2018-11-05

LABQUALITY

External Quality Assessment Scheme

Veterinary basic chemistry 1-2018

Urgent! Please analyze the samples as soon as possible, - preferably on the arrival day or the following day at the latest!

Specimens
Specimens S001 (LQ780518011) and S002 (LQ780518012) are animal origin serum samples. Both samples are ready for use. Specimens should be handled as carefully as patient samples.

Storage
If you are not able to analyse the samples on the arrival day, the samples should be transferred immediately to a refrigerator and stored in the dark.

Use
Allow the samples to reach room temperature. Mix the specimens by quickly inverting the tube several times, until the suspension appears homogeneous.

Analysis
Analyze the chemistry parameters that are in your laboratory's test selection for serum and report your results on our electronic form at my.labscala.eu.

Reporting the results
Fill your results on my.labscala.fi. In case you have forgotten your password, please contact our client services at info@labquality.fi. Instructions on how to use the electronic form can be found on our YouTube channel at https://www.youtube.com/watch?v=SyRtvTEV8iY.

Report
Participants who have sent their results by November 25 will receive a laboratory specific report after the scheme is closed.

Instructions

Product no. 8530
LQ780518011-012 (UK)

The shipment includes
- 2 serum samples

If the kit is incomplete or contains damaged specimens, please report immediately to the EQA coordinator.

Please note:
The results should be at Labquality no later than **November 25, 2018.**

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Specimen S001 | Alkaline phosphatase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	12.00	12.00	-	1
BS-120 (Mindray)	-	-	-	-	-	3.00	3.00	-	1
Indiko (Thermo Fischer Scientific)	12.00	12.00	<0.01	<0.1	<0.01	12.00	12.00	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	12.00	12.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	5.00	5.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	13.00	13.00	-	1
All	**9.86**	**12.00**	**4.06**	**41.2**	**1.53**	**3.00**	**13.00**	**-**	**7**

Specimen S001 | Alkaline phosphatase, U/l| histogram summaries in LabScala

Specimen S001 | Alanine aminotransferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	4.00	4.00	-	1
BS-120 (Mindray)	3.00	3.00	<0.01	<0.1	<0.01	3.00	3.00	-	2
Indiko (Thermo Fischer Scientific)	3.00	3.00	1.41	47.1	1.00	2.00	4.00	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	2.00	2.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	6.00	6.00	-	1
All	**3.43**	**3.00**	**1.40**	**40.8**	**0.53**	**2.00**	**6.00**	**-**	**7**

Specimen S001 | Alanine aminotransferase, U/l| histogram summaries in LabScala

Specimen S001 | Glutamyl transferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	1.00	1.00	-	1
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	1.00	1.00	-	1
All	**1.00**	**1.00**	**<0.01**	**<0.1**	**<0.01**	**1.00**	**1.00**	**-**	**2**

Specimen S001 | Glutamyl transferase, U/l| histogram summaries in LabScala

Specimen S001 | Amylase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	570.00	570.00	-	1
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	598.00	598.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	544.00	544.00	-	1
All	**570.67**	**570.00**	**27.01**	**4.7**	**15.59**	**544.00**	**598.00**	**-**	**3**

Specimen S001 | Amylase, U/l| histogram summaries in LabScala

Specimen S001 | Albumin, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	27.60	27.60	-	1
BS-120 (Mindray)	29.45	29.45	1.34	4.6	0.95	28.50	30.40	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	23.00	23.00	-	1
Indiko (Thermo Fischer Scientific)	24.13	24.00	0.42	1.7	0.24	23.80	24.60	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	25.00	25.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	24.80	24.80	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	20.00	20.00	-	1
All	**25.17**	**24.70**	**2.97**	**11.8**	**0.94**	**20.00**	**30.40**	**-**	**10**

Specimen S001 | Albumin, g/l| histogram summaries in LabScala

Specimen S001 | Protein, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n

Advia 1800 (Siemens)	-	-	-	-	-	61.70	61.70	-	1
BS-120 (Mindray)	61.95	61.95	1.77	2.9	1.25	60.70	63.20	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	59.00	59.00	-	1
Indiko (Thermo Fischer Scientific)	59.00	59.00	1.00	1.7	0.58	58.00	60.00	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	57.00	57.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	59.00	59.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	61.00	61.00	-	1
All	**59.86**	**59.50**	**1.84**	**3.1**	**0.58**	**57.00**	**63.20**	**-**	**10**

Specimen S001 | Protein, g/l| histogram summaries in LabScala

Specimen S001 | Bilirubin total, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
BS-120 (Mindray)	-	-	-	-	-	0.9	0.9	-	1
Indiko (Thermo Fischer Scientific)	1.1	1.1	0.6	60.6	0.5	0.6	1.5	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	1.7	1.7	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	1.6	1.6	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	4.0	4.0	-	1
All	**1.7**	**1.6**	**1.2**	**70.5**	**0.5**	**0.6**	**4.0**	**-**	**6**

Specimen S001 | Bilirubin total, µmol/l| histogram summaries in LabScala

Specimen S001 | Urea, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	8.90	8.90	-	1
BS-120 (Mindray)	-	-	-	-	-	8.66	8.66	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	8.43	8.43	-	1
Indiko (Thermo Fischer Scientific)	8.07	7.90	0.67	8.3	0.38	7.50	8.80	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	7.20	7.20	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	8.44	8.44	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	7.40	7.40	-	1
All	**8.14**	**8.43**	**0.65**	**8.0**	**0.22**	**7.20**	**8.90**	**-**	**9**

Specimen S001 | Urea, mmol/l| histogram summaries in LabScala

Specimen S001 | Creatinine, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	100.0	100.0	-	1
BS-120 (Mindray)	93.7	93.7	8.7	9.3	6.2	87.5	99.9	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	127.0	127.0	-	1
Indiko (Thermo Fischer Scientific)	99.7	100.0	3.5	3.5	2.0	96.0	103.0	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	95.0	95.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	102.0	102.0	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	100.0	100.0	-	1
All	**101.0**	**100.0**	**10.2**	**10.0**	**3.2**	**87.5**	**127.0**	**-**	**10**

Specimen S001 | Creatinine, µmol/l| histogram summaries in LabScala

Specimen S001 | Calcium, ionized, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	2.02	2.02	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	2.15	2.15	-	1
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	1.95	1.95	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	2.09	2.09	-	1
All	**2.05**	**2.06**	**0.09**	**4.2**	**0.04**	**1.95**	**2.15**	**-**	**4**

Specimen S001 | Calcium, ionized, mmol/l| histogram summaries in LabScala

Specimen S001 | Glucose, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	3.00	3.00	-	1
BS-120 (Mindray)	3.31	3.31	0.04	1.1	0.03	3.28	3.33	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	2.90	2.90	-	1
Indiko (Thermo Fischer Scientific)	2.97	3.00	0.06	1.9	0.03	2.90	3.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	3.10	3.10	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	3.10	3.10	-	1
All	**3.07**	**3.00**	**0.15**	**5.0**	**0.05**	**2.90**	**3.33**	**-**	**9**

Specimen S001 | Glucose, mmol/l| histogram summaries in LabScala

Specimen S001 | Sodium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	142.4	142.4	-	1
BS-120 (Mindray)	-	-	-	-	-	145.0	145.0	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	142.0	142.0	-	1
Indiko (Thermo Fischer Scientific)	146.3	145.0	2.3	1.6	1.3	145.0	149.0	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	144.0	144.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	144.0	144.0	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	137.0	137.0	-	1
All	**143.7**	**144.0**	**3.2**	**2.2**	**1.1**	**137.0**	**149.0**	**-**	**9**

Specimen S001 | Sodium, mmol/l| histogram summaries in LabScala

Specimen S001 | Potassium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	4.96	4.96	-	1
BS-120 (Mindray)	-	-	-	-	-	5.20	5.20	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	4.80	4.80	-	1
Indiko (Thermo Fischer Scientific)	4.90	4.90	0.10	2.0	0.06	4.80	5.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	4.97	4.97	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	5.00	5.00	-	1
All	**4.95**	**4.97**	**0.13**	**2.6**	**0.05**	**4.80**	**5.20**	**-**	**8**

