LABQUALITY

External Quality Assessment Scheme

Bile acids
Round 1, 2023

Specimens
Please find enclosed 2 liquid human serum samples S001and S002, each 0.5 mL.

Caution
Quality control specimens derived from human blood must be handled with the same care as patient samples, i.e. as potential transmitters of serious diseases. The specimens are found to be HBsAg, HCVAb and HIVAgAb negative when tested with licensed reagents, but no known test method can offer complete assurance that the specimens will not transmit these or other infectious diseases.

Examinations
Bile acids

Storage and use
The specimens should be analysed immediately after their arrival. Otherwise freeze them.
Analyse as adult patient samples. Please, centrifuge the samples before analysis.

If the specimens have been frozen, thaw the samples before analysing to reach the room temperature. Mix sample by inverting the tube a few times and then centrifuge.

Result reporting
Please enter the results and methods via LabScala. If you can't find your method from the registry, please contact the EQA Coordinator.

S001:

S002:

2023-03-14

INSTRUCTIONS

Product no. 2520
LQ751423011-012/FI

If the kit is incomplete or contains damaged specimens, please report immediately to info@labquality.fi.

The results should be reported no later than **April 6, 2023**.

Inquiries
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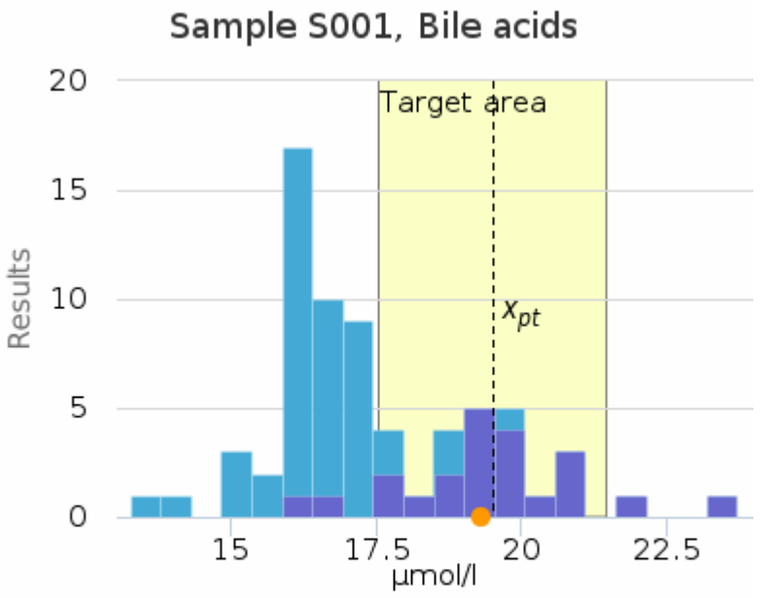
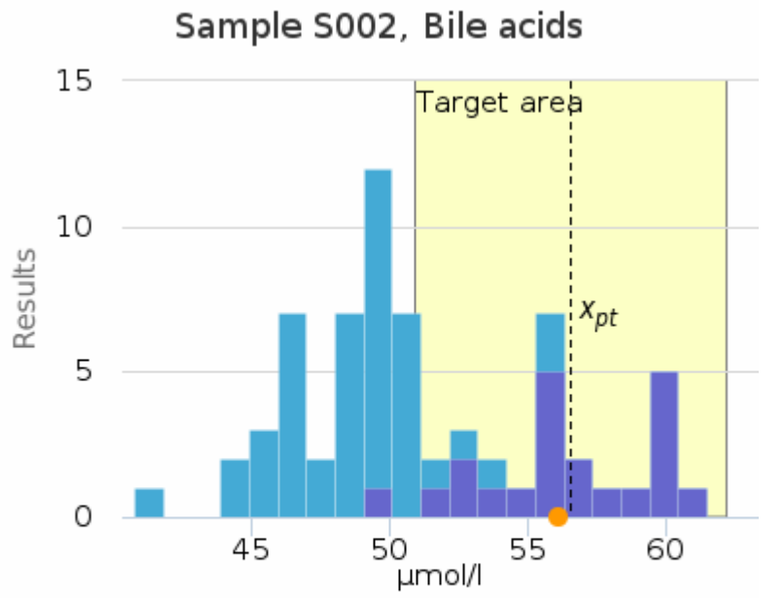
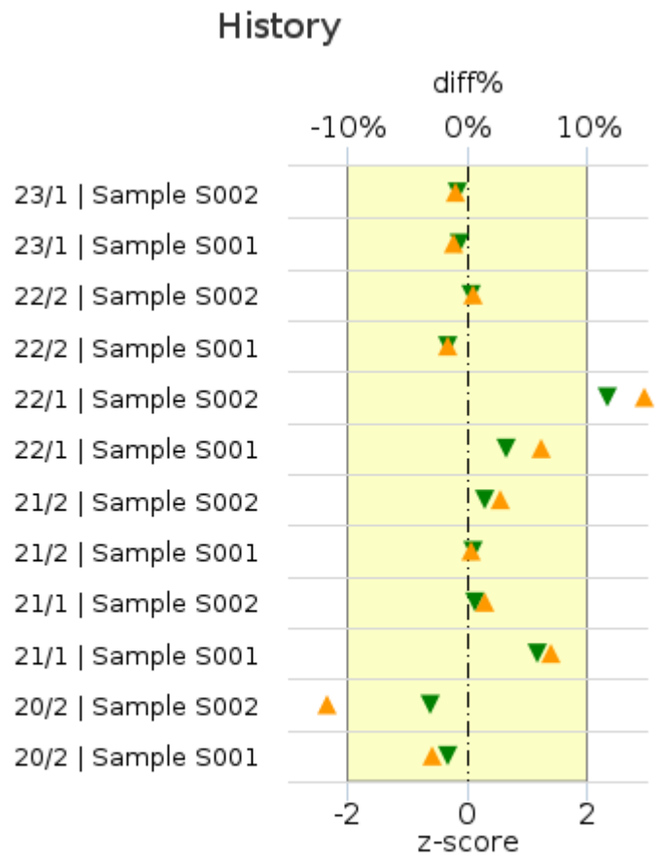
Bile acids |Roche Cobas c702







	x_{pt}	sd	SEM	CV%	n
Diazyme Bile acids	19.5 µmol/l	1.6	0.4	8.5	22
All methods	17.4 µmol/l	1.8	0.2	10.2	68

	x_{pt}	sd	SEM	CV%	n
Diazyme Bile acids	56.6 µmol/l	3.1	0.7	5.5	21
All methods	51.3 µmol/l	4.6	0.6	9.0	66

