

External Quality Assessment Scheme

Thyroid gland antibodies Round 1, 2023

Specimens

Please find enclosed 2 human plasma or serum samples S001 and S002, each 0.4 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

Thyroglobulin antibodies
Thyroid peroxidase antibodies

Postanalytical part

A postanalytical part is integrated in this round. The questions are not related to any of the samples to be tested (samples S001-S002) but should be considered as a totally separate part. The questions are presented on the LabScala result form in the "Analytics" section named as "Postanalytical question". You may report your answers by choosing an option from the drop-down menu and by specifying your possible actions in the comments field. It is not mandatory to reply to the postanalytical part.

Storage and use

After arrival, the samples should be stored at +2...8 °C, and used as soon as possible, preferably within a week. The samples are ready for use. 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. Report only the results of examinations that are in use in your laboratory. Samples with a result that exceeds the upper limit of the method do not need to be diluted, but the result should be reported > upper limit of the method (a greater than ">" character should be next to a number without a space, e.g. >500).

S001



S002



2023-03-07

INSTRUCTIONS

Product no. 5920
LQ717523011-012/FI

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 **March 30, 2023.**

The expected results of the round are published in LabScala in the View Reports section by April 4, 2023.

Inquiries

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Only the analysis phase is accredited.



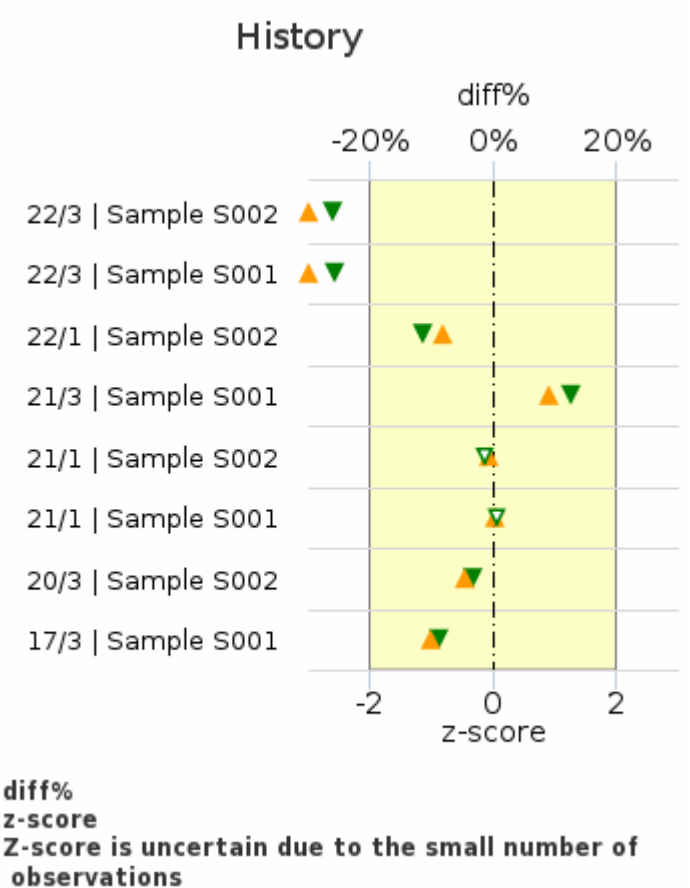
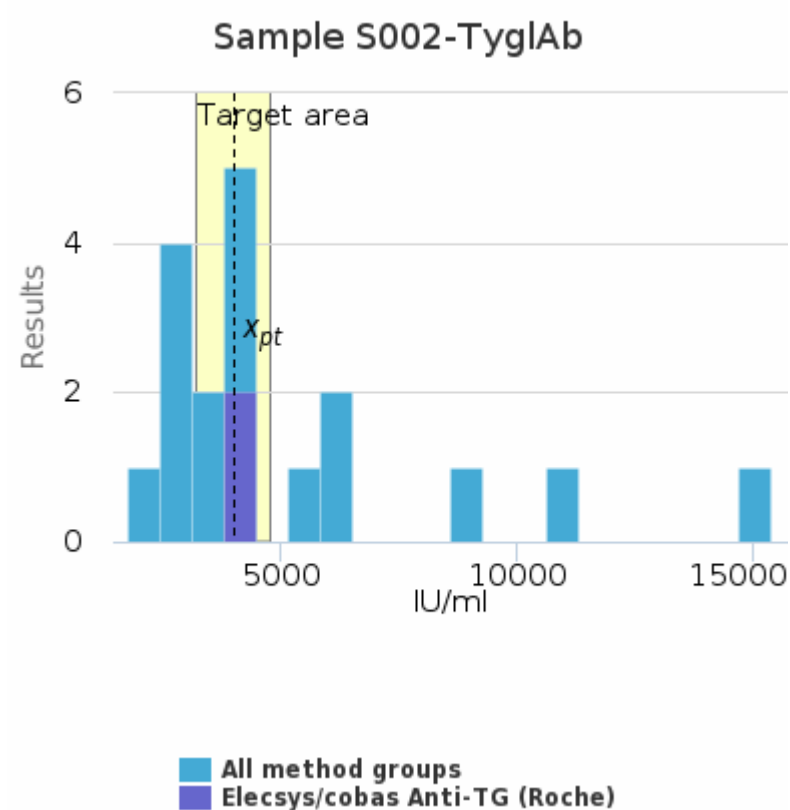
TyglAb |e601

Sample S001

Methodics	Negative	Positive	No interpretation	Total
Access (Beckman Coulter)	3	-	-	3
Advia Centaur aTG / aTPO (Siemens)	2	1	-	3
Alegria Anti-TG (Orgentec)	1	-	-	1
Alinity i Anti-Tg	4	-	1	5
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	-	1
Architect (Abbott)	5	-	-	5
Atellica Solution Anti-TG (Siemens)	2	1	-	3
Elecsys/cobas Anti-TG (Roche)	23	-	2	25
Immulinite 2000/2500 (Siemens)	4	-	-	4
IRMA (Beckman Coulter)	1	-	-	1
Maglumi Anti-TG (Snibe)	2	-	-	2
Phadia EliA (Thermo Scientific)	8	-	-	8
Vidas (bioMerieux)	1	-	-	1
Total	57	2	3	62

Sample S002

Methodics	Positive	No interpretation	Total
Access (Beckman Coulter)	3	-	3
Advia Centaur aTG / aTPO (Siemens)	3	-	3
Alegria Anti-TG (Orgentec)	1	-	1
Alinity i Anti-Tg	4	1	5
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	1
Architect (Abbott)	5	-	5
Atellica Solution Anti-TG (Siemens)	3	-	3
Elecsys/cobas Anti-TG (Roche)	24	2	26
Immulinite 2000/2500 (Siemens)	4	-	4
IRMA (Beckman Coulter)	1	-	1
Maglumi Anti-TG (Snibe)	2	-	2
Phadia EliA (Thermo Scientific)	8	-	8
Vidas (bioMerieux)	1	-	1
Total	60	3	63



* outlier

	x_{pt}	sd	SEM	CV%	n
Elecsys/cobas Anti-TG (Roche)	4000.0 IU/ml	<0.1	<0.1	<0.1	2
All methods	4641.0 IU/ml	2389.9	579.6	51.5	18