Specimen S001 | Potassium, mmol/l| histogram summaries in LabScala

Specimen S001 | Phosphorus, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	1.62	1.62	-	1
BS-120 (Mindray)	-	-	-	-	-	1.58	1.58	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	1.70	1.70	-	1
Indiko (Thermo Fischer Scientific)	1.57	1.55	0.08	4.9	0.04	1.50	1.65	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	1.43	1.43	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	1.56	1.56	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	1.79	1.79	-	1
All	**1.60**	**1.58**	**0.11**	**6.7**	**0.04**	**1.43**	**1.79**	**-**	**9**

Specimen S001 | Phosphorus, mmol/l| histogram summaries in LabScala

Specimen S001 | GLOB, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	34	34	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	36	36	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	41	41	-	1
All	**37**	**36**	**4**	**9.6**	**2**	**34**	**41**	**-**	**3**

Specimen S001 | GLOB, g/l| histogram summaries in LabScala

Specimen S001 | Aspartate aminotransferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	24.00	24.00	-	1
BS-120 (Mindray)	11.50	11.50	0.71	6.1	0.50	11.00	12.00	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	23.00	23.00	-	1
Indiko (Thermo Fischer Scientific)	20.00	20.00	1.00	5.0	0.58	19.00	21.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	24.00	24.00	-	1
All	**19.25**	**20.50**	**5.12**	**26.6**	**1.81**	**11.00**	**24.00**	**-**	**8**

Specimen S001 | Aspartate aminotransferase, U/l| histogram summaries in LabScala

Specimen S001 | Creatine kinase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	230.00	230.00	-	1
BS-120 (Mindray)	-	-	-	-	-	265.00	265.00	-	1
Indiko (Thermo Fischer Scientific)	261.00	259.00	7.21	2.8	4.16	255.00	269.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	277.00	277.00	-	1
All	**259.17**	**262.00**	**16.23**	**6.3**	**6.63**	**230.00**	**277.00**	**-**	**6**

Specimen S001 | Creatine kinase, U/l| histogram summaries in LabScala

Specimen S001 | Thyroxine, nmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	15.30	15.30	-	1
BS-120 (Mindray)	-	-	-	-	-	19.62	19.62	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	26.00	26.00	-	1
All	**20.31**	**19.62**	**5.38**	**26.5**	**3.11**	**15.30**	**26.00**	**-**	**3**

Specimen S001 | Thyroxine, nmol/l| histogram summaries in LabScala

Specimen S001 | Cholesterol, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	2.37	2.37	-	1
BS-120 (Mindray)	-	-	-	-	-	2.54	2.54	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	2.42	2.42	-	1
Indiko (Thermo Fischer Scientific)	2.45	2.45	0.07	2.9	0.05	2.40	2.50	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	2.40	2.40	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	2.50	2.50	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	2.30	2.30	-	1
All	**2.43**	**2.41**	**0.08**	**3.3**	**0.03**	**2.30**	**2.54**	**-**	**8**

Specimen S001 | Cholesterol, mmol/l| histogram summaries in LabScala

Specimen S001 | Magnesium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	0.90	0.90	-	1
BS-120 (Mindray)	0.93	0.93	0.03	3.2	0.02	0.91	0.95	-	2
Indiko (Thermo Fischer Scientific)	0.90	0.90	0.02	2.4	0.02	0.88	0.91	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	0.91	0.91	-	1
All	**0.91**	**0.91**	**0.02**	**2.5**	**<0.01**	**0.88**	**0.95**	**-**	**6**

Specimen S001 | Magnesium, mmol/l| histogram summaries in LabScala

Specimen S001 | Triglycerides, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	0.45	0.45	-	1
BS-120 (Mindray)	-	-	-	-	-	0.47	0.47	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	0.34	0.34	-	1

Indiko (Thermo Fischer Scientific)	0.36	0.36	0.01	3.9	0.01	0.35	0.37	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	0.37	0.37	-	1
All	**0.39**	**0.37**	**0.05**	**13.9**	**0.02**	**0.34**	**0.47**	**-**	**6**

Specimen S001 | Triglycerides, mmol/l| histogram summaries in LabScala

Specimen S001 | Chloride, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	117.2	117.2	-	1
BS-120 (Mindray)	-	-	-	-	-	108.0	108.0	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	111.0	111.0	-	1
Indiko (Thermo Fischer Scientific)	115.6	115.6	0.6	0.6	0.5	115.1	116.0	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	110.0	110.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	118.6	118.6	-	1
All	**113.7**	**115.1**	**4.0**	**3.5**	**1.5**	**108.0**	**118.6**	**-**	**7**

Specimen S001 | Chloride, mmol/l| histogram summaries in LabScala

Specimen S001 | Osmol, mosm/kg

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	303.00	303.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**303.00**	**303.00**	**-**	**1**

Specimen S001 | Osmol, mosm/kg| histogram summaries in LabScala

Specimen S001 | Calcium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	2.04	2.04	-	1
All	**-**	**-**	**-**	**-**	**-**	**2.04**	**2.04**	**-**	**1**

Specimen S001 | Calcium, mmol/l| histogram summaries in LabScala

Specimen S001 | Iron, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	13.10	13.10	-	1
All	**-**	**-**	**-**	**-**	**-**	**13.10**	**13.10**	**-**	**1**

Specimen S001 | Iron, µmol/l| histogram summaries in LabScala

Specimen S001 | Lactate dehydrogenase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	53.00	53.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**53.00**	**53.00**	**-**	**1**

Specimen S001 | Lactate dehydrogenase, U/l| histogram summaries in LabScala

Specimen S001 | Uric acid, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	18.00	18.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**18.00**	**18.00**	**-**	**1**

Specimen S001 | Uric acid, µmol/l| histogram summaries in LabScala

Specimen S002 | Alkaline phosphatase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	37.00	37.00	-	1
BS-120 (Mindray)	-	-	-	-	-	26.00	26.00	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	39.00	39.00	-	1
Indiko (Thermo Fischer Scientific)	41.00	40.00	3.61	8.8	2.08	38.00	45.00	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	47.00	47.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	38.00	38.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	38.00	38.00	-	1
All	**38.67**	**38.00**	**5.87**	**15.2**	**1.96**	**26.00**	**47.00**	**-**	**9**

Specimen S002 | Alkaline phosphatase, U/l| histogram summaries in LabScala

Specimen S002 | Alanine aminotransferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	35.00	35.00	-	1
BS-120 (Mindray)	34.50	34.50	0.71	2.0	0.50	34.00	35.00	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	43.00	43.00	-	1
Indiko (Thermo Fischer Scientific)	37.00	37.00	1.00	2.7	0.58	36.00	38.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	39.00	39.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	36.00	36.00	-	1
All	**37.00**	**36.00**	**2.74**	**7.4**	**0.91**	**34.00**	**43.00**	**-**	**9**

Specimen S002 | Alanine aminotransferase, U/l| histogram summaries in LabScala

Specimen S002 | Glutamyl transferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	4.00	4.00	-	1
BS-120 (Mindray)	-	-	-	-	-	3.00	3.00	-	1
Indiko (Thermo Fischer Scientific)	4.00	4.00	1.41	35.4	1.00	3.00	5.00	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	3.00	3.00	-	1
All	**3.60**	**3.00**	**0.89**	**24.8**	**0.40**	**3.00**	**5.00**	**-**	**5**

Specimen S002 | Glutamyl transferase, U/l| histogram summaries in LabScala

Specimen S002 | Amylase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	620.00	620.00	-	1
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	693.00	693.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	491.00	491.00	-	1
All	**601.33**	**620.00**	**102.29**	**17.0**	**59.05**	**491.00**	**693.00**	**-**	**3**

Specimen S002 | Amylase, U/l| histogram summaries in LabScala

Specimen S002 | Albumin, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	30.70	30.70	-	1
BS-120 (Mindray)	32.05	32.05	1.20	3.8	0.85	31.20	32.90	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	30.00	30.00	-	1
Indiko (Thermo Fischer Scientific)	28.23	28.00	0.40	1.4	0.23	28.00	28.70	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	29.00	29.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	28.90	28.90	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	58.00	58.00	-	1
All	**29.71**	**29.00**	**1.64**	**5.5**	**0.55**	**28.00**	**32.90**	**1**	**10**