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S002	56.6	56.1	-0.9%	-0.16
23/1	Sample S001	19.5	19.3	-1.1%	-0.13
22/2	Sample S002	63.8	64.1	0.5%	0.06
22/2	Sample S001	19.0	18.7	-1.7%	-0.31
22/1	Sample S002	52.6	74.6	41.9%	2.35
22/1	Sample S001	17.0	18.1	6.2%	0.66
21/2	Sample S002	92.4	94.9	2.7%	0.30
21/2	Sample S001	27.6	27.7	0.4%	0.09
21/1	Sample S002	6.5	6.6	1.5%	0.13
21/1	Sample S001	47.2	50.5	7.0%	1.17
20/2	Sample S002	124.6	110.2	-11.6%	-0.61
20/2	Sample S001	30.2	29.3	-3.0%	-0.31

Report info

Participants

67 participants from 21 countries.

Report info

Your own result should be compared to others using the same method.
Assigned values (x_{pt}, target values) are means of the results where results deviating more than +/- 3*standard deviation from the median are removed. The standard uncertainty (u) of the assigned value is reported as standard error of the mean (SEM). Additionally, if the measurement uncertainty of the target value is large an automatic text is printed on the report: “The uncertainty of the assigned value is not negligible, and evaluations could be affected.”
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LABQUALITY