Round	Sample	x_{pt}	Result	diff%	z-score
22/3	Sample S002	93.9	45.1	-51.9%	-2.61
22/3	Sample S001	147.0	99.2	-32.6%	-2.56
22/1	Sample S002	117.3	107.8	-8.1%	-1.13
21/3	Sample S001	172.5	188.1	9.0%	1.26
21/1	Sample S002	585.5	580.6	-0.8%	-0.14
21/1	Sample S001	170.2	170.9	0.4%	0.05
20/3	Sample S002	2899.8	2766.0	-4.6%	-0.33

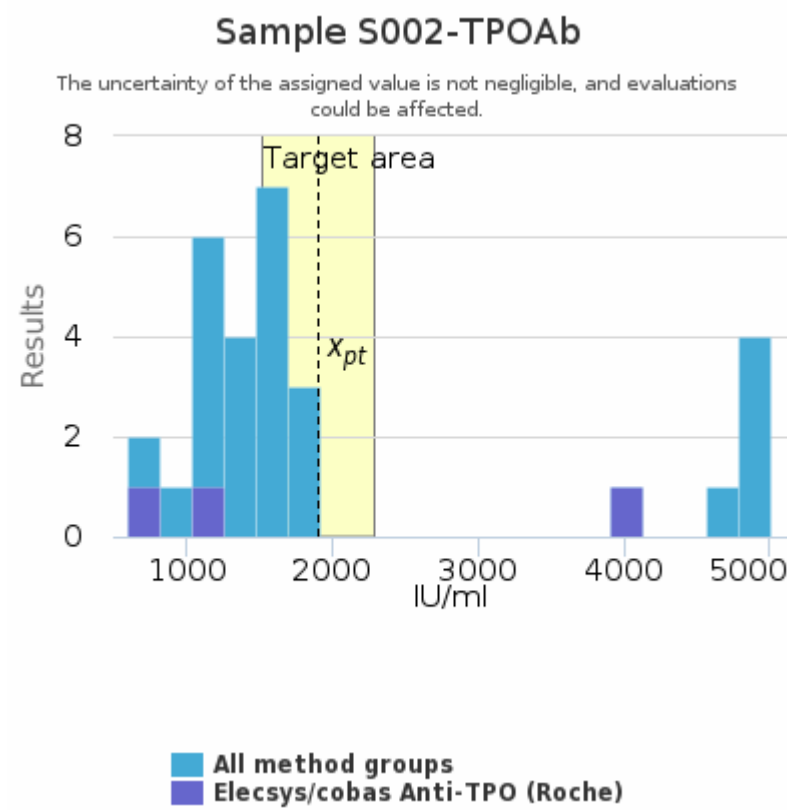
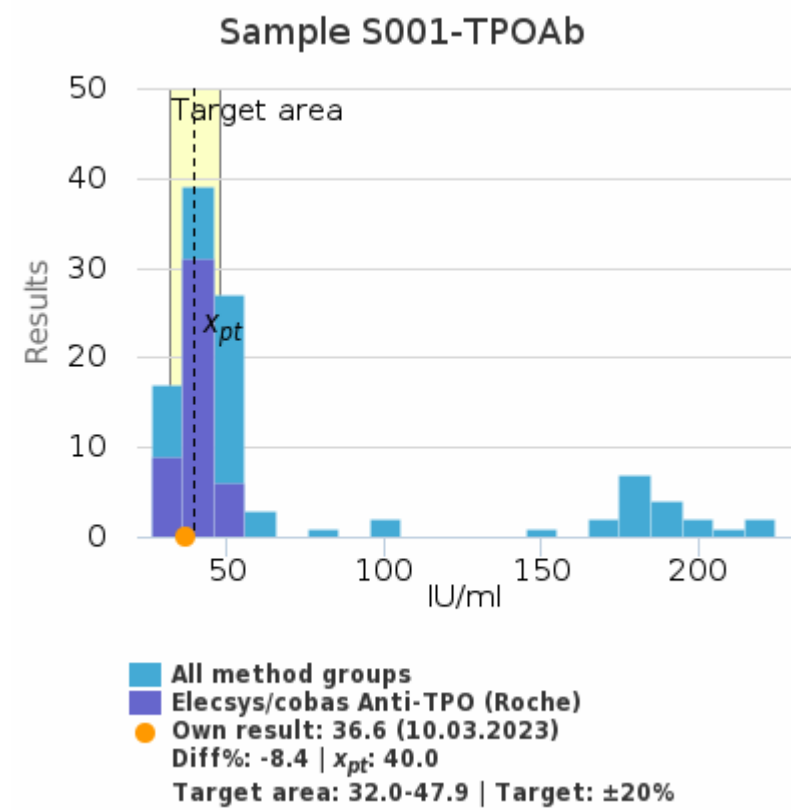
TPOAb |e601

Sample S001

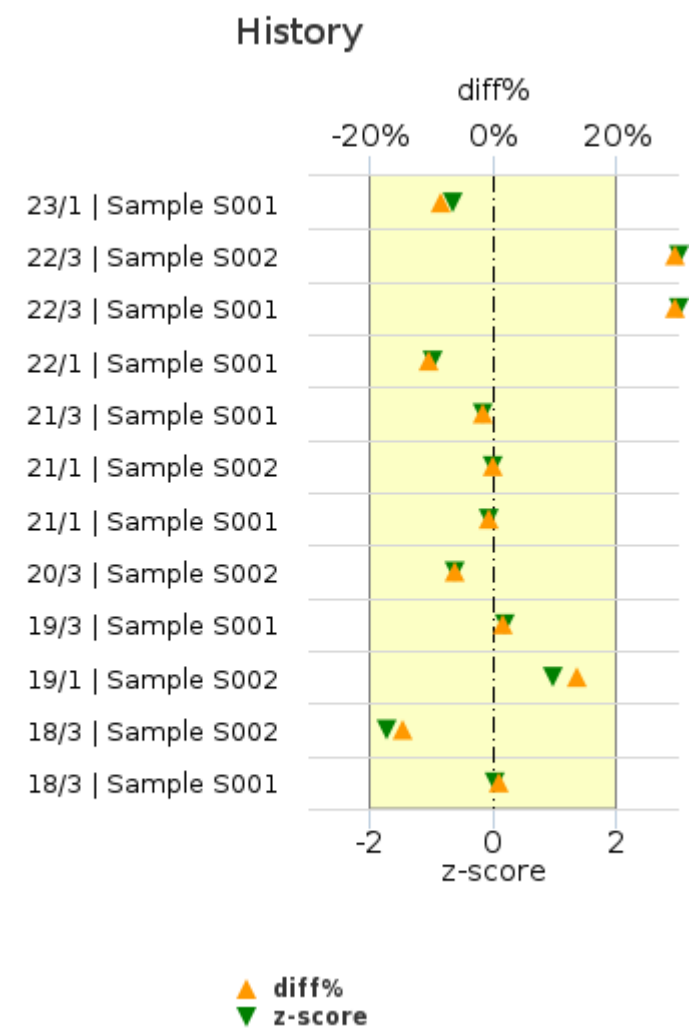
Methodics	Negative	Borderline	Weak positive	Positive	No interpretation	Total
Access (Beckman Coulter)	-	-	1	2	1	4
Advia Centaur aTG / aTPO (Siemens)	1	-	-	5	-	6
Alegria Anti-TPO (Orgentec)	-	1	-	-	-	1
Alinity i Anti-TPO	-	-	1	9	3	13
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	-	-	-	1
Architect (Abbott)	-	-	-	8	-	8
Atellica Solution Anti-TPO (Siemens)	1	-	-	10	3	14
Diesse Chorus a-TPO	-	-	-	1	-	1
Elecsys/cobas Anti-TPO (Roche)	4	3	11	25	3	46
Immolute 2000/2500 (Siemens)	-	-	-	4	-	4
IRMA (Beckman Coulter)	1	-	-	-	-	1
Maglumi Anti-TPO (Snibe)	1	-	1	-	-	2
Phadia EliA (Thermo Scientific)	-	2	1	5	-	8
Vidas (bioMerieux)	-	-	-	2	-	2
Total	9	6	15	71	10	111