Specimen S002 | Albumin, g/l| histogram summaries in LabScala

Specimen S002 | Protein, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n

Advia 1800 (Siemens)	-	-	-	-	-	59.90	59.90	-	1
BS-120 (Mindray)	61.40	61.40	3.25	5.3	2.30	59.10	63.70	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	57.00	57.00	-	1
Indiko (Thermo Fischer Scientific)	58.33	58.00	0.58	1.0	0.33	58.00	59.00	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	56.00	56.00	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	57.00	57.00	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	61.00	61.00	-	1
All	**58.87**	**58.50**	**2.25**	**3.8**	**0.71**	**56.00**	**63.70**	**-**	**10**

Specimen S002 | Protein, g/l| histogram summaries in LabScala

Specimen S002 | Bilirubin total, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	0.3	0.3	-	1
BS-120 (Mindray)	-	-	-	-	-	1.0	1.0	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	4.0	4.0	-	1
Indiko (Thermo Fischer Scientific)	1.7	1.7	0.5	30.0	0.4	1.3	2.0	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	2.1	2.1	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	2.2	2.2	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	4.0	4.0	-	1
All	**2.1**	**2.1**	**1.3**	**62.6**	**0.5**	**0.3**	**4.0**	**-**	**8**

Specimen S002 | Bilirubin total, µmol/l| histogram summaries in LabScala

Specimen S002 | Urea, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	5.50	5.50	-	1
BS-120 (Mindray)	-	-	-	-	-	5.66	5.66	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	5.41	5.41	-	1
Indiko (Thermo Fischer Scientific)	5.20	5.30	0.46	8.8	0.26	4.70	5.60	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	4.60	4.60	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	5.27	5.27	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	4.70	4.70	-	1
All	**5.19**	**5.30**	**0.42**	**8.0**	**0.14**	**4.60**	**5.66**	**-**	**9**

Specimen S002 | Urea, mmol/l| histogram summaries in LabScala

Specimen S002 | Creatinine, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	68.0	68.0	-	1
BS-120 (Mindray)	48.6	48.6	7.5	15.4	5.3	43.3	53.9	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	51.0	51.0	-	1
Indiko (Thermo Fischer Scientific)	57.0	57.0	1.0	1.8	0.6	56.0	58.0	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	58.0	58.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	58.0	58.0	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	65.0	65.0	-	1
All	**56.8**	**57.5**	**6.8**	**12.0**	**2.2**	**43.3**	**68.0**	**-**	**10**

Specimen S002 | Creatinine, µmol/l| histogram summaries in LabScala

Specimen S002 | Calcium, ionized, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	2.48	2.48	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	2.73	2.73	-	1
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	2.50	2.50	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	2.70	2.70	-	1
All	**2.60**	**2.60**	**0.13**	**5.0**	**0.07**	**2.48**	**2.73**	**-**	**4**

Specimen S002 | Calcium, ionized, mmol/l| histogram summaries in LabScala

Specimen S002 | Glucose, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	3.20	3.20	-	1
BS-120 (Mindray)	3.55	3.55	<0.01	<0.1	<0.01	3.55	3.55	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	3.20	3.20	-	1
Indiko (Thermo Fischer Scientific)	3.33	3.40	0.12	3.5	0.07	3.20	3.40	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	3.40	3.40	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	3.30	3.30	-	1
All	**3.36**	**3.40**	**0.14**	**4.2**	**0.05**	**3.20**	**3.55**	**-**	**9**

Specimen S002 | Glucose, mmol/l| histogram summaries in LabScala

Specimen S002 | Sodium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	145.3	145.3	-	1
BS-120 (Mindray)	-	-	-	-	-	148.0	148.0	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	143.0	143.0	-	1
Indiko (Thermo Fischer Scientific)	148.7	147.0	2.9	1.9	1.7	147.0	152.0	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	148.0	148.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	146.0	146.0	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	138.0	138.0	-	1
All	**146.0**	**147.0**	**3.9**	**2.6**	**1.3**	**138.0**	**152.0**	**-**	**9**

Specimen S002 | Sodium, mmol/l| histogram summaries in LabScala

Specimen S002 | Potassium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	4.56	4.56	-	1
BS-120 (Mindray)	-	-	-	-	-	4.70	4.70	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	4.30	4.30	-	1
Indiko (Thermo Fischer Scientific)	4.53	4.50	0.06	1.3	0.03	4.50	4.60	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	4.52	4.52	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	4.90	4.90	-	1
All	**4.57**	**4.54**	**0.17**	**3.8**	**0.06**	**4.30**	**4.90**	**-**	**8**

Specimen S002 | Potassium, mmol/l| histogram summaries in LabScala

Specimen S002 | Phosphorus, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	1.46	1.46	-	1
BS-120 (Mindray)	-	-	-	-	-	1.39	1.39	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	1.47	1.47	-	1
Indiko (Thermo Fischer Scientific)	1.42	1.40	0.08	5.8	0.05	1.35	1.51	-	3
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	1.34	1.34	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	1.44	1.44	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	1.56	1.56	-	1
All	**1.44**	**1.44**	**0.07**	**5.1**	**0.02**	**1.34**	**1.56**	**-**	**9**

Specimen S002 | Phosphorus, mmol/l| histogram summaries in LabScala

Specimen S002 | GLOB, g/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	29	29	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	27	27	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	3	3	-	1
All	**20**	**27**	**15**	**73.6**	**8**	**3**	**29**	**-**	**3**

Specimen S002 | GLOB, g/l| histogram summaries in LabScala

Specimen S002 | Aspartate aminotransferase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	39.00	39.00	-	1
BS-120 (Mindray)	34.00	34.00	<0.01	<0.1	<0.01	34.00	34.00	-	2
Fuji NX500 (Fujifilm)	-	-	-	-	-	37.00	37.00	-	1
Indiko (Thermo Fischer Scientific)	41.33	41.00	2.52	6.1	1.45	39.00	44.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	46.00	46.00	-	1
All	**39.25**	**39.00**	**4.33**	**11.0**	**1.53**	**34.00**	**46.00**	**-**	**8**

Specimen S002 | Aspartate aminotransferase, U/l| histogram summaries in LabScala

Specimen S002 | Creatine kinase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	232.00	232.00	-	1
BS-120 (Mindray)	-	-	-	-	-	281.00	281.00	-	1
Indiko (Thermo Fischer Scientific)	272.00	271.00	11.53	4.2	6.66	261.00	284.00	-	3
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	289.00	289.00	-	1
All	**269.67**	**276.00**	**20.99**	**7.8**	**8.57**	**232.00**	**289.00**	**-**	**6**

Specimen S002 | Creatine kinase, U/l| histogram summaries in LabScala

Specimen S002 | Thyroxine, nmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	19.50	19.50	-	1
BS-120 (Mindray)	-	-	-	-	-	19.65	19.65	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	19.00	19.00	-	1
All	**19.38**	**19.50**	**0.34**	**1.8**	**0.20**	**19.00**	**19.65**	**-**	**3**

Specimen S002 | Thyroxine, nmol/l| histogram summaries in LabScala

Specimen S002 | Cholesterol, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	4.59	4.59	-	1
BS-120 (Mindray)	-	-	-	-	-	4.58	4.58	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	5.14	5.14	-	1
Indiko (Thermo Fischer Scientific)	4.85	4.85	0.07	1.5	0.05	4.80	4.90	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	4.80	4.80	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	4.80	4.80	-	1
Vetscan VS2 (Abaxis)	-	-	-	-	-	4.60	4.60	-	1
All	**4.78**	**4.80**	**0.19**	**4.0**	**0.07**	**4.58**	**5.14**	**-**	**8**

Specimen S002 | Cholesterol, mmol/l| histogram summaries in LabScala

Specimen S002 | Magnesium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	0.81	0.81	-	1
BS-120 (Mindray)	1.20	1.20	0.52	43.2	0.37	0.83	1.56	-	2
Indiko (Thermo Fischer Scientific)	0.81	0.81	<0.01	0.9	<0.01	0.80	0.81	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	0.87	0.87	-	1
All	**0.95**	**0.82**	**0.30**	**31.8**	**0.12**	**0.80**	**1.56**	**-**	**6**