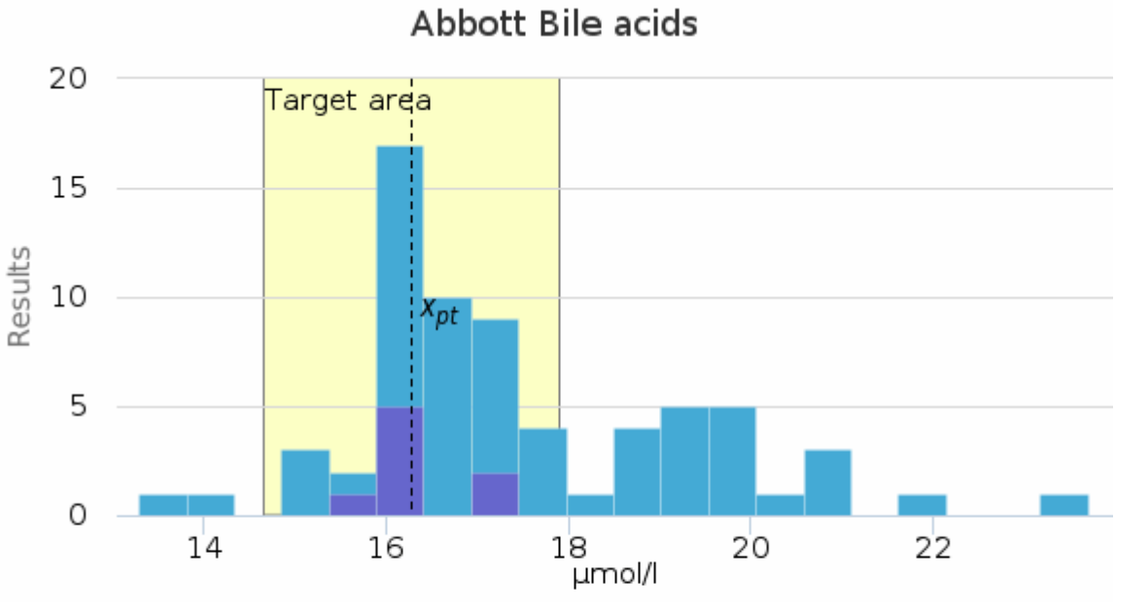
Bile acids, March, 1-2023

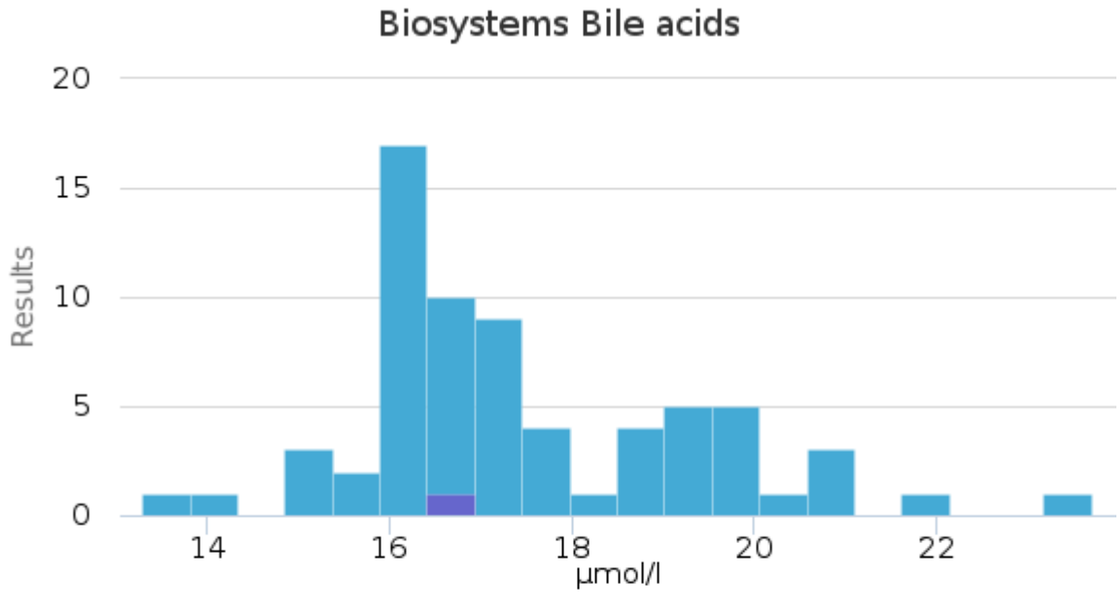
Quantitative report

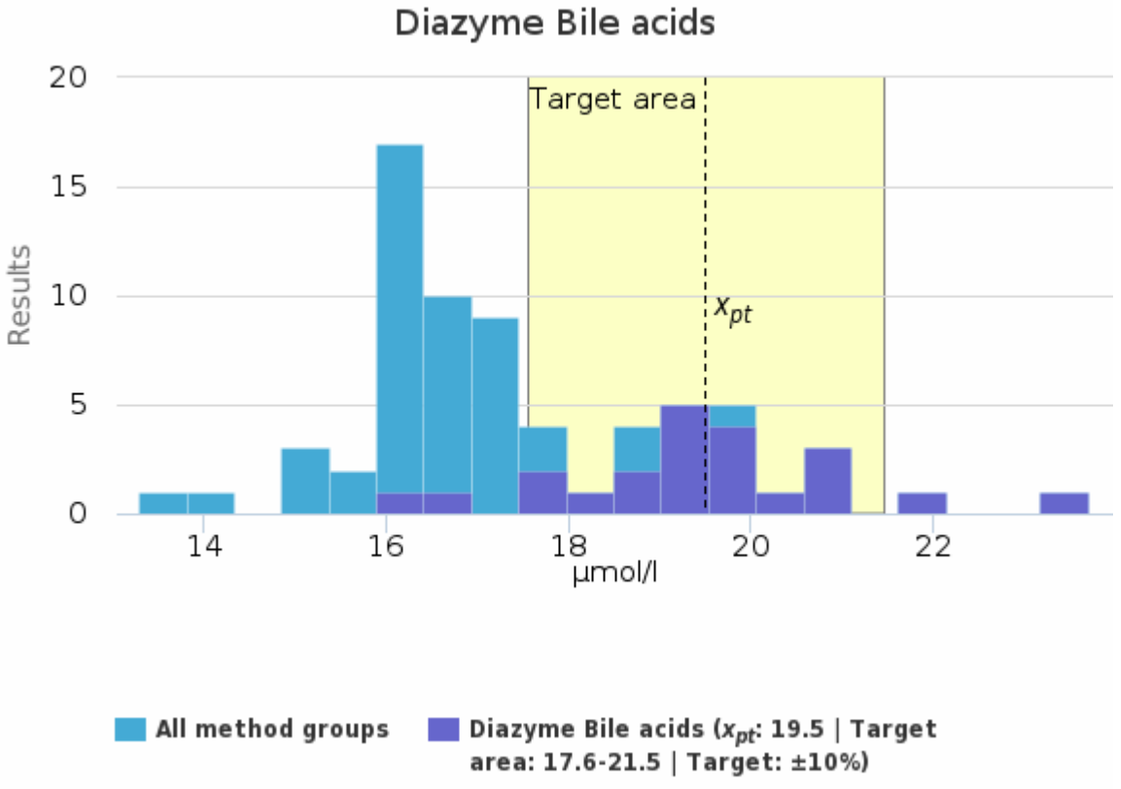
Sample S001 | Bile acids, µmol/l

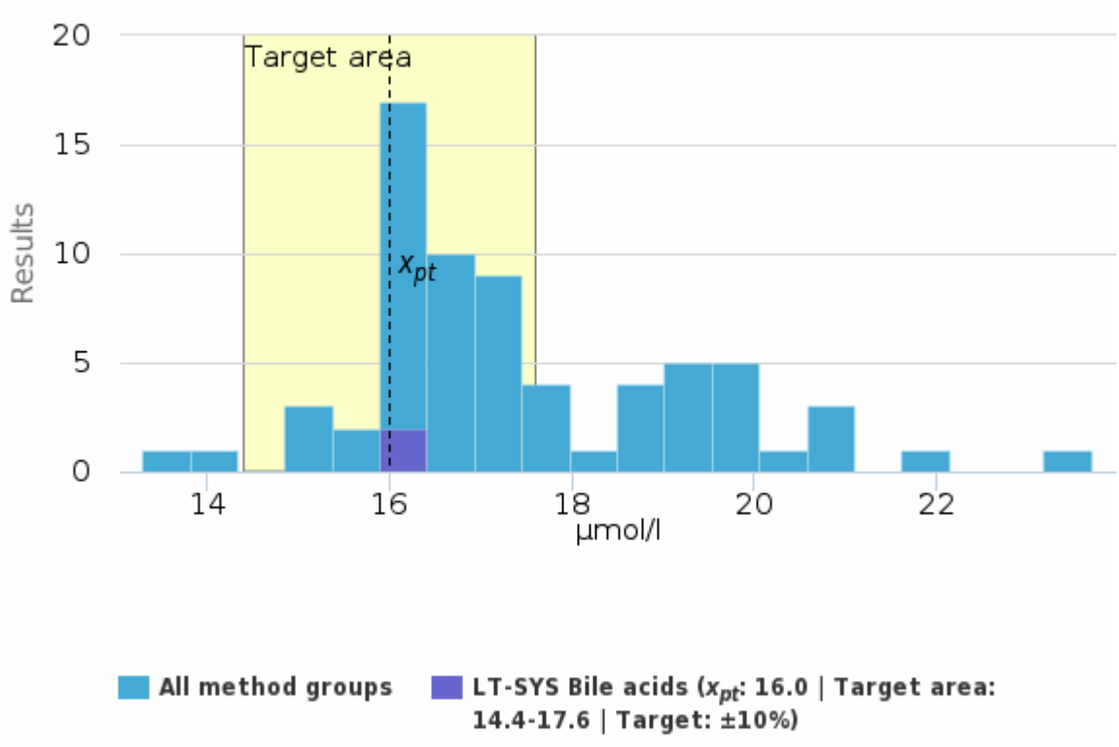
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Bile acids	16.3	16.2	0.5	2.9	0.2	15.7	17.0	-	8
Biosystems Bile acids	-	-	-	-	-	16.6	16.6	-	1
Diazyme Bile acids	19.5	19.4	1.6	8.5	0.4	16.4	23.7	-	22
LT-SYS Bile acids	16.0	16.0	<0.1	<0.1	<0.1	16.0	16.0	-	2
Randox Bile acids	16.3	16.5	1.1	6.5	0.2	13.3	19.0	-	24
Sentinel Bile acids	17.1	17.0	1.6	9.2	0.5	14.2	19.6	-	9
Trinitiy Biotech Bile acids	17.3	17.3	0.9	5.3	0.7	16.6	17.9	-	2
All	**17.4**	**16.9**	**1.8**	**10.2**	**0.2**	**13.3**	**22.1**	**1**	**68**