Sample S002

Methodics	Positive	No interpretation	Total
Access (Beckman Coulter)	3	1	4
Advia Centaur aTG / aTPO (Siemens)	6	-	6
Alegria Anti-TPO (Orgentec)	1	-	1
Alinity i Anti-TPO	10	3	13
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	1
Architect (Abbott)	8	-	8
Atellica Solution Anti-TPO (Siemens)	11	3	14
Diesse Chorus a-TPO	1	-	1
Elecsys/cobas Anti-TPO (Roche)	43	3	46
Immolute 2000/2500 (Siemens)	4	-	4
IRMA (Beckman Coulter)	1	-	1
Maglumi Anti-TPO (Snibe)	2	-	2
Phadia EliA (Thermo Scientific)	8	-	8
Vidas (bioMerieux)	2	-	2
Total	101	10	111



* outlier



	x_{pt}	sd	SEM	CV%	n
Elecsys/cobas Anti-TPO (Roche)	40.0 IU/ml	5.1	0.8	12.8	46

	x_{pt}	sd	SEM	CV%	n
Elecsys/cobas Anti-TPO (Roche)	1903.2 IU/ml	1833.7	1058.7	96.3	3

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S001	40.0	36.6	-8.4%	-0.66
22/3	Sample S002	43.6	96.6	121.5%	11.08
22/3	Sample S001	98.8	159.3	61.3%	5.04

Report info**Participants**

107 participants from 14 countries.

Report info

Qualitative and quantitative results are presented in the same report. Always compare your results to those obtained with the same test kit.

The qualitative results are divided into groups according to the method stated by the laboratory and presented in laboratory-specific tables. Accepted results are marked with green colour and laboratory's own result with a black radio button .

The quantitative results from the positive specimens are presented as histograms. Quantitative results reported with < or > -signs are not processed. Results reported as ratios, titres, absorbances and without a unit are manually removed and not statistically processed.

Assigned values (target values) are mean 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 participant specific report your own result is shown with an orange dot. The target area is presented as a yellow area in the picture. In the history graphs you are able to see your performance graphically with both against the assigned value (xpt) and the z-score area of -2 ... +2.

If you have not reported any results you will get a note: "You have not responded in time, only global report is available".

For information on report interpretation and performance evaluation, please see the "EQAS Interpretation guidelines" in LabScala User instructions. In case you have any questions regarding the reports, please contact the EOA Coordinator.

Sample S001 | TyglAb, IU/ml

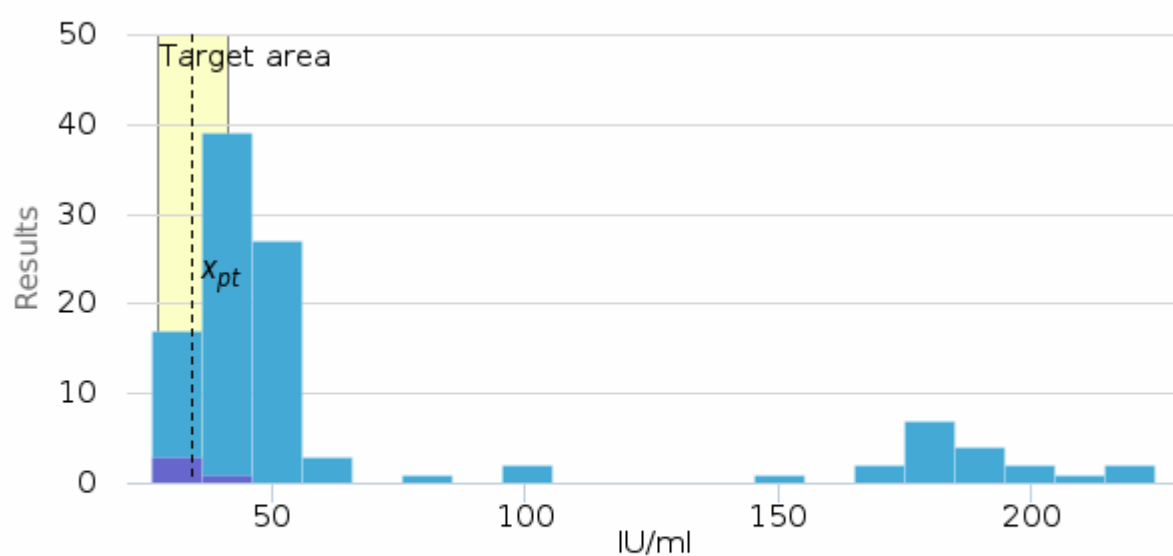
Methodics	Negative	Positive	No interpretation	Total
Access (Beckman Coulter)	3	-	-	3
Advia Centaur aTG / aTPO (Siemens)	2	1	-	3
Alegria Anti-TG (Orgentec)	1	-	-	1
Alinity i Anti-Tg	4	-	1	5
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	-	1
Architect (Abbott)	5	-	-	5
Atellica Solution Anti-TG (Siemens)	2	1	-	3
Elecsys/cobas Anti-TG (Roche)	23	-	2	25
Immulite 2000/2500 (Siemens)	4	-	-	4
IRMA (Beckman Coulter)	1	-	-	1
Maglumi Anti-TG (Snibe)	2	-	-	2
Phadia EliA (Thermo Scientific)	8	-	-	8
Vidas (bioMerieux)	1	-	-	1
Total	57	2	3	62

Sample S001 | TPOAb, IU/ml

Methodics	Negative	Borderline	Weak positive	Positive	No interpretation	Total
Access (Beckman Coulter)	-	-	1	2	1	4
Advia Centaur aTG / aTPO (Siemens)	1	-	-	5	-	6
Alegria Anti-TPO (Orgentec)	-	1	-	-	-	1
Alinity i Anti-TPO	-	-	1	9	3	13
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	-	-	-	1
Architect (Abbott)	-	-	-	8	-	8
Atellica Solution Anti-TPO (Siemens)	1	-	-	10	3	14
Diesse Chorus a-TPO	-	-	-	1	-	1
Elecsys/cobas Anti-TPO (Roche)	4	3	11	25	3	46
Immulin 2000/2500 (Siemens)	-	-	-	4	-	4
IRMA (Beckman Coulter)	1	-	-	-	-	1
Maglumi Anti-TPO (Snibe)	1	-	1	-	-	2
Phadia EliA (Thermo Scientific)	-	2	1	5	-	8
Vidas (bioMérieux)	-	-	-	2	-	2
Total	9	6	15	71	10	111

