LABQUALITY

External Quality Assessment Scheme

Parathyroid hormone, intact
Round 1, 2023

Specimens
Please find enclosed 2 lyophilized samples S001 and S002 à 3mL.

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.

Background information
Samples are lyophilized plasma with different parathyroid hormone concentrations.

Examinations
PTH intact

Storage and use
After arrival, the samples should be stored at +2…8 °C, analysed as soon as possible.

Remove the screw cap and carefully remove the rubber stopper from the samples. Add exactly 3.0 mL of sterile deionized water. Close the bottle with the rubber stopper and ensure the contents are completely dissolved by gentle but continuous swirling for approximately 30 minutes. Avoid formation of foam. Do not shake. Analyse as patient samples.

Result reporting
Please enter the results and methods via LabScala (www.labscala.com). If you cannot find your instrument or reagent from the registry, please contact the EQA Coordinator.

S001:

LQ732623011

S002:

LQ732623012

2023-03-14

INSTRUCTIONS

Product no. 2250
LQ732623011-012/ NO

Subcontracting: Sample pretesting

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.**

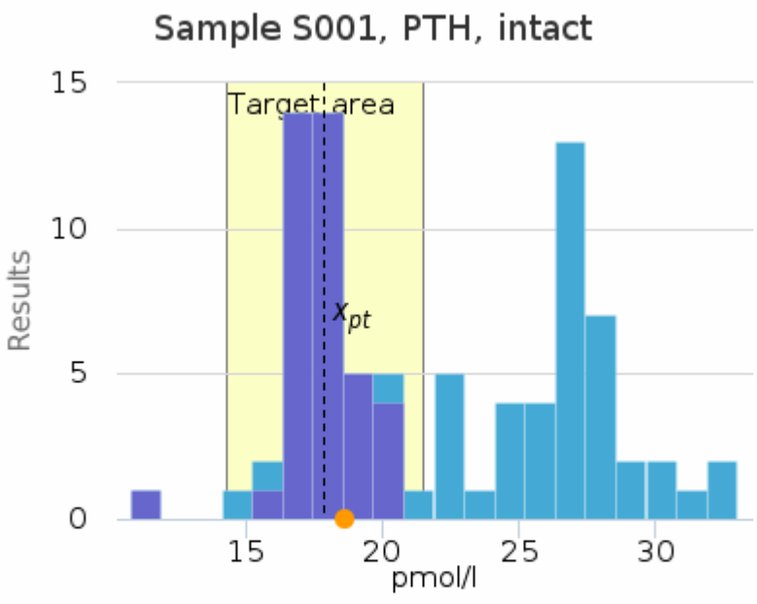
Inquiries
EQA Coordinator
Satu Eklund
satu.eklund@labquality.fi

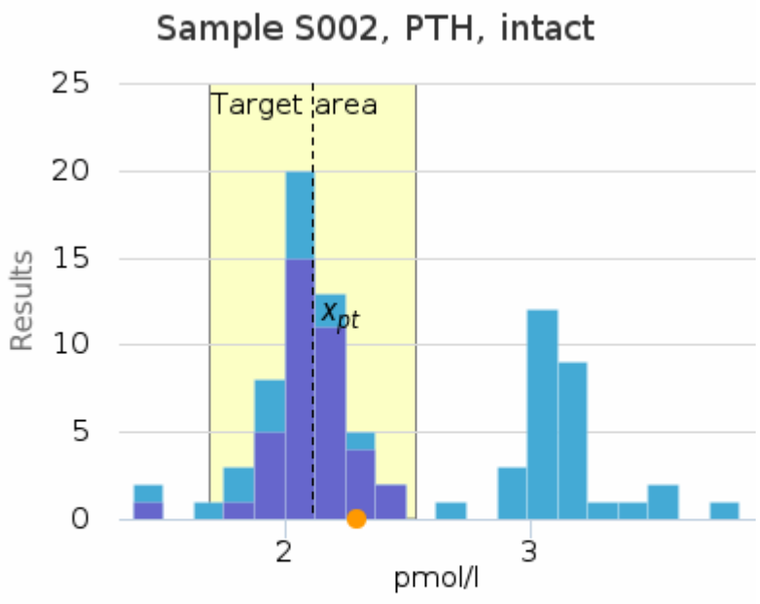
Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

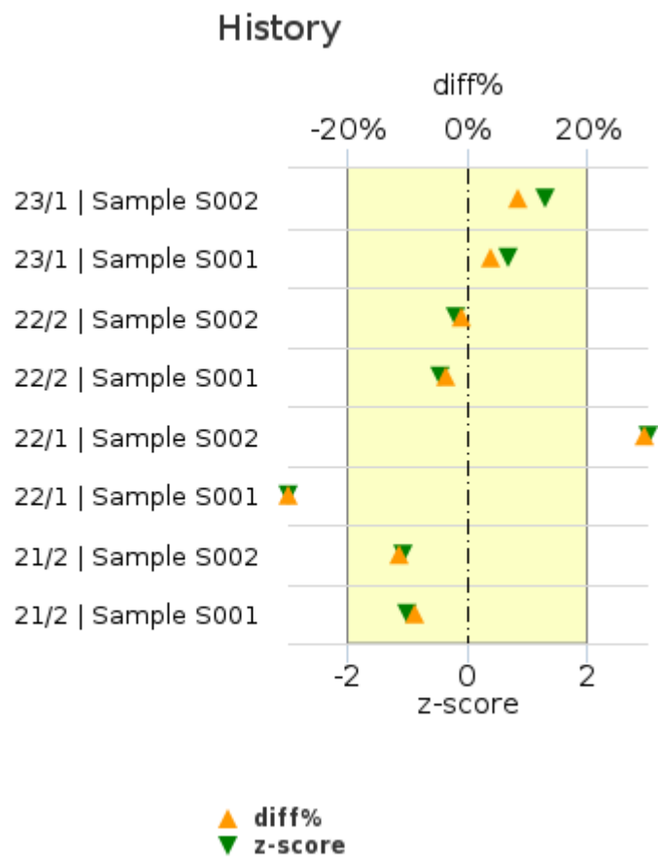
Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

PTH, intact |cobas e 601







	x_{pt}	sd	SEM	CV%	n
Roche Elecsys/cobas e	17.9 pmol/l	1.0	0.2	5.8	39
All methods	22.1 pmol/l	5.0	0.5	22.7	84

	x_{pt}	sd	SEM	CV%	n
Roche Elecsys/cobas e	2.1 pmol/l	0.1	<0.1	6.4	39
All methods	2.4 pmol/l	0.6	<0.1	22.9	84

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S002	2.1	2.3	8.3%	1.29
23/1	Sample S001	17.9	18.6	4.0%	0.68
22/2	Sample S002	8.8	8.8	-1.0%	-0.19
22/2	Sample S001	2.0	2.0	-3.6%	-0.45
22/1	Sample S002	9.0	15.8	75.2%	4.96
22/1	Sample S001	17.0	8.1	-52.3%	-7.89
21/2	Sample S002	2.2	1.9	-11.4%	-1.06
21/2	Sample S001	31.6	28.8	-8.9%	-1.02

Report info

Participants

77 participants from 13 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.”
In case the client’s result is the only one in the method group, no assigned value will be calculated, no target area shown, and no statistics calculated. In case there are only a few results in the client’s own method group, the result can be compared to all method mean or to a group that is similar to the own method.
Results reported with < or > -signs cannot be included in the statistics.