Specimen S002 | Magnesium, mmol/l| histogram summaries in LabScala

Specimen S002 | Triglycerides, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	0.49	0.49	-	1

BS-120 (Mindray)	-	-	-	-	-	0.44	0.44	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	0.38	0.38	-	1
Indiko (Thermo Fischer Scientific)	0.43	0.43	0.01	3.3	0.01	0.42	0.44	-	2
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	0.46	0.46	-	1
All	**0.44**	**0.44**	**0.04**	**8.5**	**0.02**	**0.38**	**0.49**	**-**	**6**

Specimen S002 | Triglycerides, mmol/l| histogram summaries in LabScala

Specimen S002 | Chloride, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	112.7	112.7	-	1
BS-120 (Mindray)	-	-	-	-	-	104.0	104.0	-	1
Fuji NX500 (Fujifilm)	-	-	-	-	-	102.0	102.0	-	1
Indiko (Thermo Fischer Scientific)	112.0	112.0	<0.1	<0.1	<0.1	112.0	112.0	-	2
Konelab 30 (Thermo Fischer Scientific)	-	-	-	-	-	107.0	107.0	-	1
Konelab 60i (Thermo Fischer Scientific)	-	-	-	-	-	113.7	113.7	-	1
All	**109.1**	**112.0**	**4.7**	**4.3**	**1.8**	**102.0**	**113.7**	**-**	**7**

Specimen S002 | Chloride, mmol/l| histogram summaries in LabScala

Specimen S002 | Osmol, mosm/kg

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia 1800 (Siemens)	-	-	-	-	-	304.00	304.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**304.00**	**304.00**	**-**	**1**

Specimen S002 | Osmol, mosm/kg| histogram summaries in LabScala

Specimen S002 | Calcium, mmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	2.63	2.63	-	1
All	**-**	**-**	**-**	**-**	**-**	**2.63**	**2.63**	**-**	**1**

Specimen S002 | Calcium, mmol/l| histogram summaries in LabScala

Specimen S002 | Iron, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	23.50	23.50	-	1
All	**-**	**-**	**-**	**-**	**-**	**23.50**	**23.50**	**-**	**1**

Specimen S002 | Iron, µmol/l| histogram summaries in LabScala

Specimen S002 | Lactate dehydrogenase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	289.00	289.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**289.00**	**289.00**	**-**	**1**

Specimen S002 | Lactate dehydrogenase, U/l| histogram summaries in LabScala

Specimen S002 | Lipase, U/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	59.00	59.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**59.00**	**59.00**	**-**	**1**

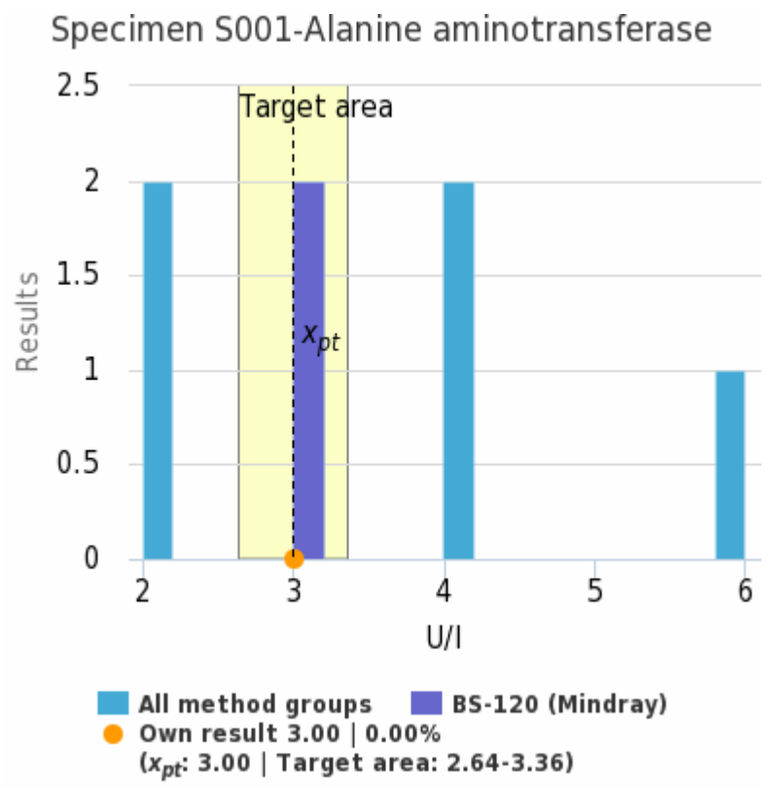
Specimen S002 | Lipase, U/l| histogram summaries in LabScala

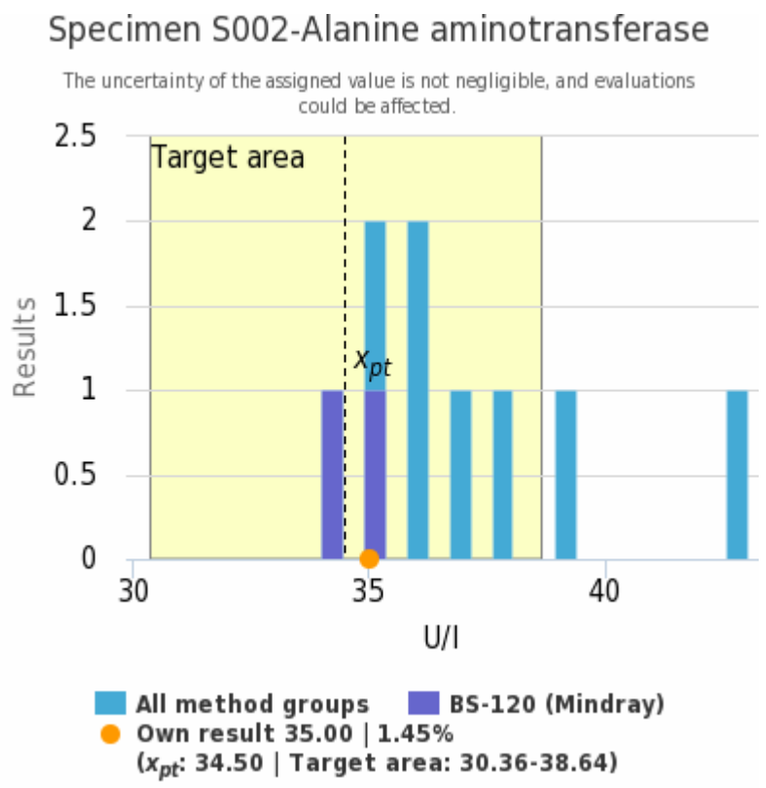
Specimen S002 | Uric acid, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Indiko (Thermo Fischer Scientific)	-	-	-	-	-	36.00	36.00	-	1
All	**-**	**-**	**-**	**-**	**-**	**36.00**	**36.00**	**-**	**1**