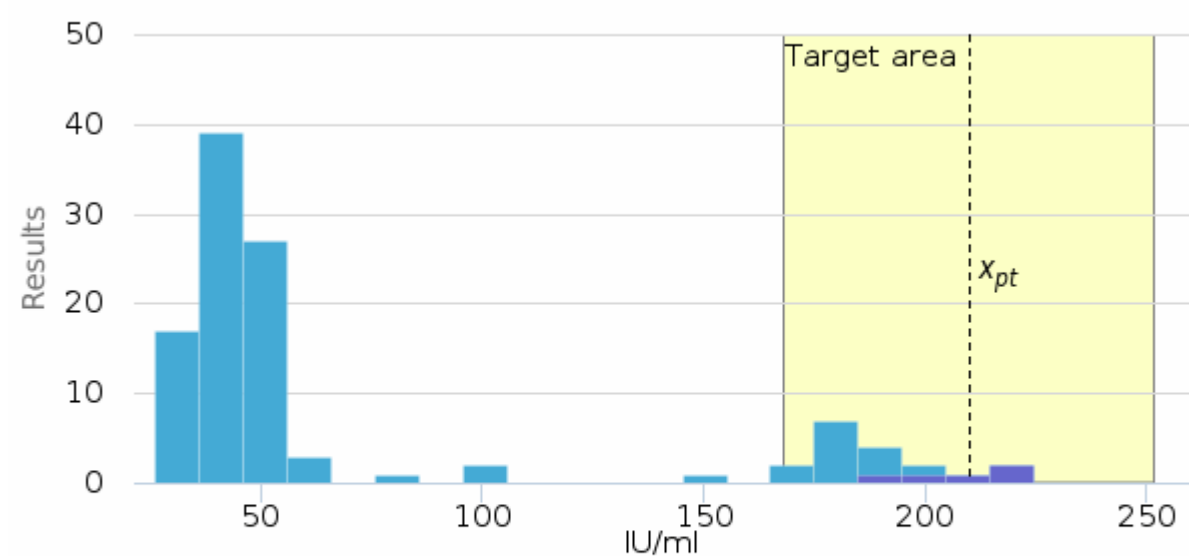
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Access (Beckman Coulter)	34.4	34.0	2.3	6.8	1.2	32.0	37.6	-	4
Advia Centaur aTG / aTPO (Siemens)	209.8	213.0	12.4	5.9	5.5	192.5	224.6	-	5
Alegria Anti-TPO (Orgentec)	-	-	-	-	-	63.0	63.0	-	1
Alinity i Anti-TPO	48.8	48.7	1.6	3.3	0.4	46.1	51.9	-	13
Anti-TG / Anti-TPO ELISA (Euroimmun)	-	-	-	-	-	31.0	31.0	-	1
Architect (Abbott)	52.1	51.8	2.5	4.8	0.9	48.7	56.7	-	8
Atellica Solution Anti-TPO (Siemens)	183.1	181.6	7.9	4.3	2.2	172.8	196.0	-	13
Diesse Chorus a-TPO	-	-	-	-	-	98.2	98.2	-	1
Elecsys/cobas Anti-TPO (Roche)	40.0	39.3	5.1	12.8	0.8	29.4	53.2	-	46
Immulin 2000/2500 (Siemens)	73.0	68.0	23.1	31.6	11.5	52.0	104.0	-	4
IRMA (Beckman Coulter)	-	-	-	-	-	26.1	26.1	-	1
Maglumi Anti-TPO (Snibe)	94.5	94.5	77.1	81.6	54.5	40.0	149.0	-	2
Phadia EliA (Thermo Scientific)	38.4	37.0	4.7	12.3	1.8	31.0	44.0	-	7
Vidas (bioMérieux)	40.9	40.9	3.5	8.5	2.5	38.4	43.3	-	2
All	66.7	44.0	53.2	79.8	5.2	26.1	213.0	2	108

Access (Beckman Coulter)