Sample S001 | Bile acids, µmol/l| histogram summaries in LabScala





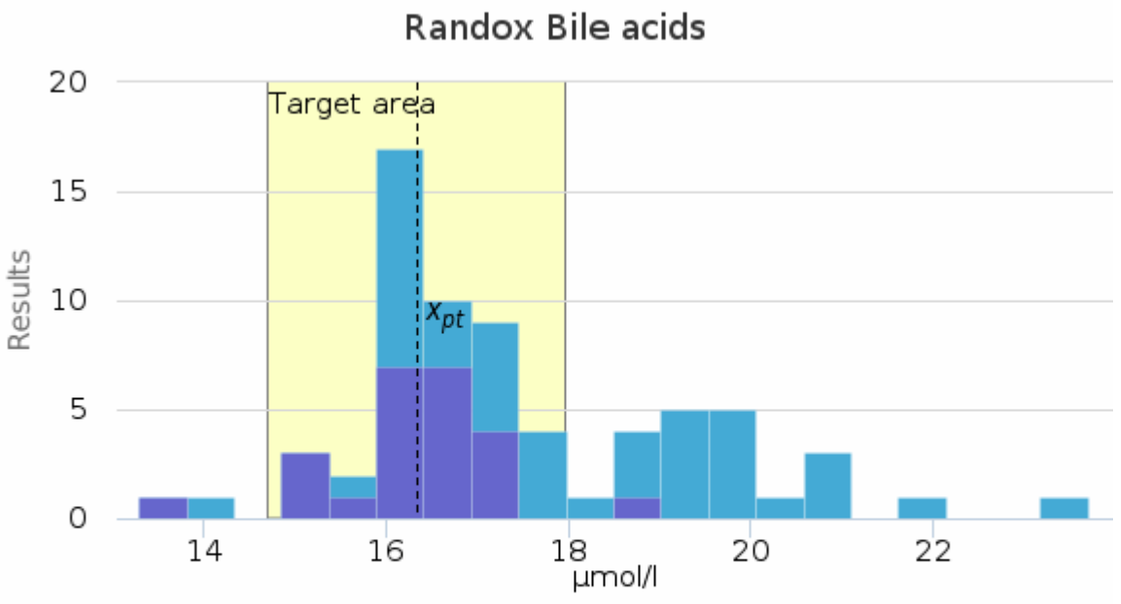


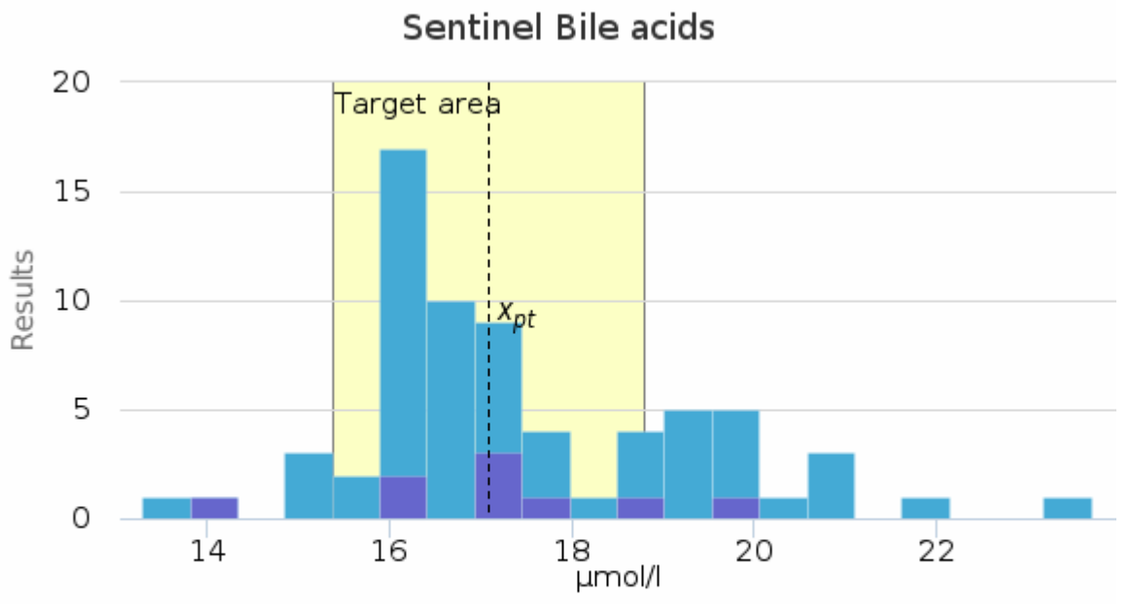


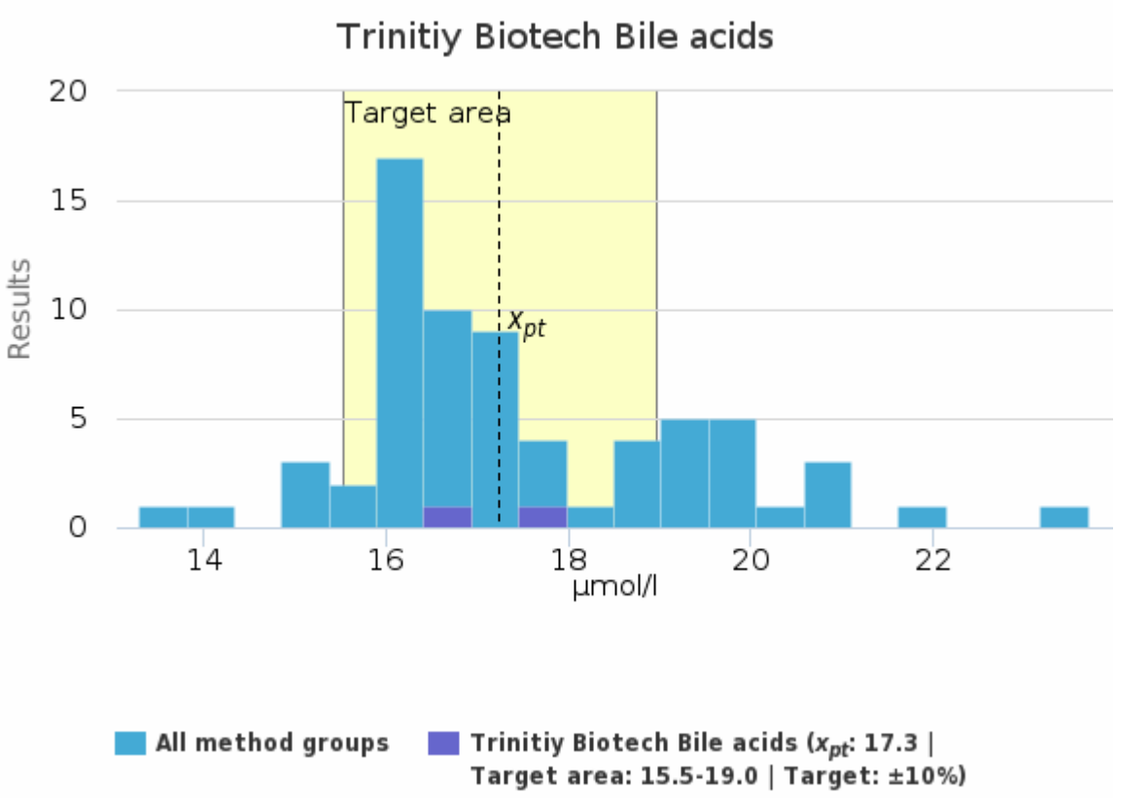
LABQUALITY

Bile acids, March, 1-2023

Quantitative report







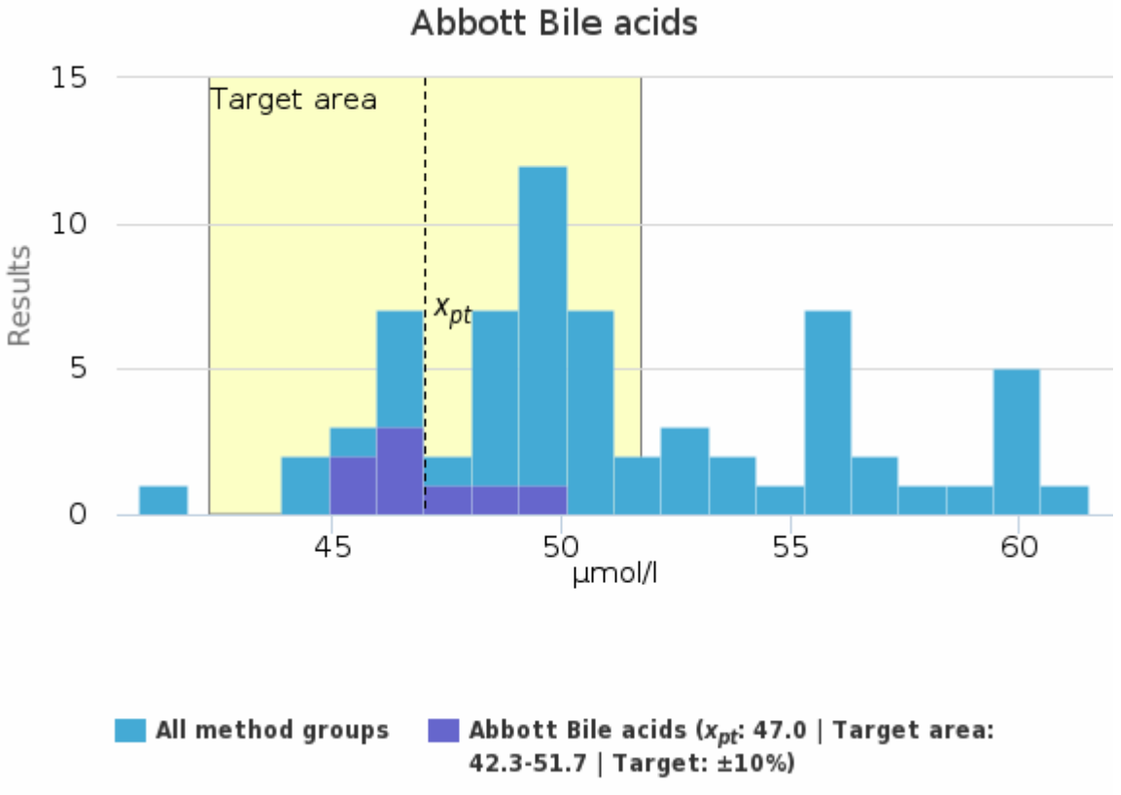
Bile acids, March, 1-2023