Specimen S002 | Uric acid, µmol/l| histogram summaries in LabScala

Alanine aminotransferase |1

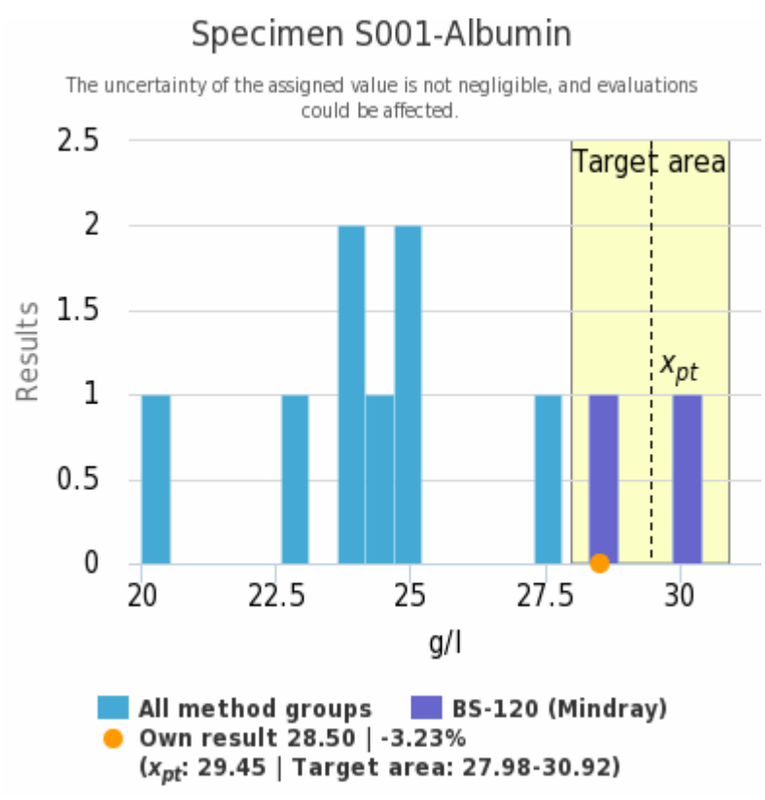


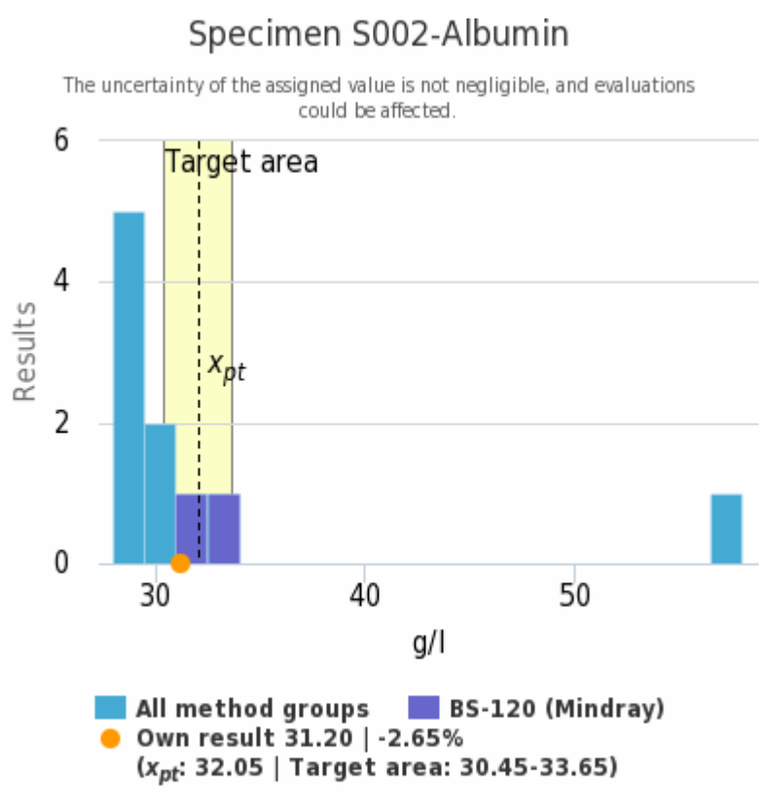


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	3.00 U/l	<0.01	<0.01	<0.1	2
All methods	3.43 U/l	1.40	0.53	40.8	7

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	34.50 U/l	0.71	0.50	2.0	2
All methods	37.00 U/l	2.74	0.91	7.4	9

Albumin |1

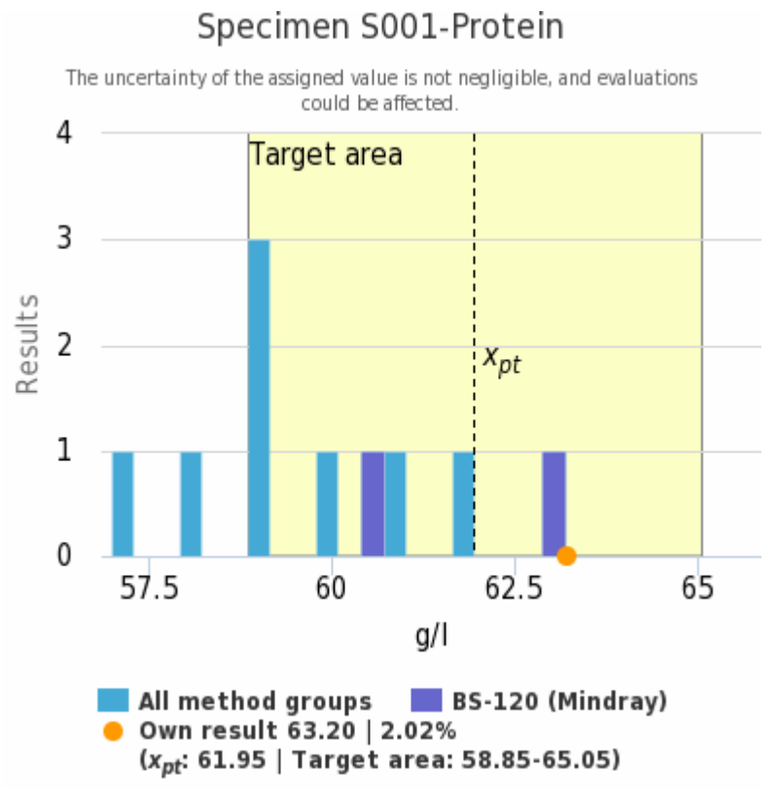


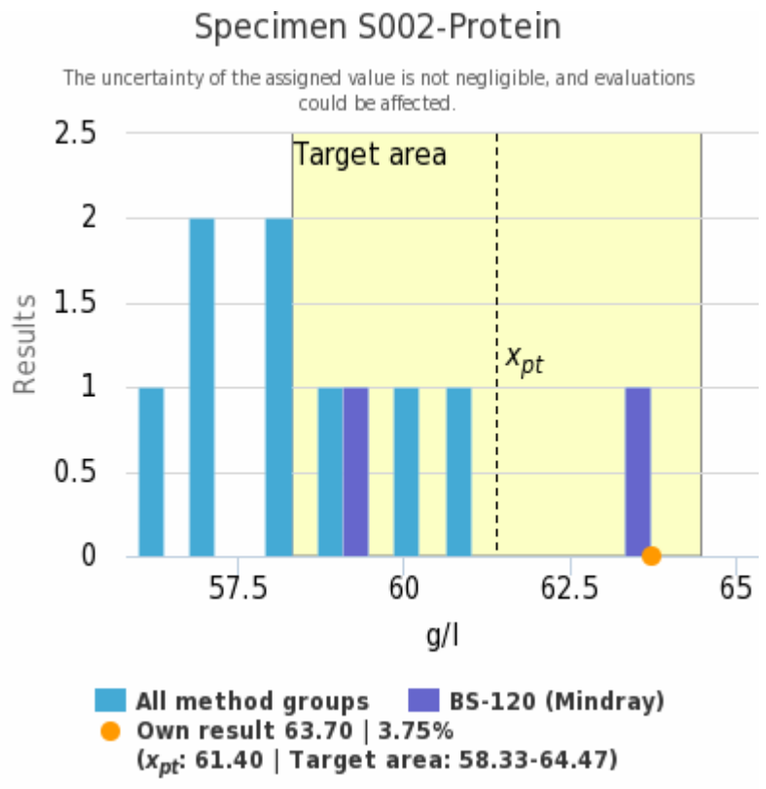


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	29.45 g/l	1.34	0.95	4.6	2
All methods	25.17 g/l	2.97	0.94	11.8	10

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	32.05 g/l	1.20	0.85	3.8	2
All methods	29.71 g/l	1.64	0.55	5.5	10