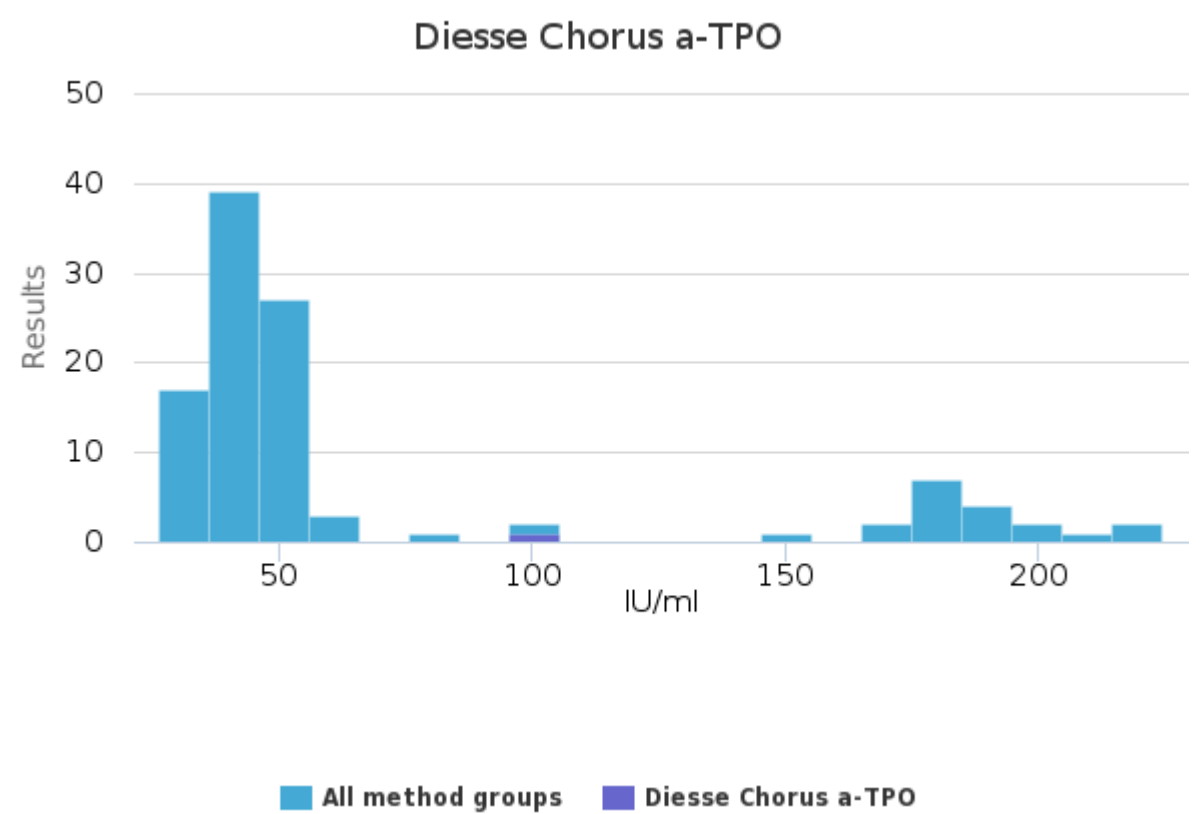
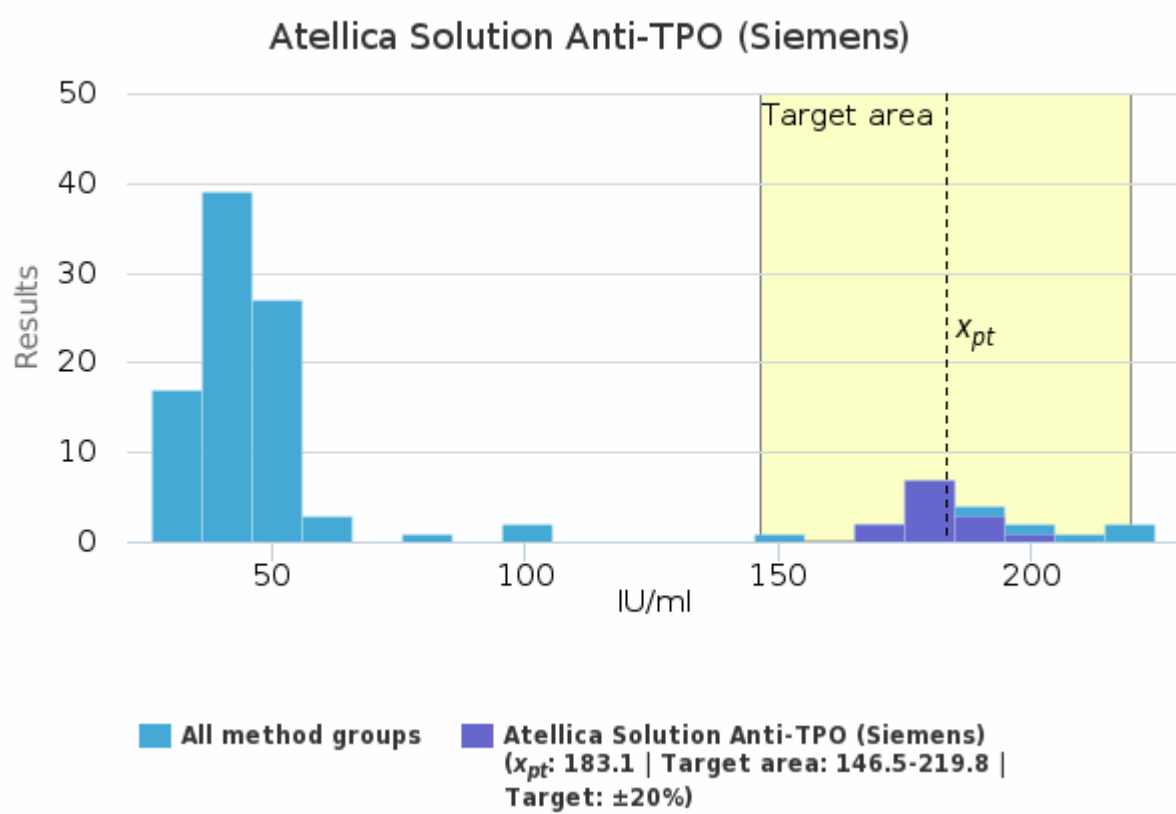
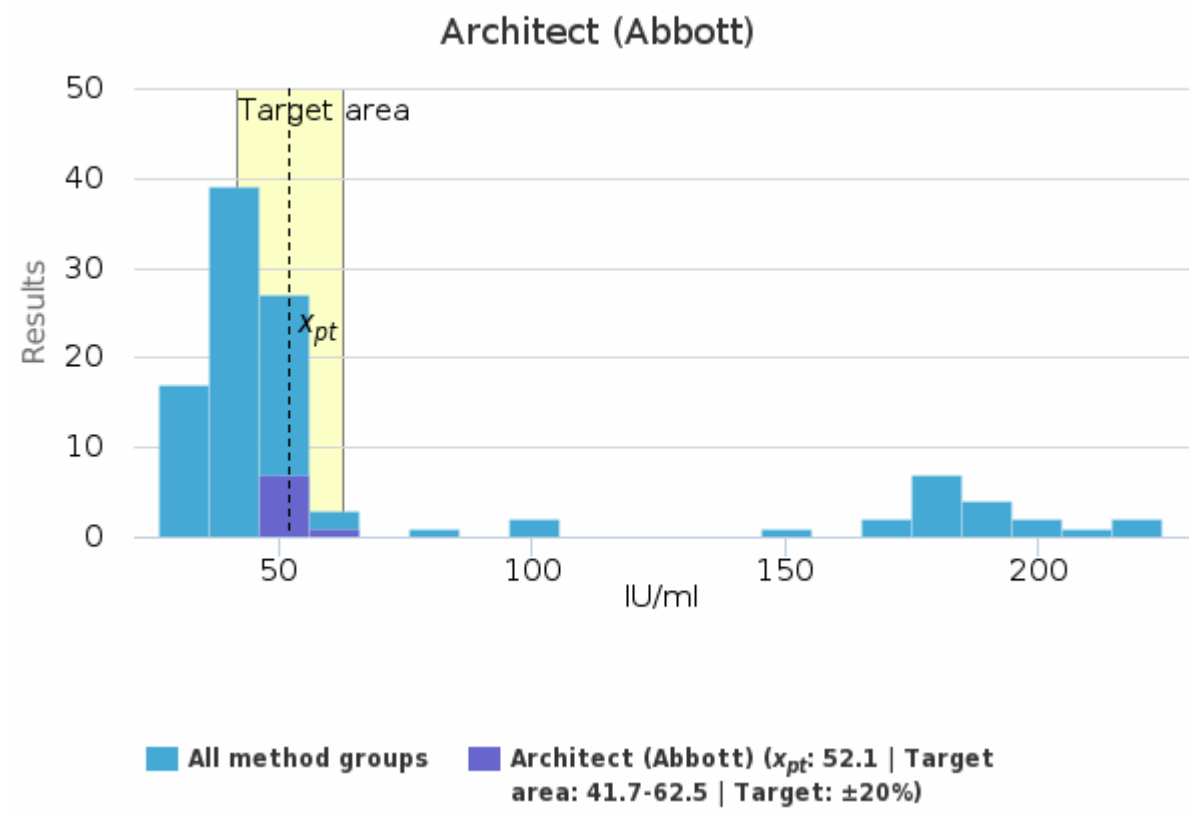
