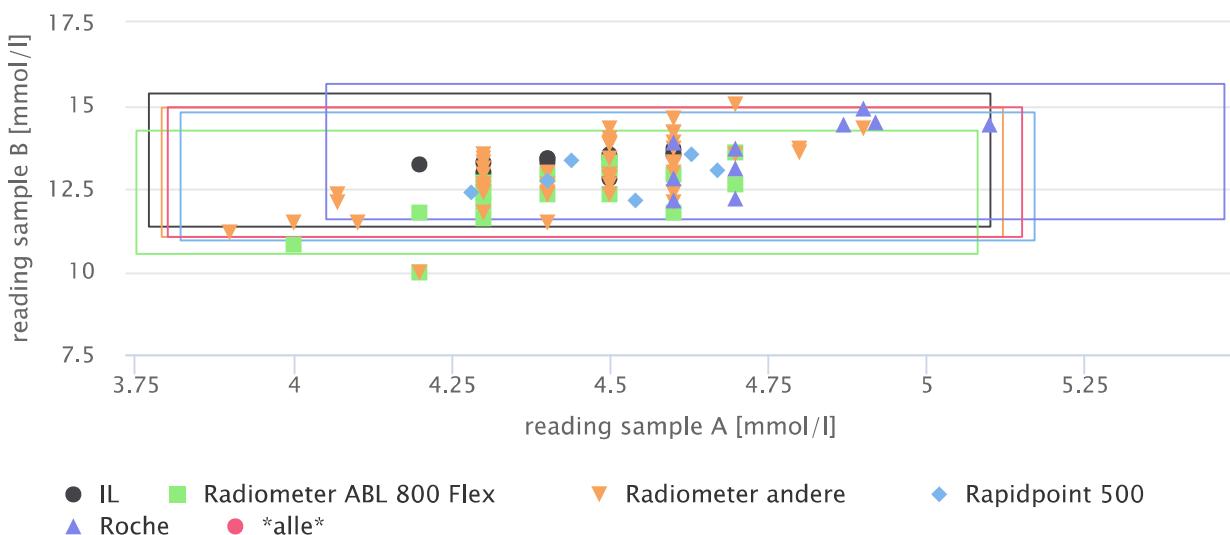
Split: Gerät

Collective	Sample	AnzE	Target	%-Abw	limits	correct	outliers	MW	Median	SD	CV %
*all*	A	100	4.48 [b]	15	[3.80...5.15]	100 (100%)	0 (0%)	4.48	4.50	0.17	3.77
	B	98	12.99 [b]	15	[11.04...14.94]	94 (96%)	4 (4%)	12.99	13.00	0.88	6.78
IL	A	13	4.43 [b]	15	[3.77...5.10]	13 (100%)	0 (0%)	4.43	4.40	0.16	3.56
	B	12	13.36 [b]	15	[11.35...15.36]	12 (100%)	0 (0%)	13.36	13.40	0.26	1.93
Radiometer ABL 800 Flex	A	17	4.42 [b]	15	[3.75...5.08]	17 (100%)	0 (0%)	4.42	4.40	0.22	4.91
	B	17	12.39 [b]	15	[10.53...14.24]	16 (94%)	1 (6%)	12.39	12.40	0.93	7.54
Radiometer andere	A	53	4.45 [b]	15	[3.79...5.12]	53 (100%)	0 (0%)	4.45	4.50	0.18	3.99
	B	53	12.98 [b]	15	[11.04...14.93]	51 (96%)	2 (4%)	12.98	12.90	0.94	7.24
Rapidpoint 500	A	6	4.49 [b]	15	[3.82...5.17]	6 (100%)	0 (0%)	4.49	4.49	0.23	5.19
	B	6	12.86 [b]	15	[10.93...14.79]	6 (100%)	0 (0%)	12.86	12.91	0.77	5.95
Roche	A	11	4.76 [b]	15	[4.05...5.47]	11 (100%)	0 (0%)	4.76	4.70	0.17	3.59
	B	10	13.61 [b]	15	[11.57...15.65]	10 (100%)	0 (0%)	13.61	13.80	1.23	9.05

S-Curves of all samples



### Youden-Plots of all sample pairs



### Category (Collectives)

#### pH

Number	Collective	Attribute	Specification
1	IL	Instrument	i-STAT IL Gem 3500 IL Gem 4000 IL Gem 5000 Opti CCA-TS2
2	Radiometer	Instrument	Epoch Reader Radiometer ABL 700 Radiometer ABL 80 Flex CO-OX Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 810 Flex Radiometer ABL 815 Flex Radiometer ABL 820 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9 Radiometer ABL 90 Flex Rapidpoint 500
3	Roche	Instrument	cobas b 123 POC System Roche/AVL cobas b 123 Roche/AVL cobas b 221 (OMNI S)

#### pO2 mmHg

Number	Collective	Attribute	Specification
1	Radiometer ABL 815 Flex	Instrument	Radiometer ABL 810 Flex Radiometer ABL 815 Flex Radiometer ABL 820 Flex
2	Radiometer ABL 835 Flex	Instrument	Radiometer ABL 700 Radiometer ABL 80 Flex CO-OX Radiometer ABL 825 Flex Radiometer ABL 835 Flex
3	Epoch Reader	Instrument	Epoch Reader