Protein |1

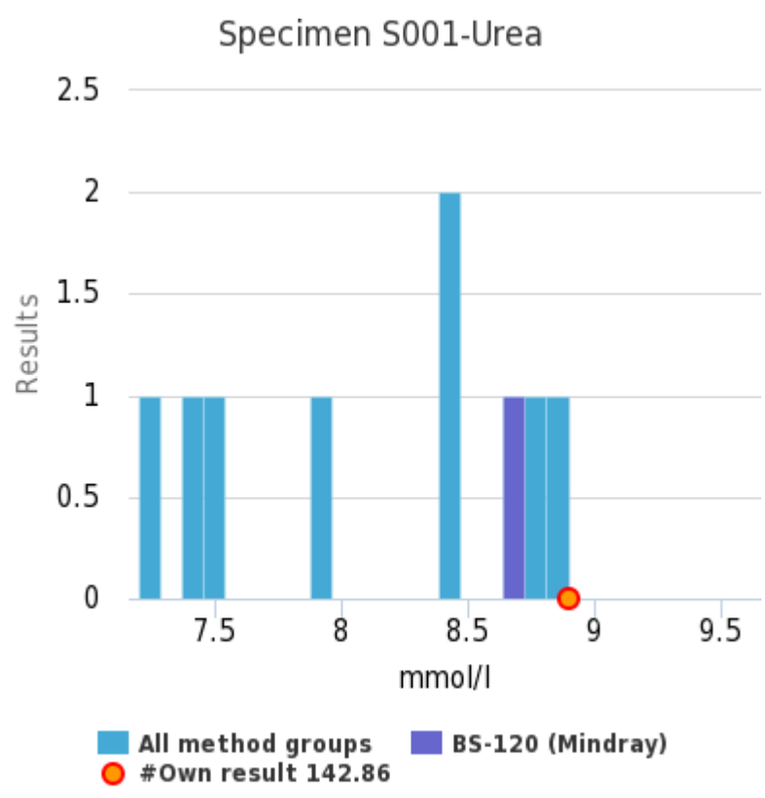


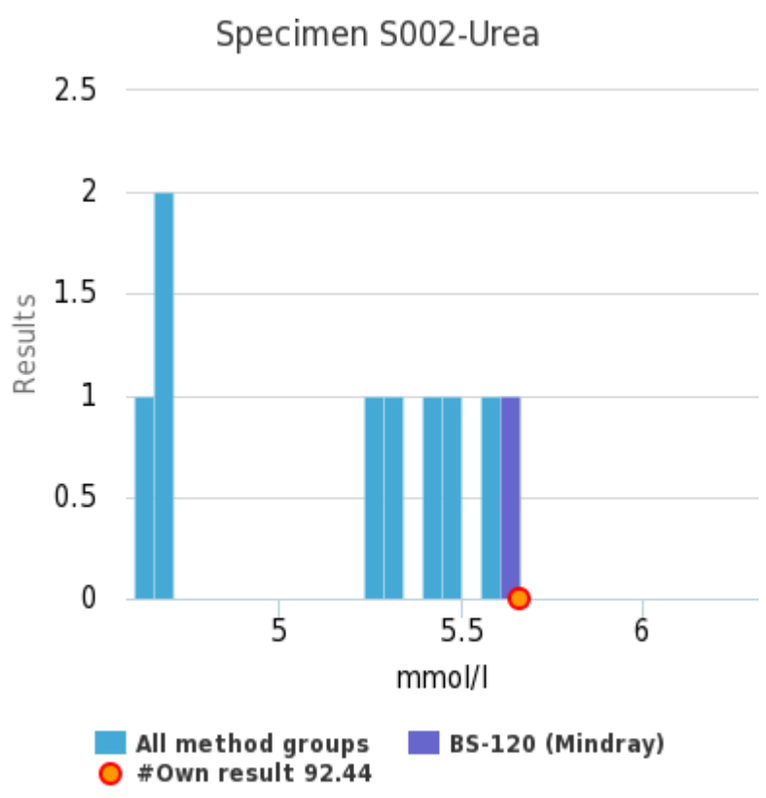


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	61.95 g/l	1.77	1.25	2.9	2
All methods	59.86 g/l	1.84	0.58	3.1	10

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	61.40 g/l	3.25	2.30	5.3	2
All methods	58.87 g/l	2.25	0.71	3.8	10

Urea |1





- manually removed

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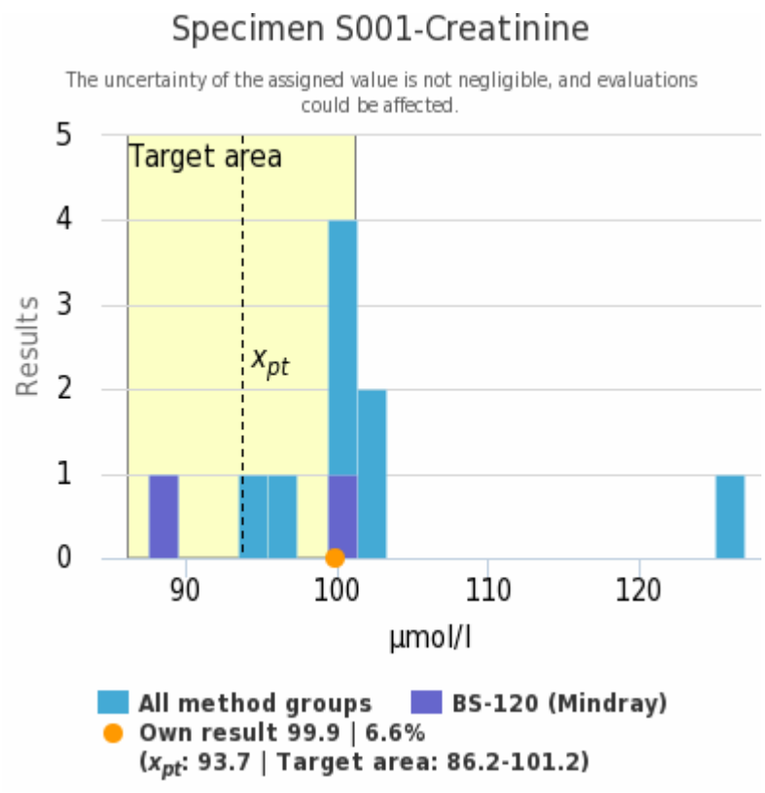
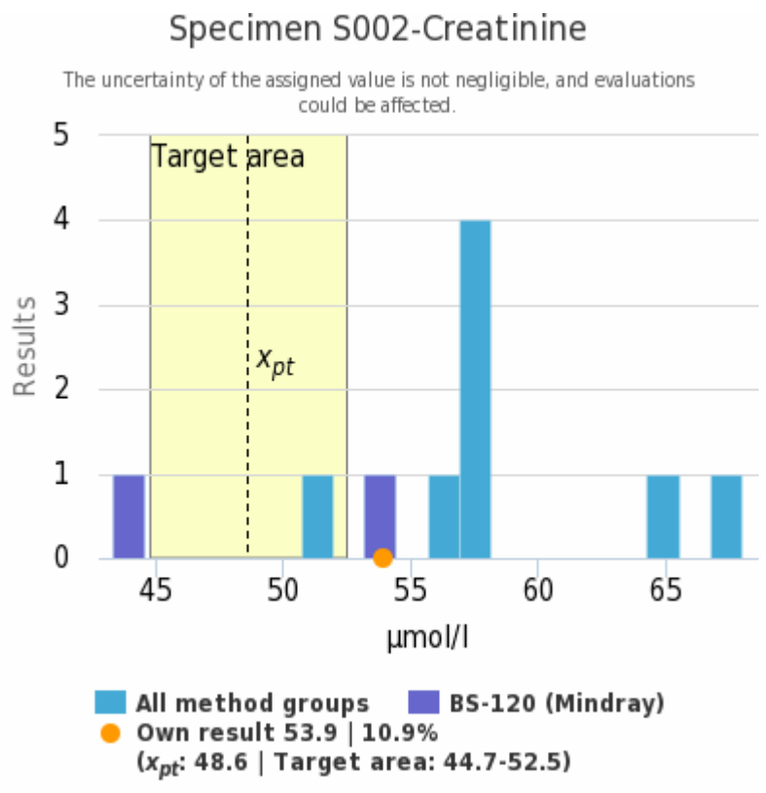
Coordinator: Please check your unit. J.Pelanti/Labquality

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	-	-	-	-	1
All methods	8.14 mmol/l	0.65	0.22	8.0	9

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	-	-	-	-	1
All methods	5.19 mmol/l	0.42	0.14	8.0	9