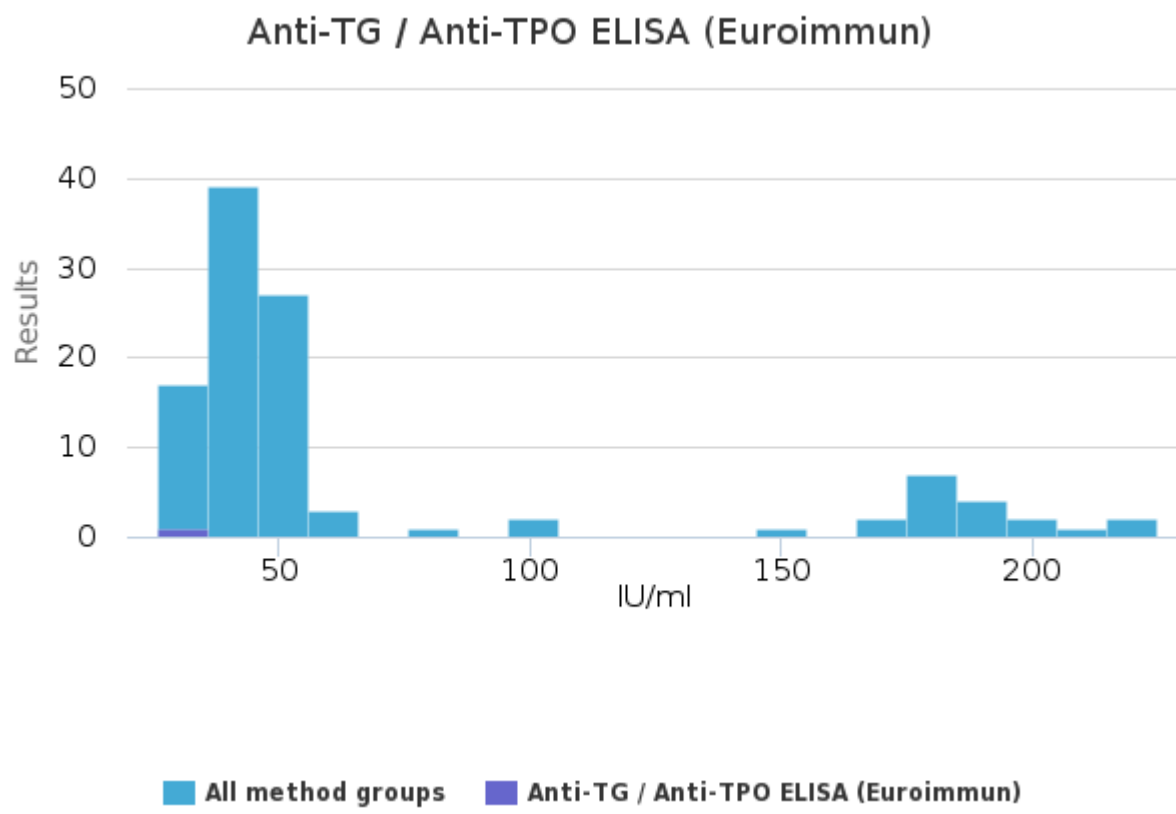
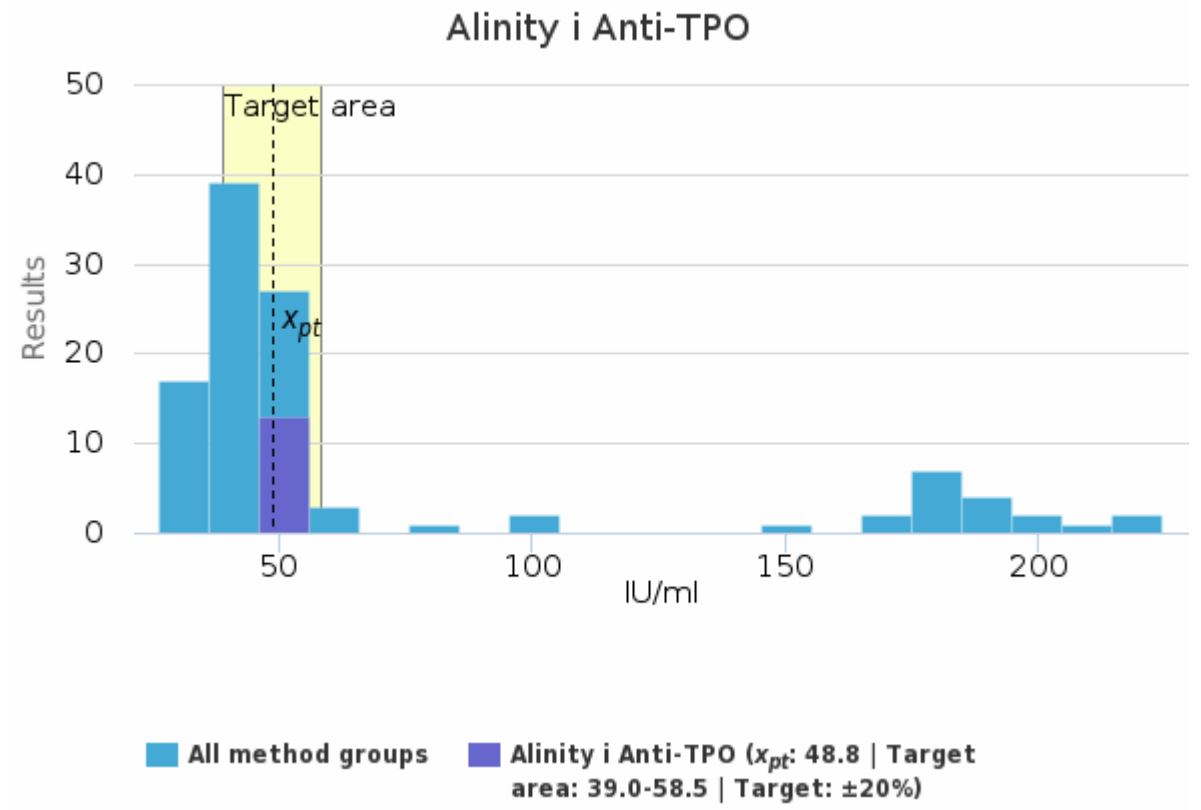
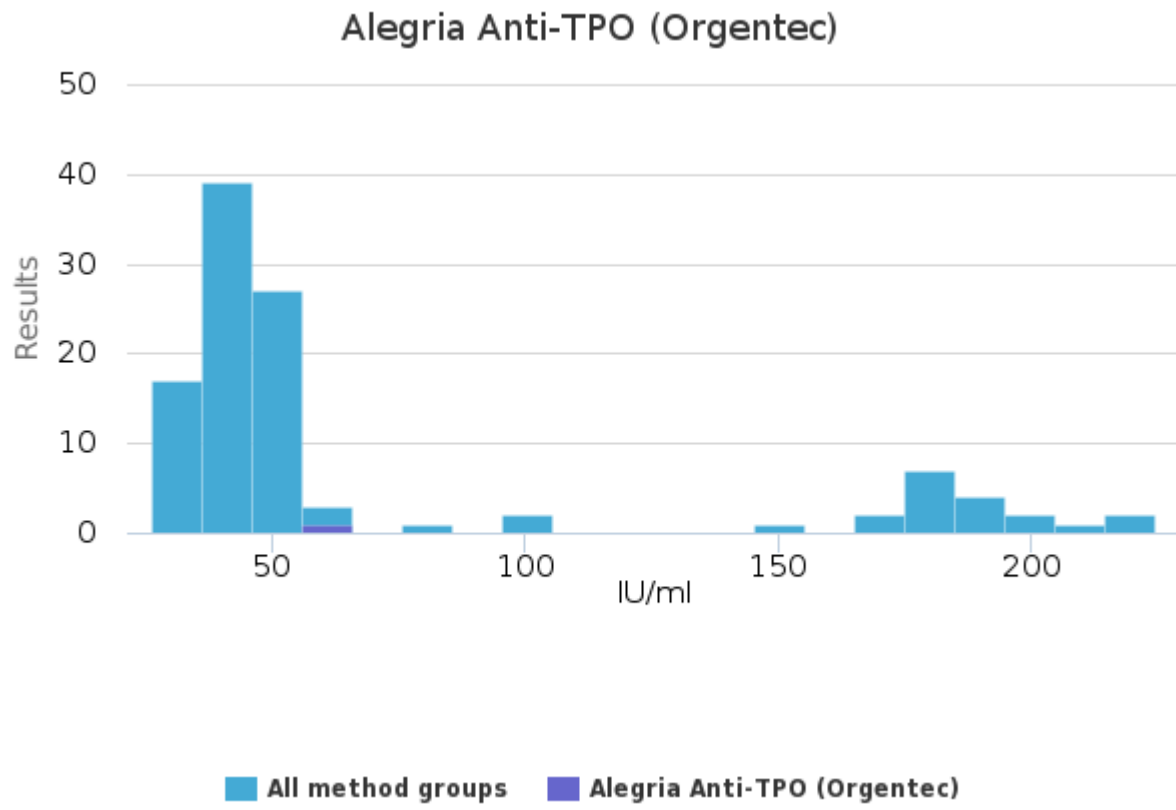