For information on report interpretation and performance evaluation, please see the " EQAS Interpretation guidelines" LabScala User instructions (top right corner ?Help link).

LABQUALITY

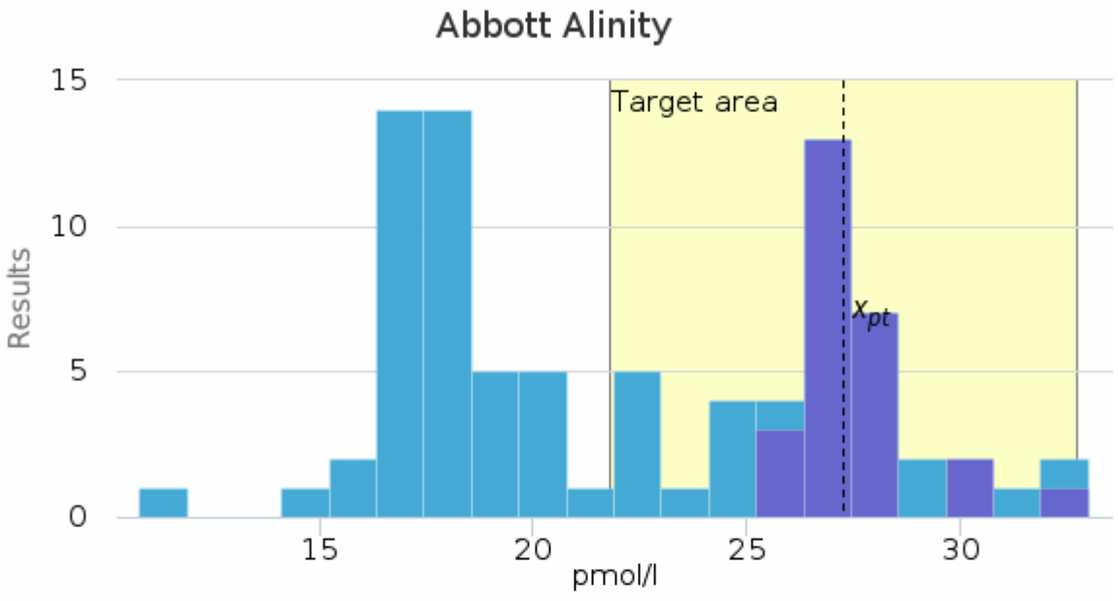
Parathyroid hormone, March, 1-2023

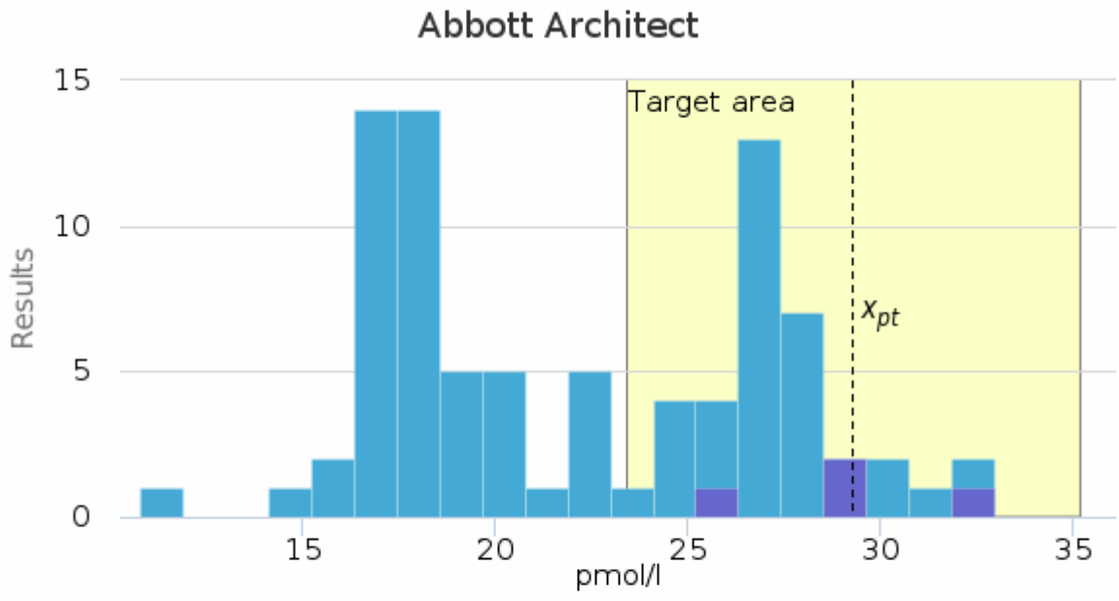
Quantitative report

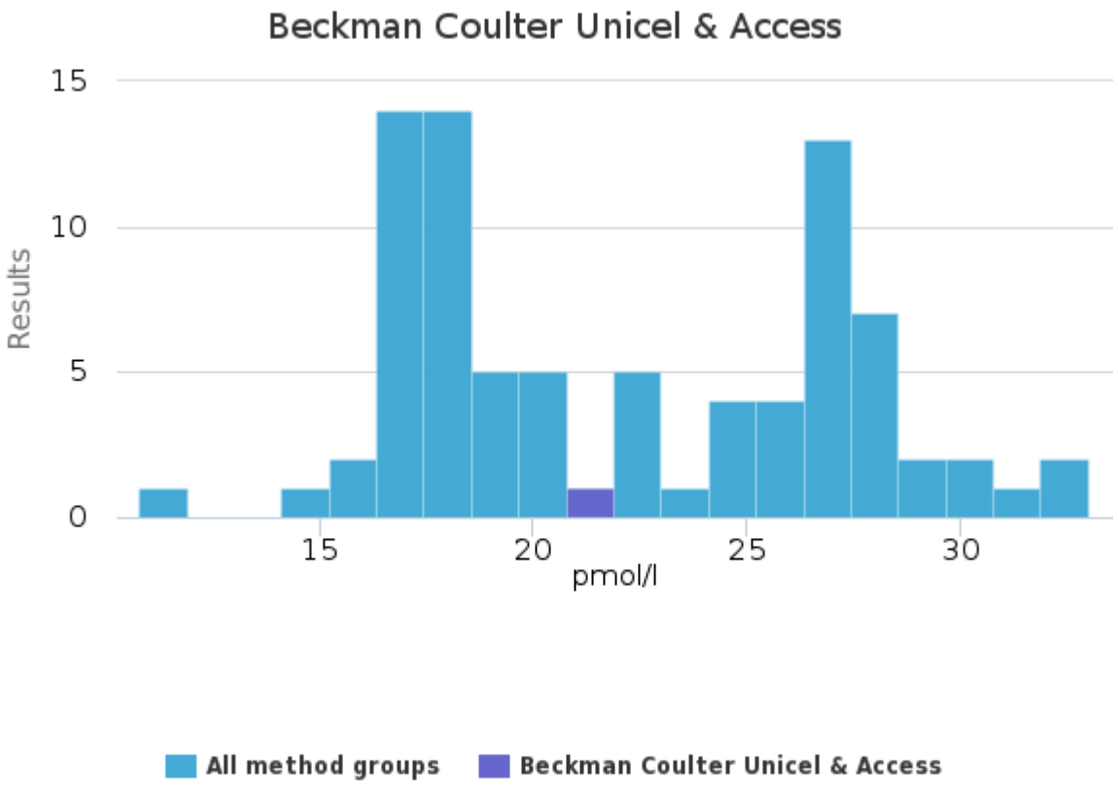
Sample S001 | PTH, intact, pmol/l

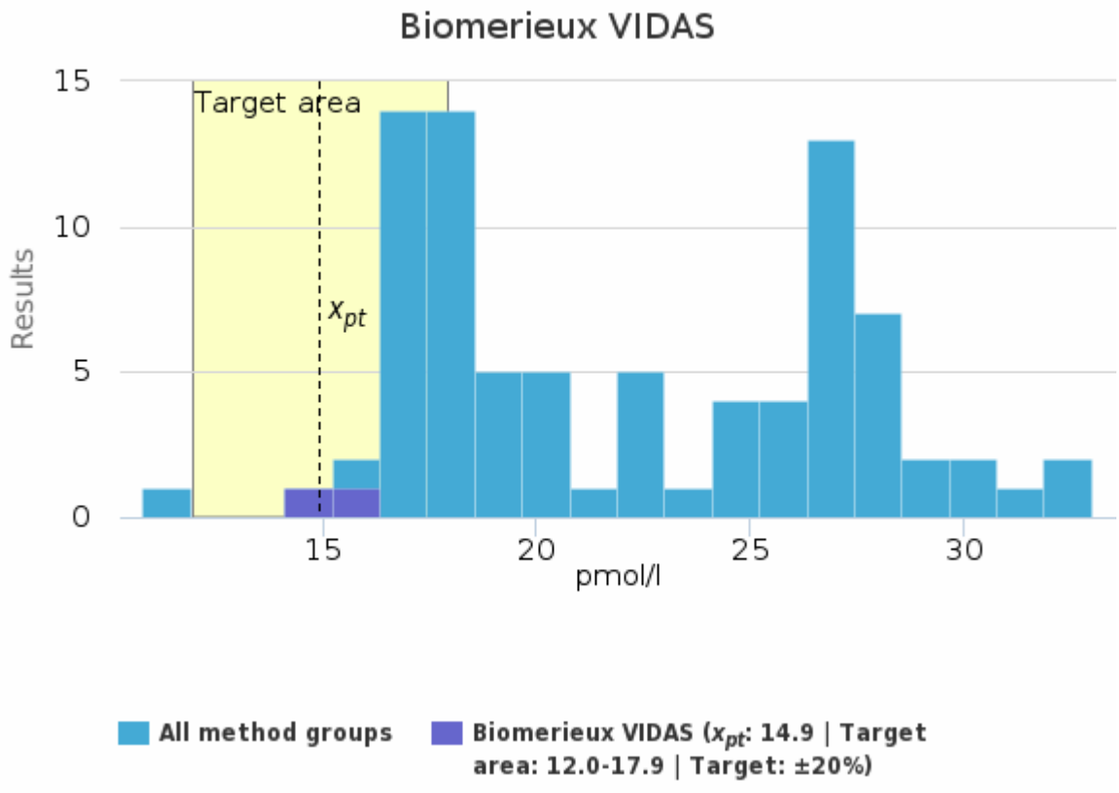
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Alinity	27.3	26.9	1.1	3.9	0.2	25.9	30.1	1	26
Abbott Architect	29.3	29.4	2.8	9.5	1.4	25.8	32.6	-	4
Beckman Coulter Unicel & Access	-	-	-	-	-	20.8	20.8	-	1
Biomerieux VIDAS	14.9	14.9	0.6	3.9	0.4	14.5	15.4	-	2
Roche Elecsys/cobas e	17.9	17.6	1.0	5.8	0.2	15.8	20.1	1	39
Siemens Advia Centaur	23.7	23.9	1.1	4.7	0.5	22.1	25.0	-	6
Siemens Atellica	22.2	22.0	1.7	7.6	0.8	19.9	24.7	-	5
Siemens Immulite	-	-	-	-	-	31.0	31.0	-	1
All	**22.1**	**20.5**	**5.0**	**22.7**	**0.5**	**10.8**	**33.0**	**-**	**84**