Creatinine |1

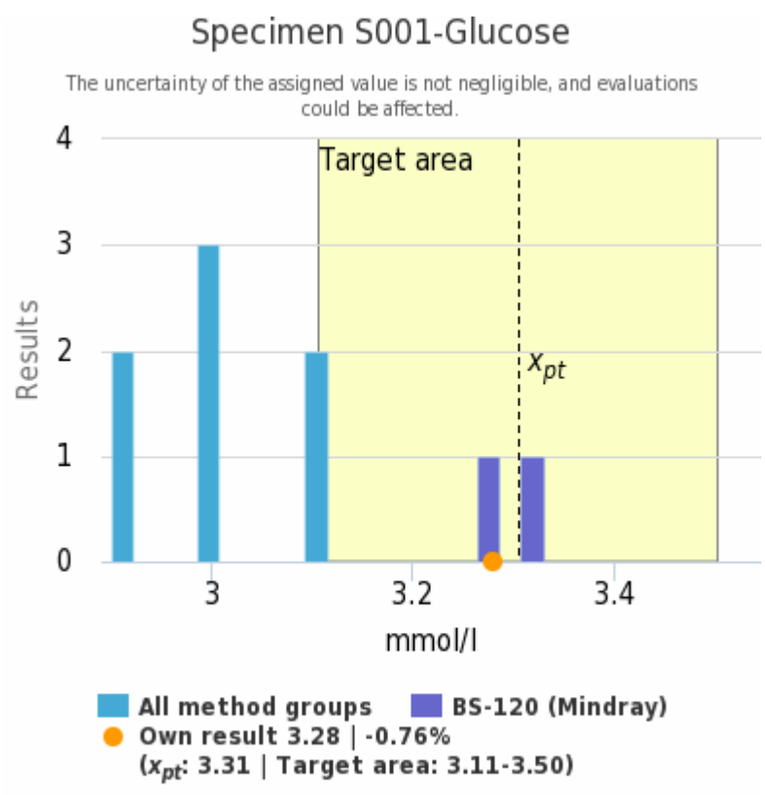


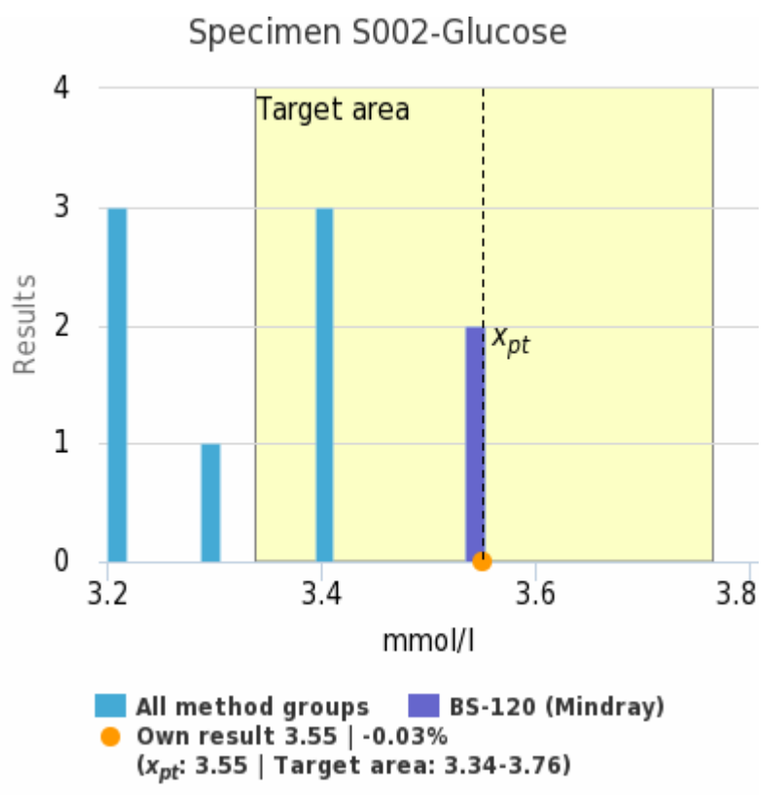


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	93.7 µmol/l	8.7	6.2	9.3	2
All methods	101.0 µmol/l	10.2	3.2	10.0	10

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	48.6 µmol/l	7.5	5.3	15.4	2
All methods	56.8 µmol/l	6.8	2.2	12.0	10

Glucose |1

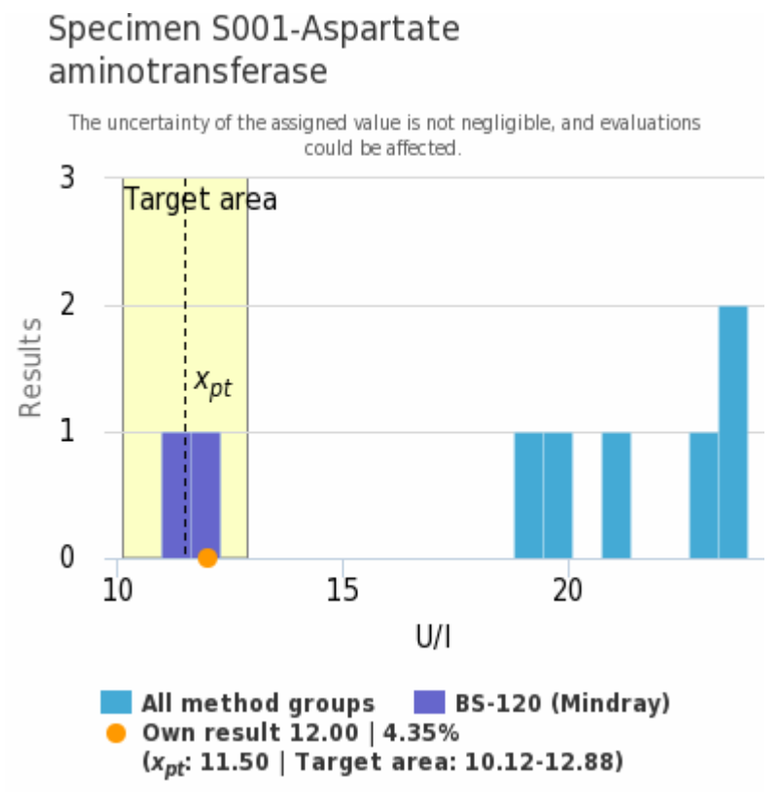


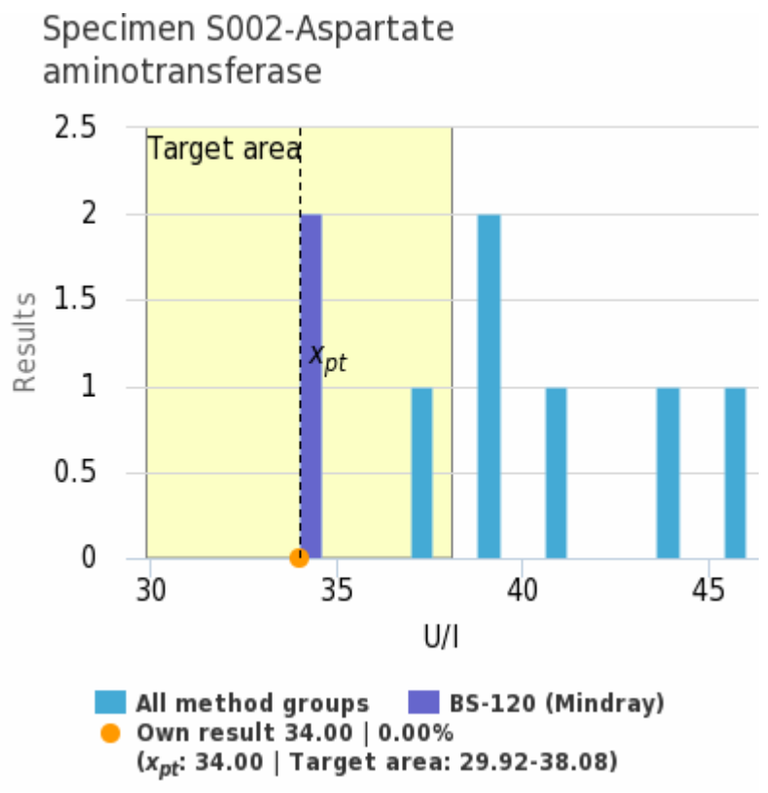


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	3.31 mmol/l	0.04	0.03	1.1	2
All methods	3.07 mmol/l	0.15	0.05	5.0	9

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	3.55 mmol/l	<0.01	<0.01	<0.1	2
All methods	3.36 mmol/l	0.14	0.05	4.2	9