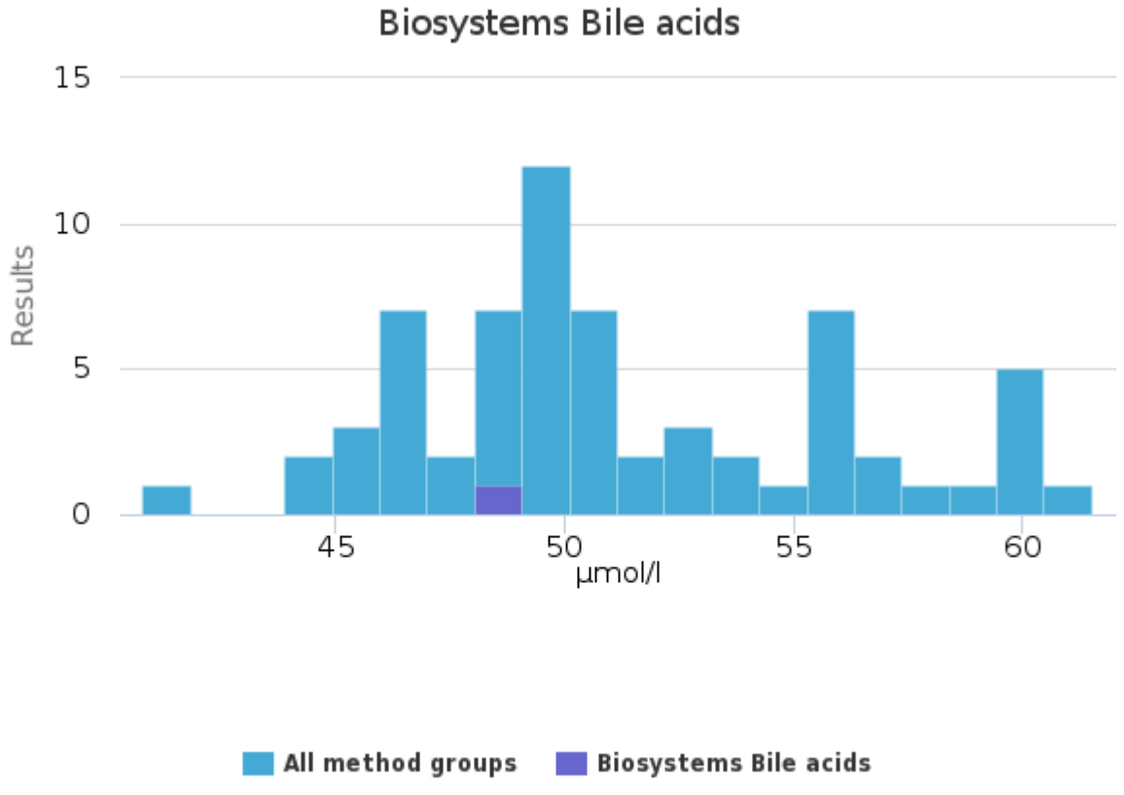
Quantitative report

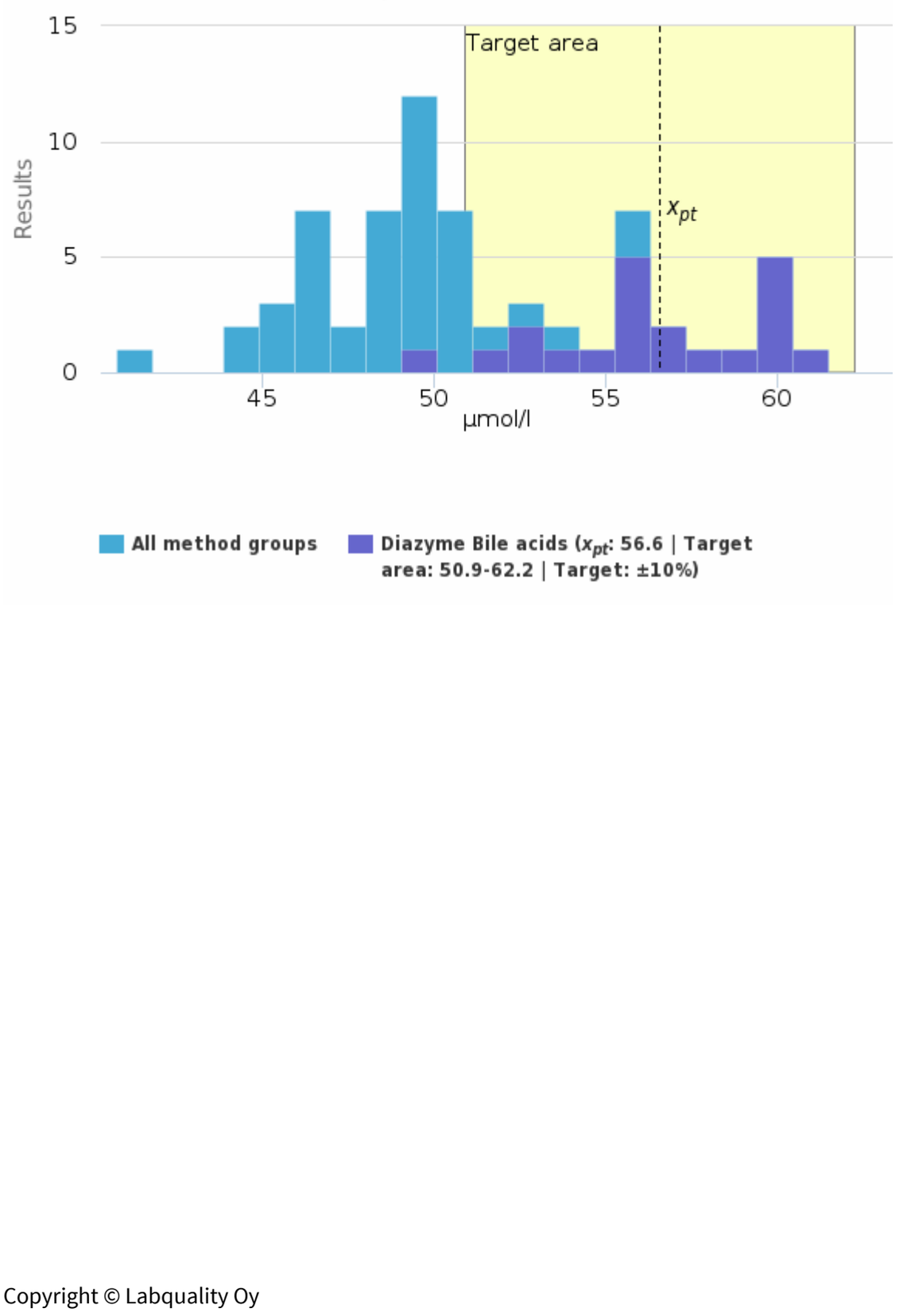
Sample S002 | Bile acids, µmol/l

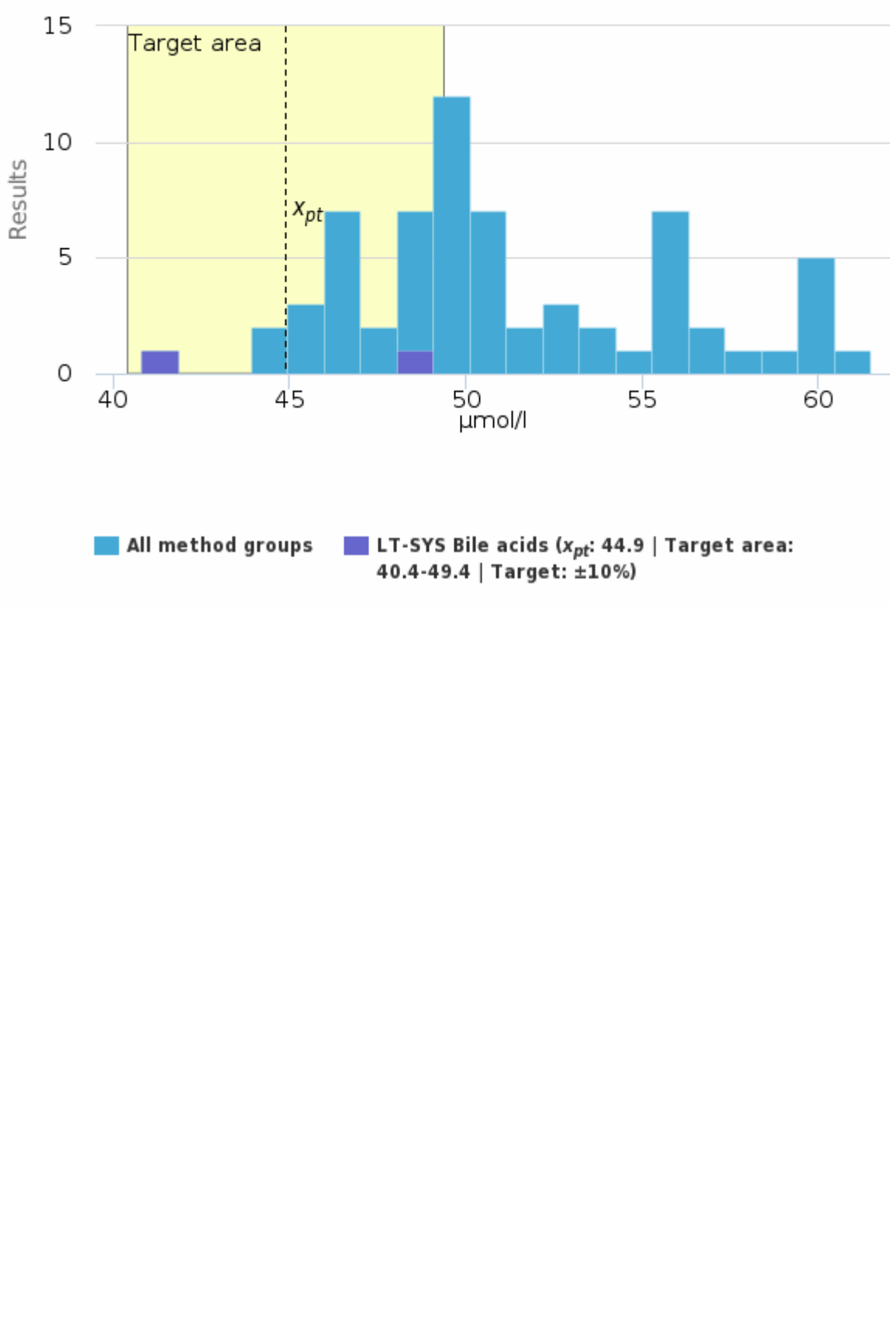
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Bile acids	47.0	46.8	1.6	3.5	0.6	45.0	50.0	-	8
Biosystems Bile acids	-	-	-	-	-	48.7	48.7	-	1
Diazyme Bile acids	56.6	56.1	3.1	5.5	0.7	50.0	61.5	-	21
LT-SYS Bile acids	44.9	44.9	5.8	12.9	4.1	40.8	49.0	-	2
Randox Bile acids	49.3	49.7	1.7	3.5	0.4	45.0	52.4	-	23
Sentinel Bile acids	49.1	49.0	3.8	7.6	1.3	44.7	55.8	-	9
Trinitiy Biotech Bile acids	53.0	53.0	3.8	7.2	2.7	50.3	55.7	-	2
All	**51.3**	**50.0**	**4.6**	**9.0**	**0.6**	**40.8**	**61.5**	**-**	**66**