Sample S001 | PTH, intact, pmol/l| histogram summaries in LabScala



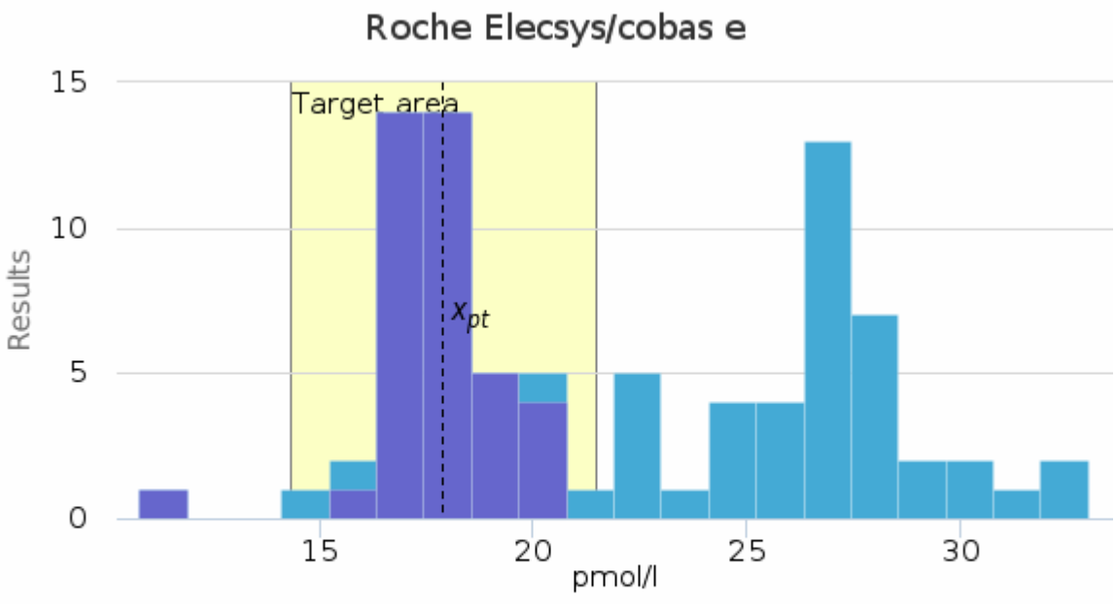


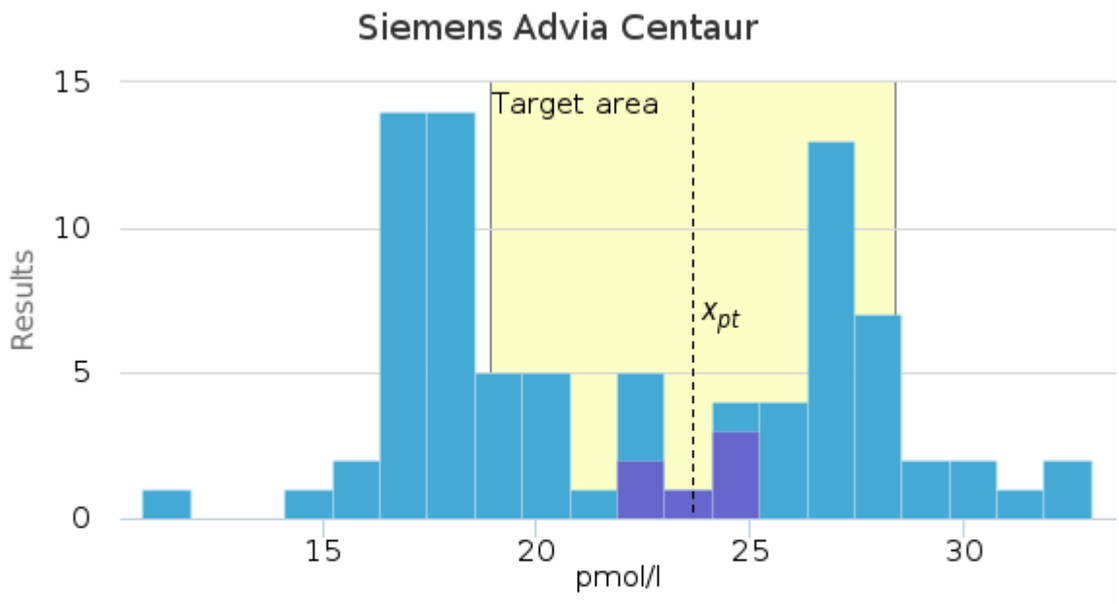


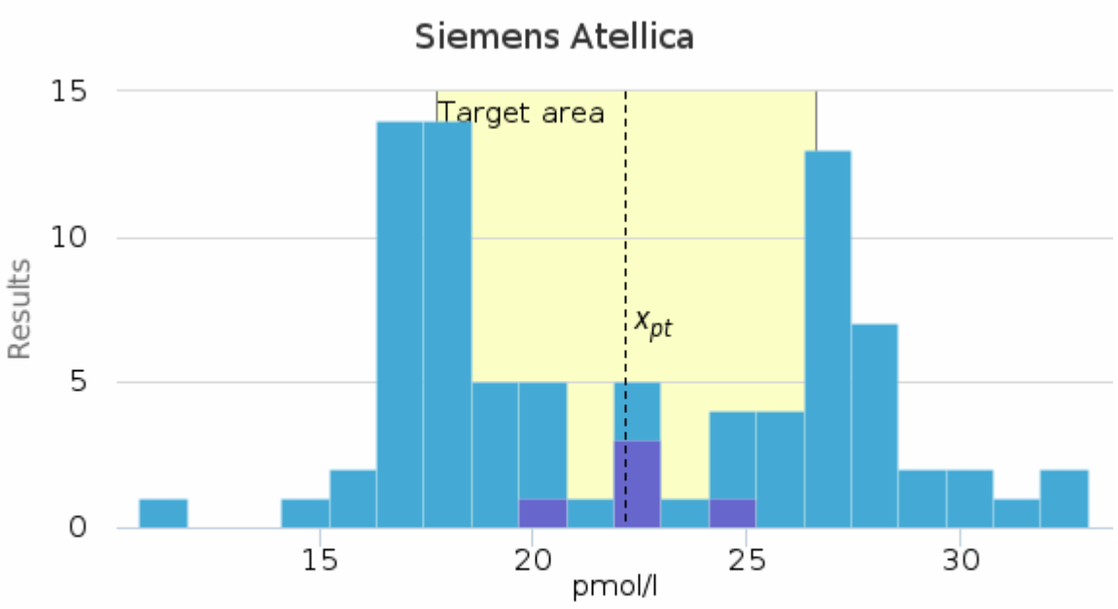


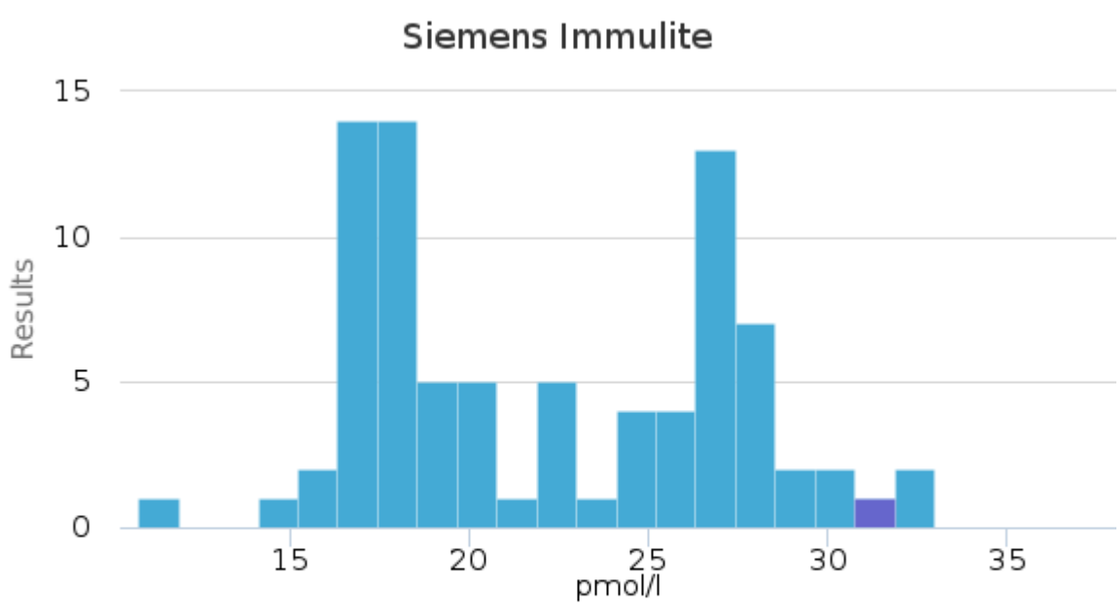
Parathyroid hormone, March, 1-2023

Quantitative report









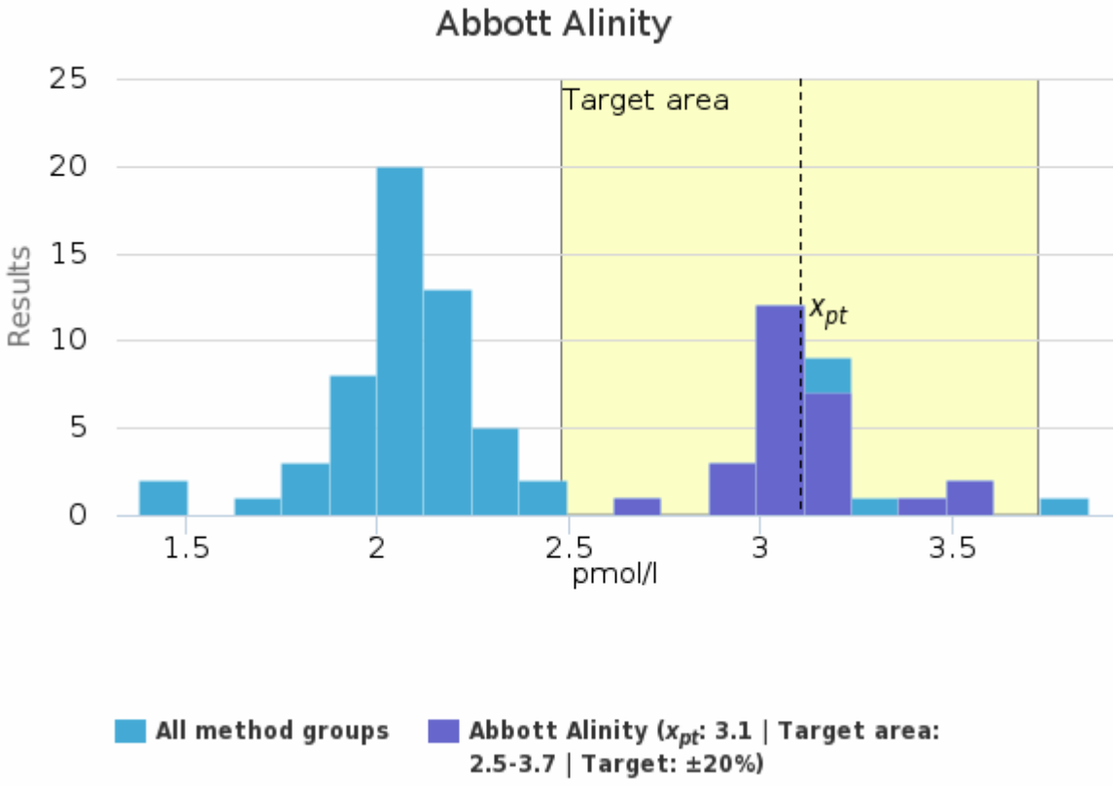