4	IL	Instrument	IL Gem 3500 IL Gem 4000 IL Gem 5000
5	Opti CCA-TS2	Instrument	Opti CCA-TS2
6	Radiometer ABL 800 Basic	Instrument	Radiometer ABL 800 Basic
7	Radiometer ABL 800 Flex	Instrument	Radiometer ABL 800 Flex
8	Radiometer ABL 9	Instrument	Radiometer ABL 9
9	Radiometer ABL 90 Flex	Instrument	Radiometer ABL 90 Flex
10	Rapidpoint 500	Instrument	Rapidpoint 500
11	Roche/AVL cobas b 123	Instrument	Roche/AVL cobas b 123
12	Roche/AVL cobas b 221 (OMNI S)	Instrument	Roche/AVL cobas b 221 (OMNI S)
13	cobas b 123 POC System	Instrument	cobas b 123 POC System
14	i-STAT	Instrument	i-STAT

**pCO<sub>2</sub> mmHg**

Number	Collective	Attribute	Specification
1	Epoc Reader	Instrument	Epoc Reader
2	IL	Instrument	IL Gem 3500 IL Gem 4000 IL Gem 5000
3	Opti CCA-TS2	Instrument	Opti CCA-TS2
4	Radiometer	Instrument	Radiometer ABL 700 Radiometer ABL 80 Flex CO-OX Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 810 Flex Radiometer ABL 815 Flex Radiometer ABL 820 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9 Radiometer ABL 90 Flex
5	Rapidpoint 500	Instrument	Rapidpoint 500
6	Roche/AVL cobas b 123	Instrument	cobas b 123 POC System Roche/AVL cobas b 123
7	Roche/AVL cobas b 221 (OMNI S)	Instrument	Roche/AVL cobas b 221 (OMNI S)

8	i-STAT	Instrument	i-STAT

**c-Sodium mmol/l**

Number	Collective	Attribute	Specification
1	alle	Instrument	cobas b 123 POC System i-STAT IL Gem 5000 Opti CCA-TS2 Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9 Radiometer ABL 90 Flex Rapidpoint 500 Roche/AVL cobas b 123 Roche/AVL cobas b 221 (OMNI S)

**c-Potassium mmol/l**

Number	Collective	Attribute	Specification
1	IL	Instrument	IL Gem 5000
2	Opti CCA-TS2	Instrument	Opti CCA-TS2
3	Radiometer	Instrument	Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9 Radiometer ABL 90 Flex Rapidpoint 500
4	Roche/AVL cobas b 123	Instrument	Roche/AVL cobas b 123
5	Roche/AVL cobas b 221 (OMNI S)	Instrument	cobas b 123 POC System Roche/AVL cobas b 221 (OMNI S)
6	i-STAT	Instrument	i-STAT

**c- ionized calcium mmol/l**

Number	Collective	Attribute	Specification
1	Epoch Reader	Instrument	Epoch Reader
2	IL	Instrument	IL Gem 5000
3	Opti CCA-TS2	Instrument	Opti CCA-TS2
4	Radiometer	Instrument	Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9

			Radiometer ABL 90 Flex Rapidpoint 500
5	Roche/AVL cobas b 123	Instrument	cobas b 123 POC System Roche/AVL cobas b 123
6	Roche/AVL cobas b 221 (OMNI S)	Instrument	Roche/AVL cobas b 221 (OMNI S)
7	i-STAT	Instrument	i-STAT

**c-Chloride mmol/l**

Number	Collective	Attribute	Specification
1	alle	Instrument	cobas b 123 POC System IL Gem 4000 IL Gem 5000 Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 9 Radiometer ABL 90 Flex Rapidpoint 500 Roche/AVL cobas b 123 Roche/AVL cobas b 221 (OMNI S)

**c-Glucose mg/dl**

Number	Collective	Attribute	Specification
1	alle	Instrument	cobas b 123 POC System i-STAT IL Gem 5000 Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 800 Flex Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 90 Flex Rapidpoint 500 Roche/AVL cobas b 123 Roche/AVL cobas b 221 (OMNI S)

**c-Lactat mmol/l**

Number	Collective	Attribute	Specification
1	IL	Instrument	IL Gem 5000
2	Radiometer ABL 800 Flex	Instrument	Radiometer ABL 800 Flex
3	Radiometer andere	Instrument	Radiometer ABL 700 Radiometer ABL 800 Basic Radiometer ABL 815 Flex Radiometer ABL 825 Flex Radiometer ABL 835 Flex Radiometer ABL 90 Flex
4	Rapidpoint 500	Instrument	Rapidpoint 500
5	Roche	Instrument	cobas b 123 POC System Roche/AVL cobas b 123 Roche/AVL cobas b 221 (OMNI S)

With best regards

Dr. Christoph Buchta, MBA  
Technical Management

Prim. Dr. Sabine Sussitz-Rack  
EQA Scheme Director