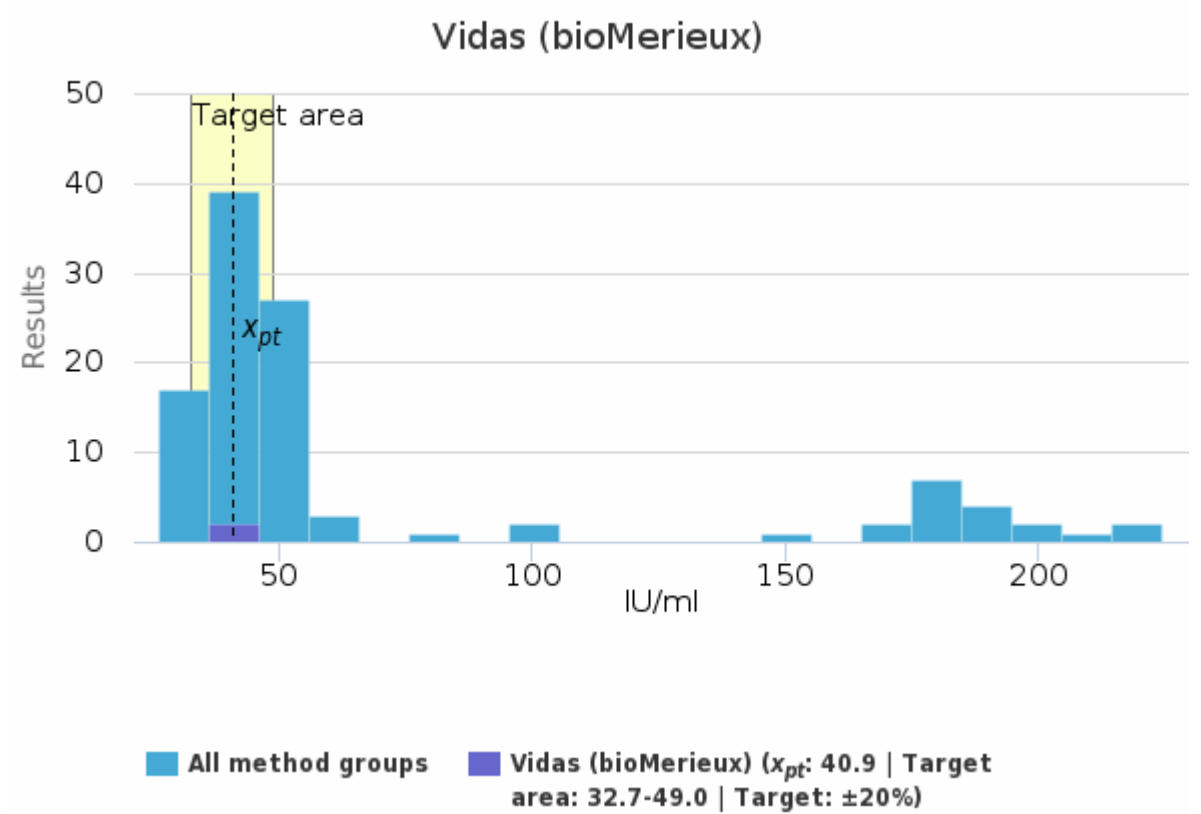
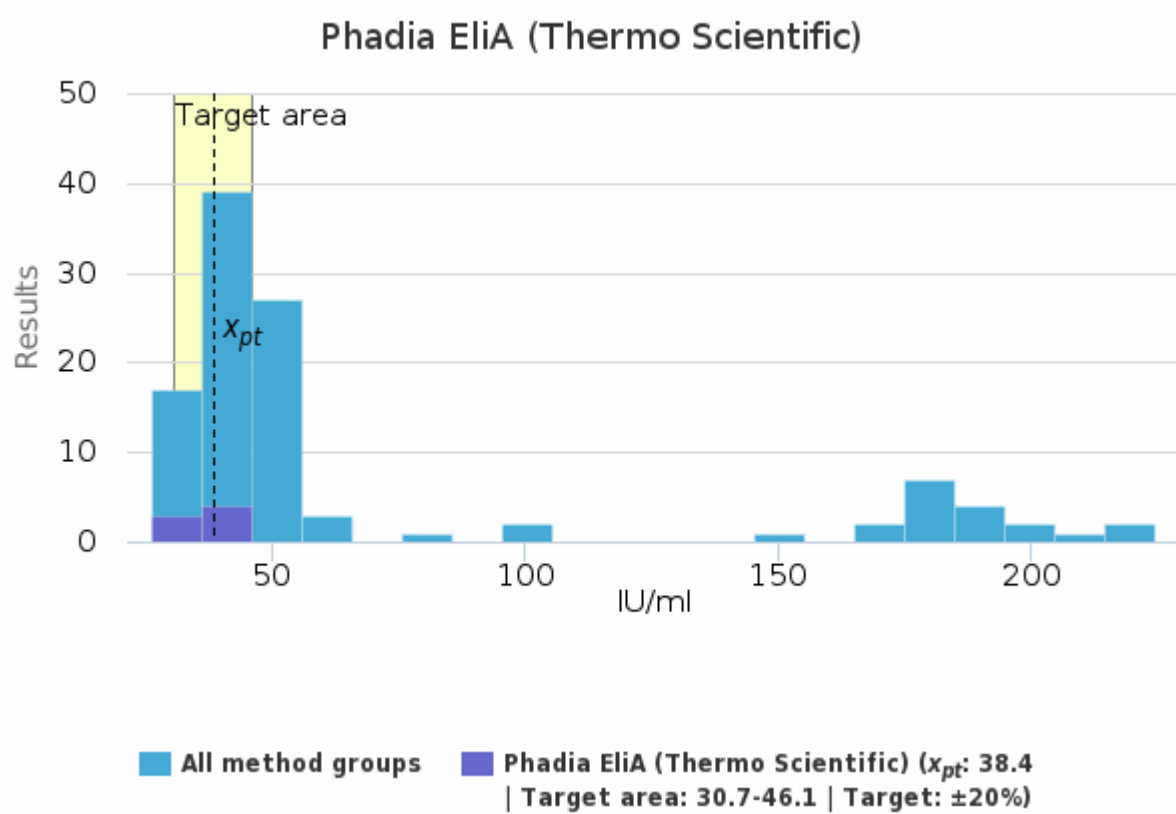