Parathyroid hormone, March, 1-2023

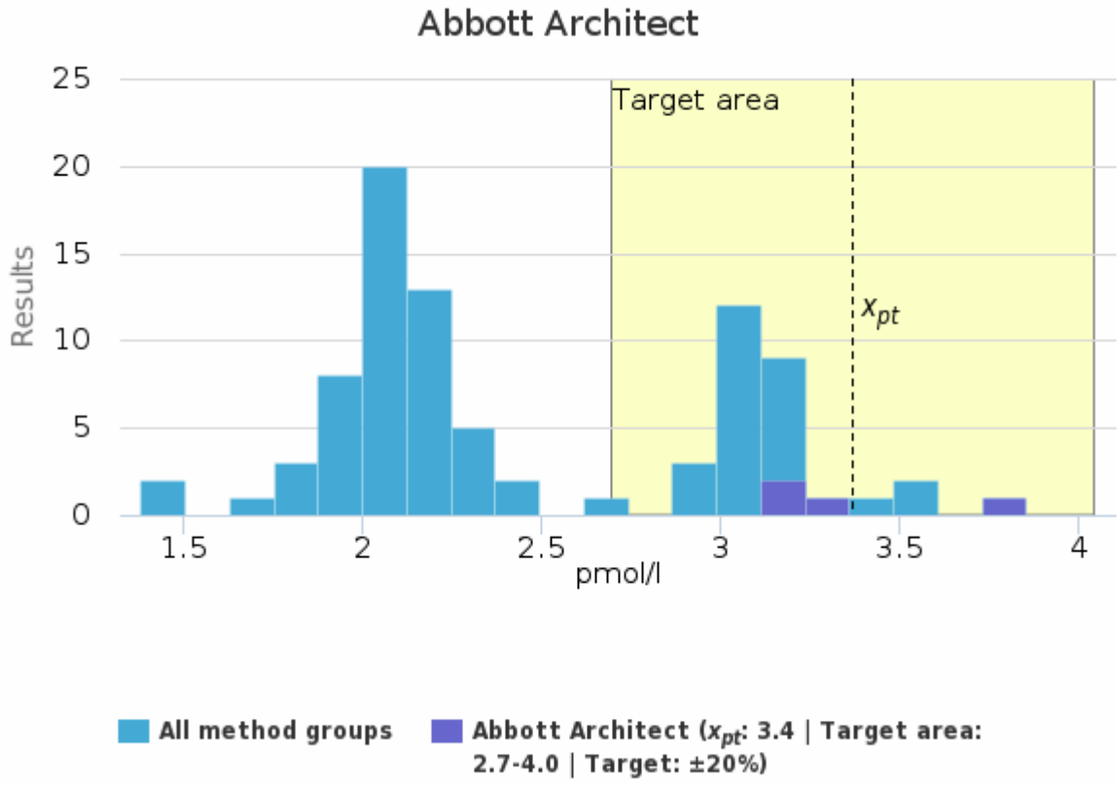
Quantitative report

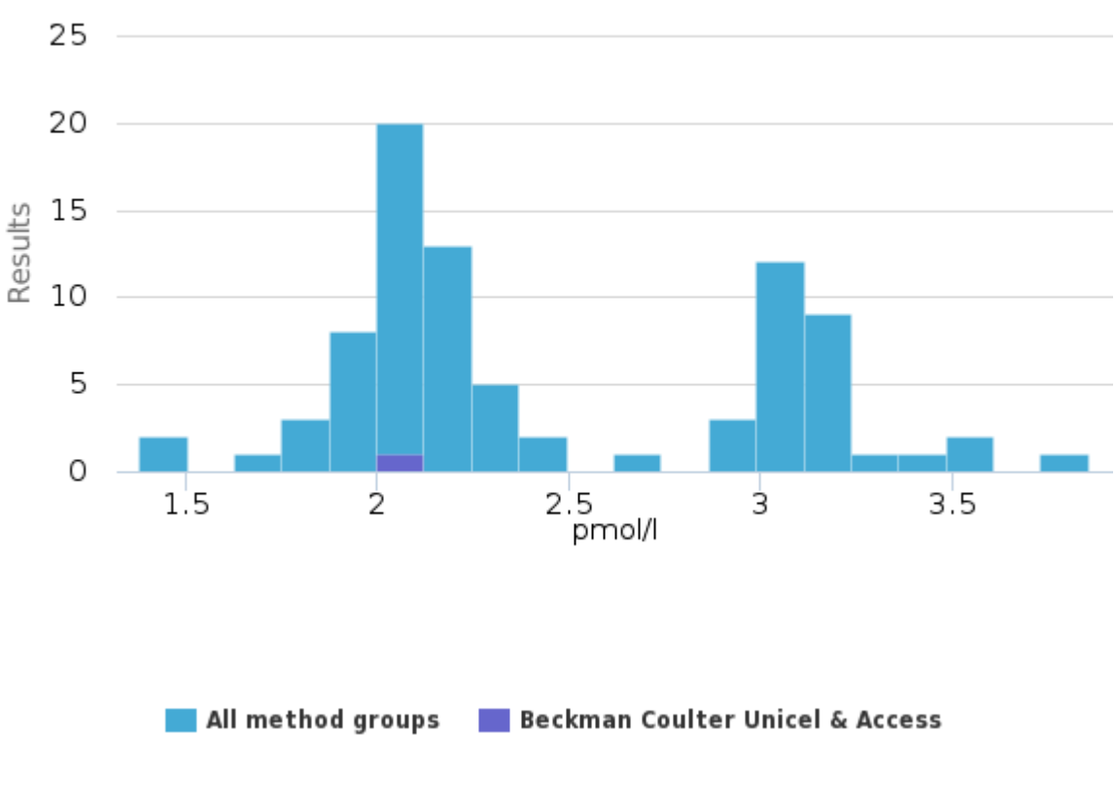
Sample S002 | PTH, intact, pmol/l

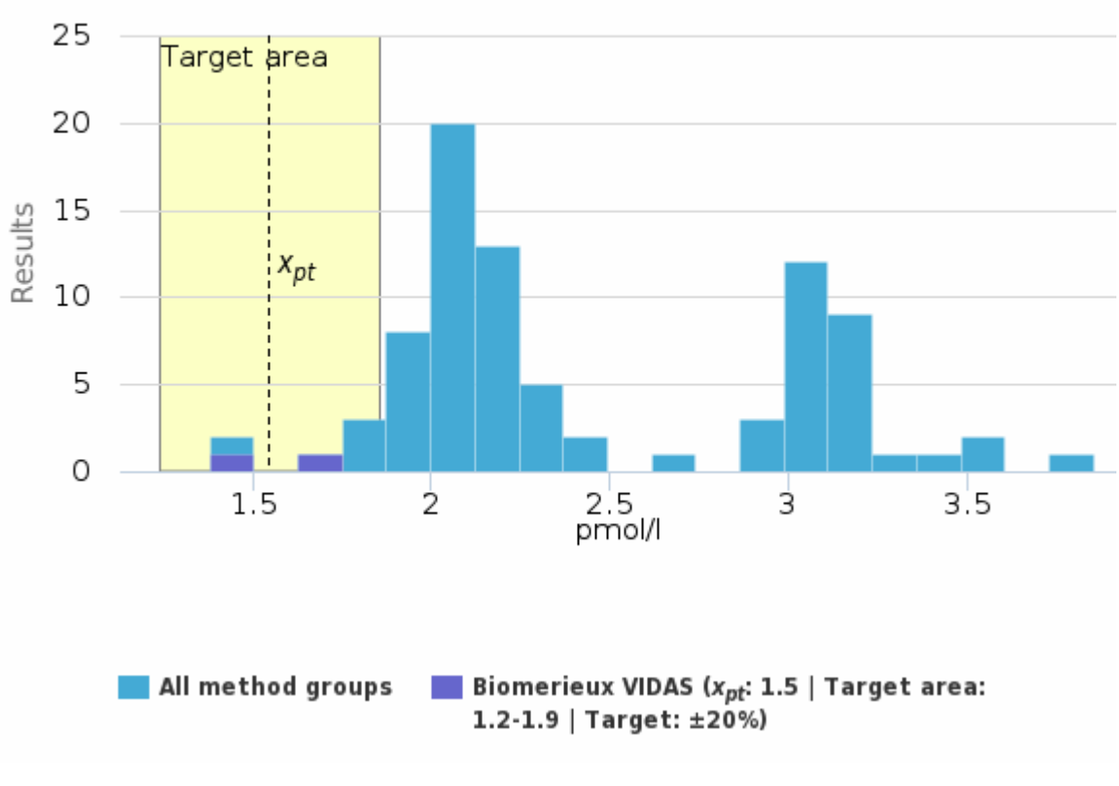
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Alinity	3.1	3.1	0.2	5.9	<0.1	2.7	3.6	-	26
Abbott Architect	3.4	3.2	0.3	10.0	0.2	3.1	3.9	-	4
Beckman Coulter Unicel & Access	-	-	-	-	-	2.1	2.1	-	1
Biomerieux VIDAS	1.5	1.5	0.2	14.4	0.2	1.4	1.7	-	2
Roche Elecsys/cobas e	2.1	2.1	0.1	6.4	<0.1	1.9	2.4	1	39
Siemens Advia Centaur	2.0	2.0	0.2	8.2	<0.1	1.8	2.3	-	6
Siemens Atellica	2.0	1.9	0.1	6.1	<0.1	1.8	2.1	-	5
Siemens Immulite	-	-	-	-	-	2.2	2.2	-	1
All	**2.4**	**2.2**	**0.6**	**22.9**	**<0.1**	**1.4**	**3.9**	**-**	**84**