Sample S002 | Bile acids, µmol/l| histogram summaries in LabScala









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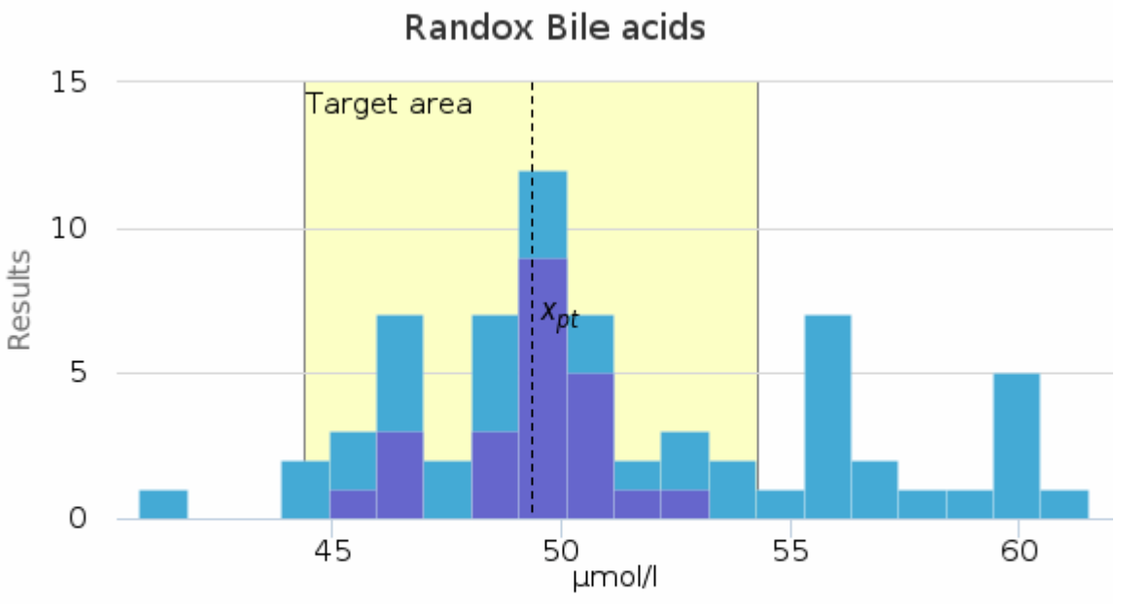
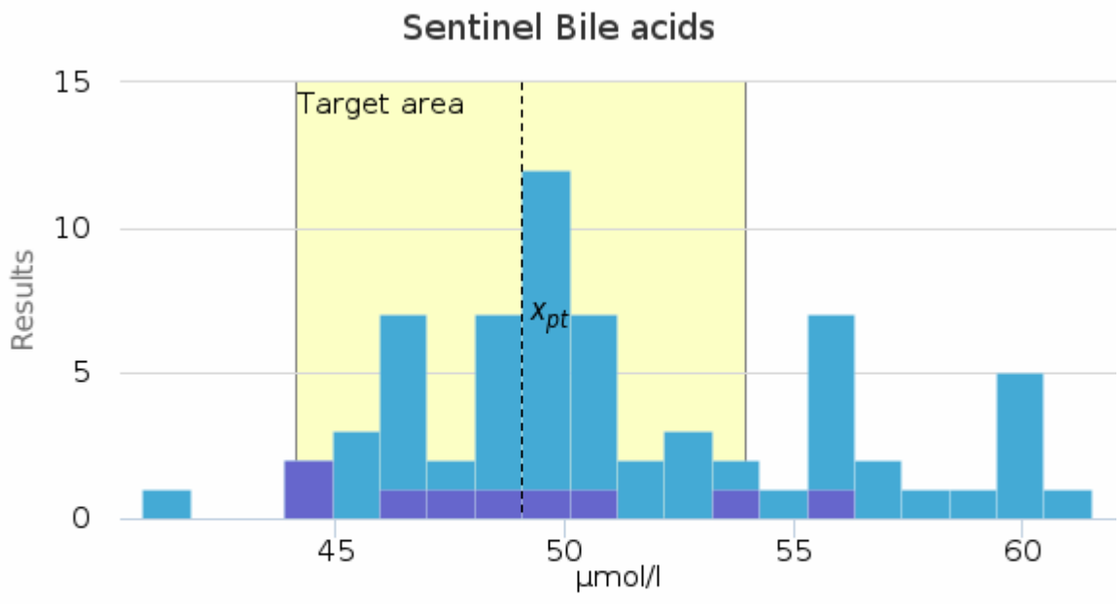
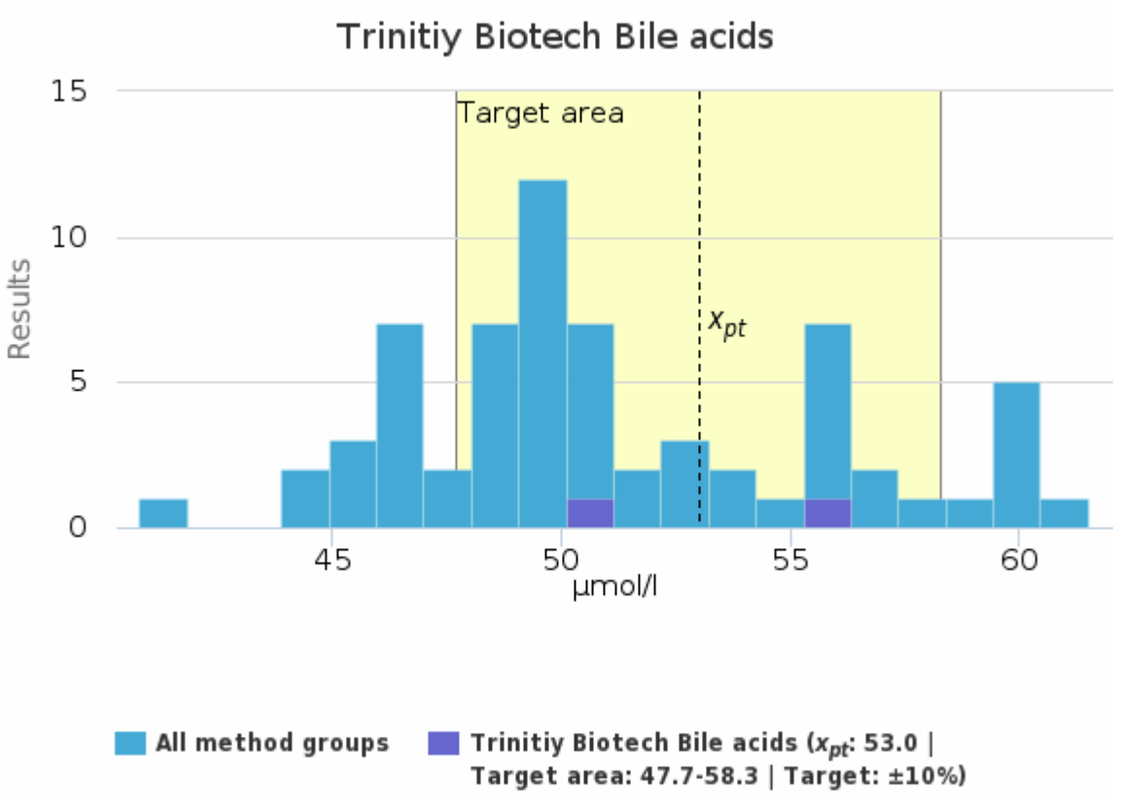
Bile acids, March, 1-2023

Quantitative report







Bile acids, March, 1-2023

Quantitative report

Report info

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LABQUALITY

External Quality Assessment Scheme

Bile acids
Round 1, 2023

Specimens
Sample S001 (LQ751423011) and Sample S002 (LQ751423012) were human liquid sera.

Based on the previous tests and the results of this round, the samples are homogeneous, stable and suitable for the external quality assessment scheme.

The materials were sent without temperature control packaging.

Report info
Please see the description of the data analysis on the last page of the laboratory-specific histograms and Numerical Summary reports. It is important to read the Final report first, because it contains important information of the samples and results in each round

Comments – Expert
The average concentration of the sample S001 was 17.4 µmol/L. The result group averages corresponded quite well to each other. The sample results ranged from 13.3 µmol/L to 22.1 µmol/L. In the sample S001, the variation of the results was the greatest with the Diazyme method, the results varied between 16.4 and 23.7 µmol/L.

The average concentration of the sample S002 was 51.3 µmol/L. The result group averages corresponded fairly well to each other. In this sample, the result level of the Diazyme method differed slightly from the others. The sample results ranged from 40.8 µmol/L to 61.5 µmol/L. One high Diazyme method result 69.44 µmol/L was removed from the income statement for this sample. Also one Randox method sample was removed 40.9 µmol/L.

The concentrations of the samples were close to decision limits. The variation in results was as great as in previous rounds. Those laboratories whose result differs from the results of their own method group and from the mean of all results should check the functionality of the method.

End of report

2023-04-25

FINAL REPORT

Product no. 2520

Subcontracting: Sample preparation, Sample pretesting

Samples sent	2023-03-14
Round closed	2023-04-06
Final report	2023-04-25

Request for correction
Typing errors in laboratory's result forms are on laboratory's responsibility. Labquality accepts responsibility only for result processing. Requests must be notified by writing within three weeks from the date of this letter.

Authorized by
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