Aspartate aminotransferase |1

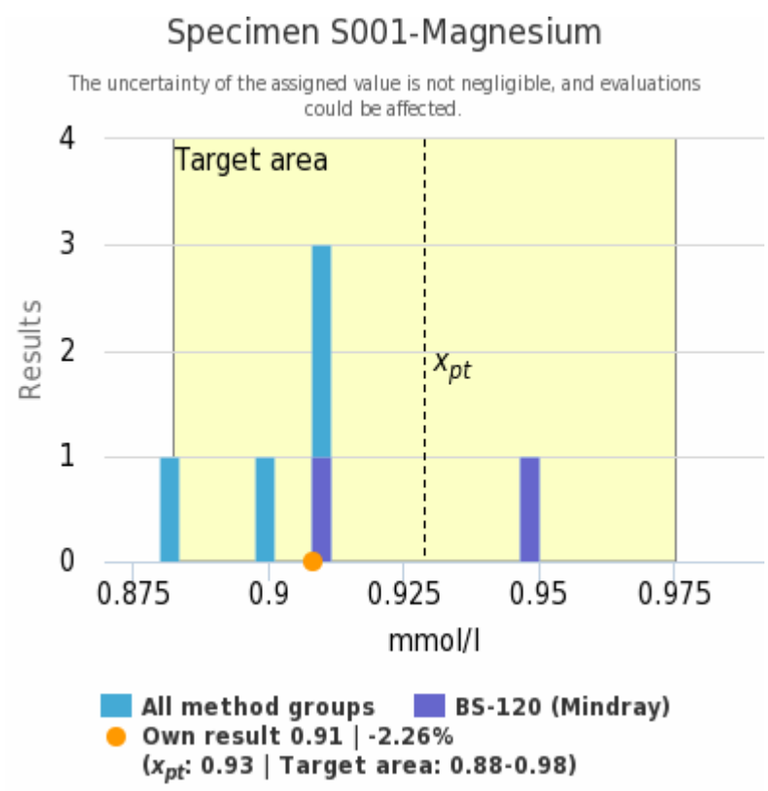


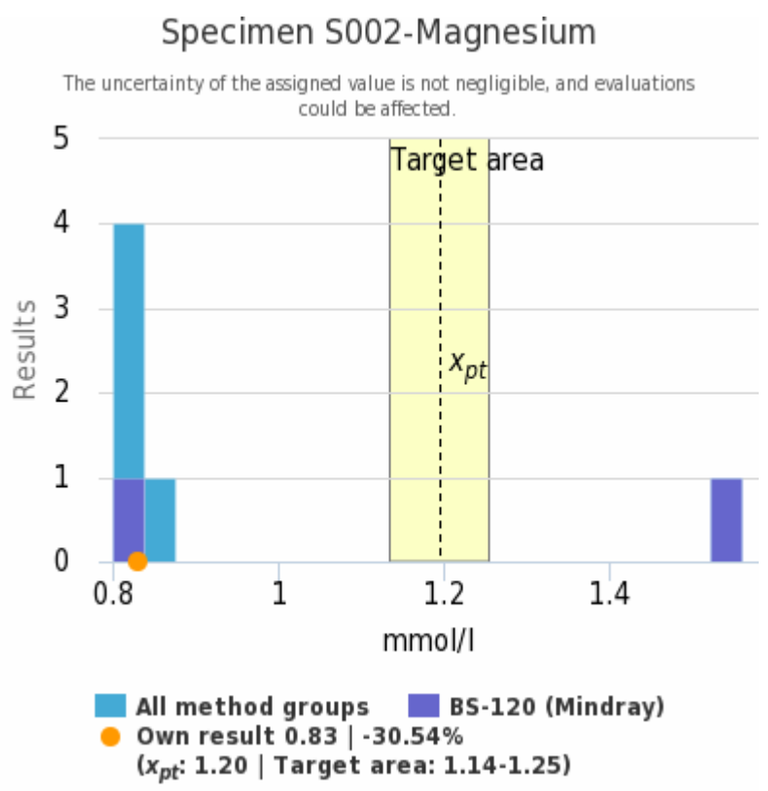


	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	11.50 U/l	0.71	0.50	6.1	2
All methods	19.25 U/l	5.12	1.81	26.6	8

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	34.00 U/l	<0.01	<0.01	<0.1	2
All methods	39.25 U/l	4.33	1.53	11.0	8

Magnesium |1





	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	0.93 mmol/l	0.03	0.02	3.2	2
All methods	0.91 mmol/l	0.02	<0.01	2.5	6

	x_{pt}	sd	SEM	CV%	n
BS-120 (Mindray)	1.20 mmol/l	0.52	0.37	43.2	2
All methods	0.95 mmol/l	0.30	0.12	31.8	6

LABQUALITY

External Quality Assessment Scheme

Veterinary basic chemistry, 1-2018

10 laboratories participated in this scheme.

Material

Samples S001 (LQ780518011) and S002 (LQ780518012) were serum samples. Sample S001 was feline and S002 of canine origin.

The materials were sent without any temperature control packaging.

Expert comments

In sample S001, the concentrations of many analytes is so low that the differences in the results could not be compared.

The albumin content in sample S002 is at a uniform level, except the Vetscan method. The albumin results from sample S001 varies too much to allow a consistent clinical interpretation. The total protein methods are at a very uniform level.

There are variations in creatinine methods, but some of the methods are based on the enzymatic method and some methods are based on colour reaction. There is clear distinction in these different method types. There is too much variation in the results of sodium, potassium and chloride when compared to the reference value range.

In some analytes (amylase, magnesium), the cat's sample yielded consistent results and in (thyroxine) the canine sample yielded a consistent results.

In the many methods (urea, bilirubin, glucose, creatine kinase, cholesterol, triglycerides, alanine aminotransferase and globulins), the methods give comparable results..

This round provided a good start for laboratories to monitor and check their result levels compared to other laboratories. In the future, it would be good to have pathological samples to compare the results (bilirubin, glutamyltransferase).

How to interpret the report

Laboratories receive histogram reports in which the result distribution is shown in graphic mode. Laboratory's own result is marked with an orange dot. Black dashed line is the assigned value, the mean value of the accepted results calculated for clients using similar devices. Clear outliers of the result distribution have been removed. The yellow area is the target area which is depending on the test. The aim is for your result to be in the yellow area and if it is then it means that your laboratory's performance is acceptable compared to others using the same device. All participants receive also a numerical summary from which all the methods' performance can be seen.

2018-12-03

Final Report

Product no. 8530
LQ780518011-012 (UK)

Samples sent 2018-11-05
Survey closed 2018-11-25
Report released 2018-12-03

The report contains
- Numerical summary
- Individual histograms

(if results have been returned)

Inquiries about this survey, including questions of possible errors in result processing, should be at Labquality's office **before 2019-01-03.**

Authorized by
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The symbols presented in the reports are
$\mathbf{x_{pt}}$ = Assigned value, method mean
Med = median value
sd = standard deviation showing the scattering of the results
CV% = coefficient of variation (standard deviation divided by the mean value)
SEM = Standard error of the mean (standard deviation divided by the square root of the number of results)
min = The smallest accepted result in the method group
max = The largest accepted result in the method group
Outliers = The number of outliers found by the calculation used
n = Number of accepted results in the method group

From the beginning of 2018 we have made some changes in the statistical calculations and reporting. In case the client's result is the only one in the method group, no target value will be calculated, no target area shown, and no statistics calculated. In case there are 2-12 results in a method group, the robust calculation is not used but a calculation where results deviating more than +/- 3*standard deviation SD from the median are removed. Additionally, if the measurement uncertainty of the target value is too large ((u(xpt) < 0.1δE)) an automatic text is printed on the report: "The uncertainty of the assigned value is not negligible, and evaluations could be affected." In case there are 2-5 results in a method group, no z-score is calculated, and a text is printed on the report: "Due to the small number of results, the z score is not calculated." In case there are 6-12 results, the report has a text: "Z score is uncertain due to the small number of observations."

Guidelines how to interpret the reports can be found under "LabScala user instructions" in LabScala.

As there were only a limited amount of participants in this round all the conclusions from the report should be made with caution. In case you wish to have help in interpreting your performance please contact Labquality. We would be happy to be of assistance.

End of report