Sample S002 | PTH, intact, pmol/l| histogram summaries in LabScala





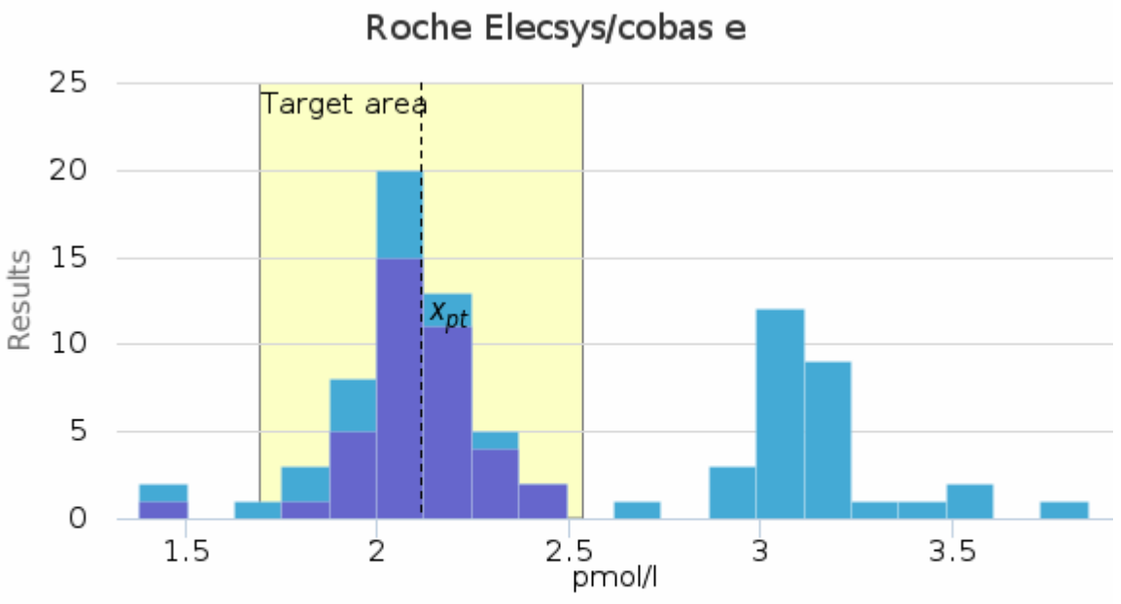


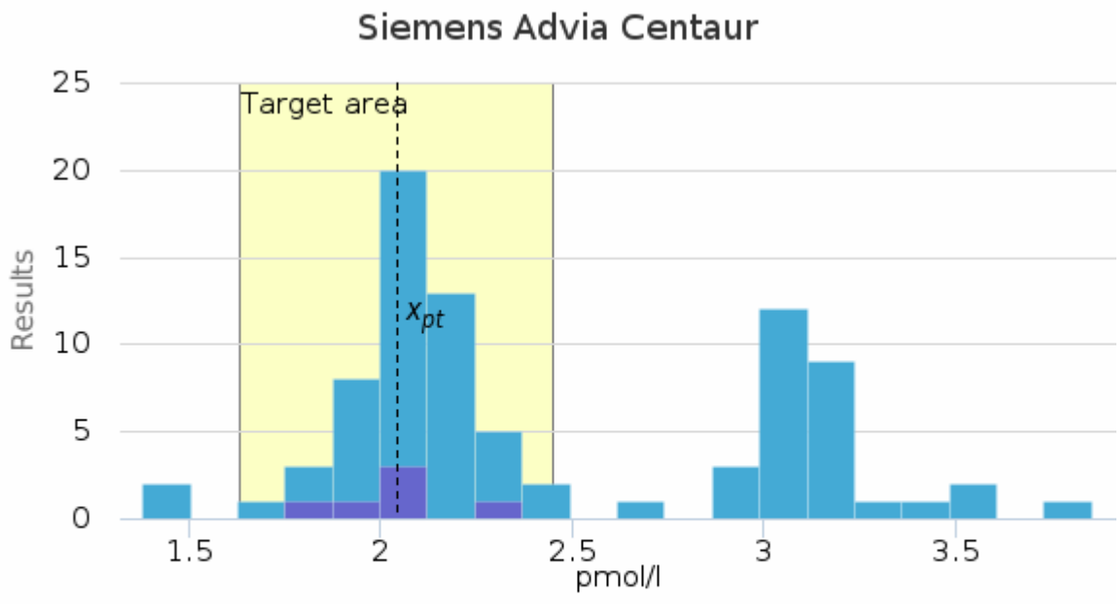


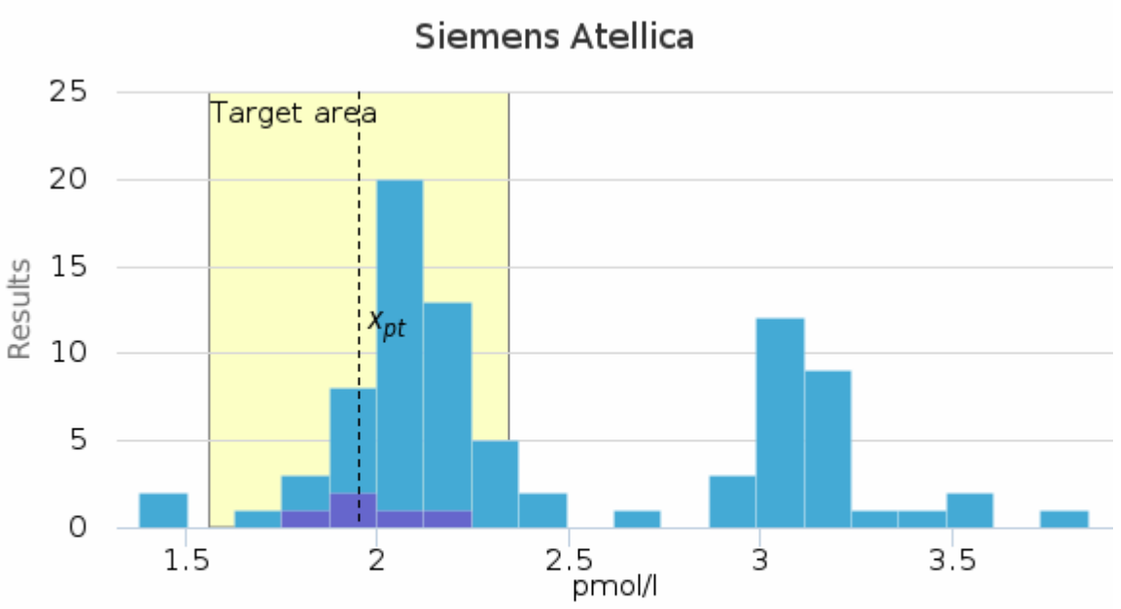
LABQUALITY

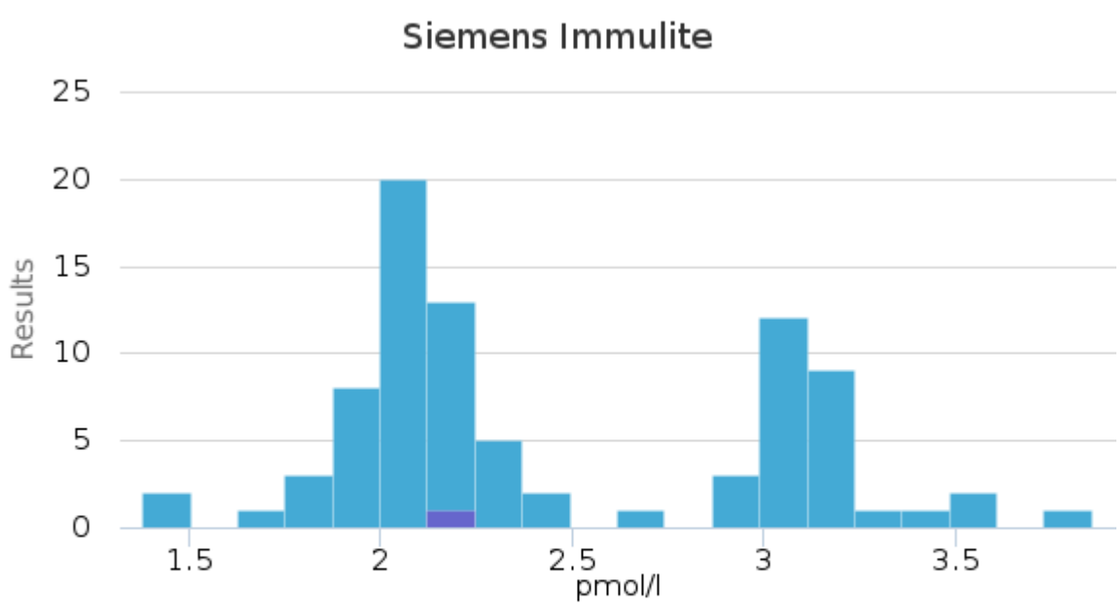
Parathyroid hormone, March, 1-2023

Quantitative report









Parathyroid hormone, March, 1-2023

Quantitative report

Report info

Participants

77 participants from 13 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.”
In case the client’s result is the only one in the method group, no assigned value will be calculated, no target area shown, and no statistics calculated. In case there are only a few results in the client’s own method group, the result can be compared to all method mean or to a group that is similar to the own method.
Results reported with < or > -signs cannot be included in the statistics.

For information on report interpretation and performance evaluation, please see the " EQAS Interpretation guidelines" LabScala User instructions (top right corner ?Help link).

LABQUALITY

External Quality Assessment Scheme

Parathyroid hormone, intact
Round 1, 2023

2023-04-19

FINAL REPORT

Product no. 2250

Samples sent	2023-03-14
Round closed	2023-04-06
Final report	2023-04-19

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
EQA Coordinator
Satu Eklund
satu.eklund@labquality.fi

Expert
PhD, Clinical Biochemist
Titta Salopuro
HUS Diagnostic Center
Helsinki, Finland

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

Specimens
Sample S001 (LQ732623011) and Sample S002 (LQ732623012) were lyophilized, commercial control serum specimens. Based on the manufacturer´s 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
Seventy-seven (77) customer laboratories from thirteen countries participated in Labquality`s Parathormone EQA round 1, 2023. Altogether five outliers were observed (Roche Elecsys/cobas e and Abbott Alinity groups). Some laboratories reported results from several analyzers and thus, the final statistical parameters were calculated from 84 results.

The concentration of intact PTH is clearly elevated in Sample S001 (concentration given by the manufacturer is 22 pmol/L = 207 ng/L) and within reference ranges in Sample S002 (concentration given by the manufacturer is 2.10 pmol/L = 19.8 ng/L).

In this round the customer laboratories were using eight methods, but four of these methods were used by one to four laboratories only. As in previous Parathormone EQA rounds, marked method-based numerical differences were observed in this round (total CV 23% for both samples). These differences probably arise from differences in the calibration of various PTH assays. The highest parathormone concentrations are seen in Abbott group, and the lowest in Roche (and Siemens) group.

The following four methods were used by at least five participants:
Roche Elecsys/cobas e analyzers were used by 39 laboratories, Abbott Alinity by 26, Siemens Advia Centaur by six and Siemens Atellica by five laboratories. The results of these four methods (76 analyzers) cover 90 per cent of all results given in this round.

The method-based variation in these four most used method groups was rather low in both samples (Sample S001 CV 4-8%, sample S002 CV 6-8%). These variation figures can be regarded as a good result, and they show good technical performance of automated analyzers.

End of report