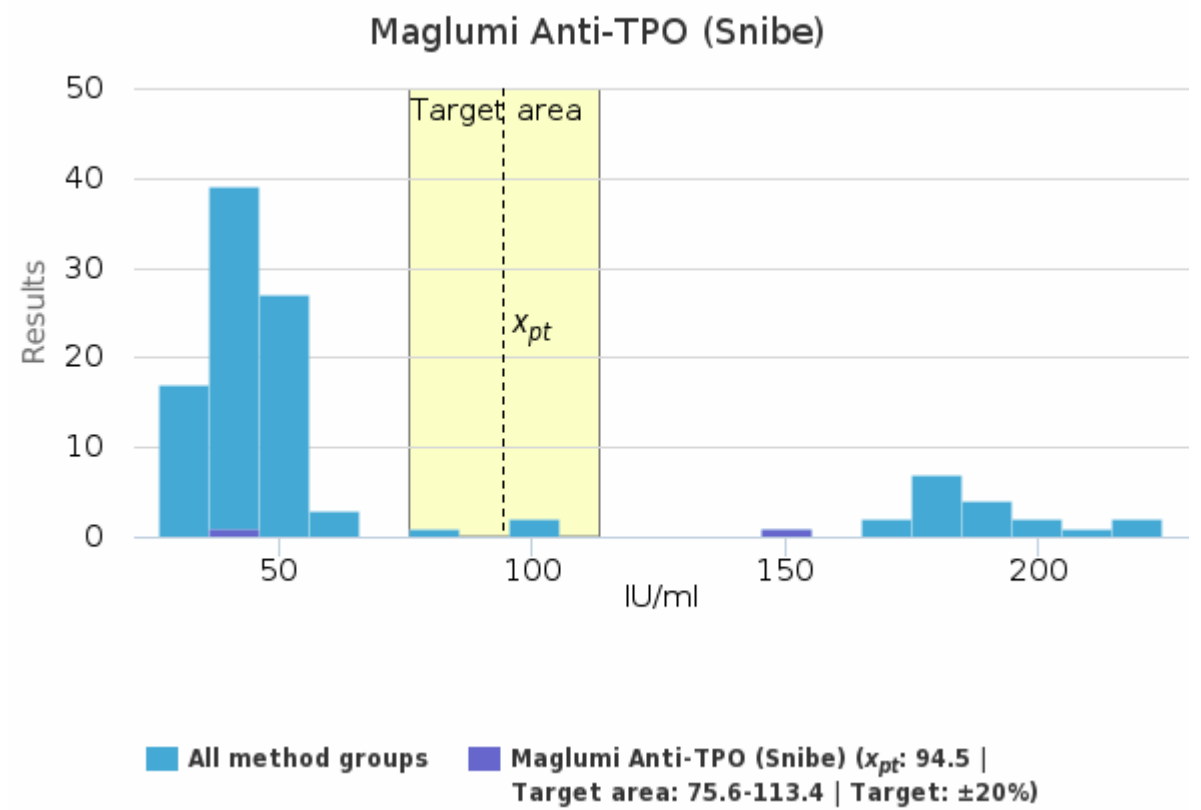
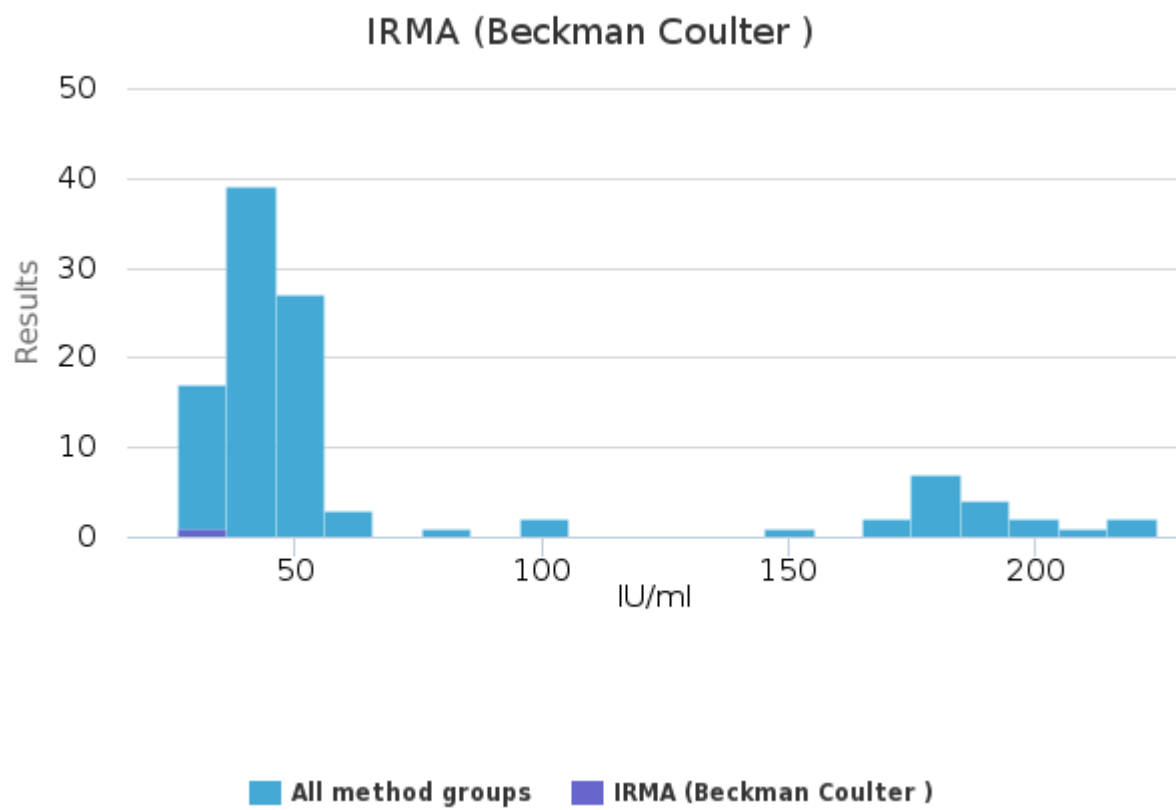
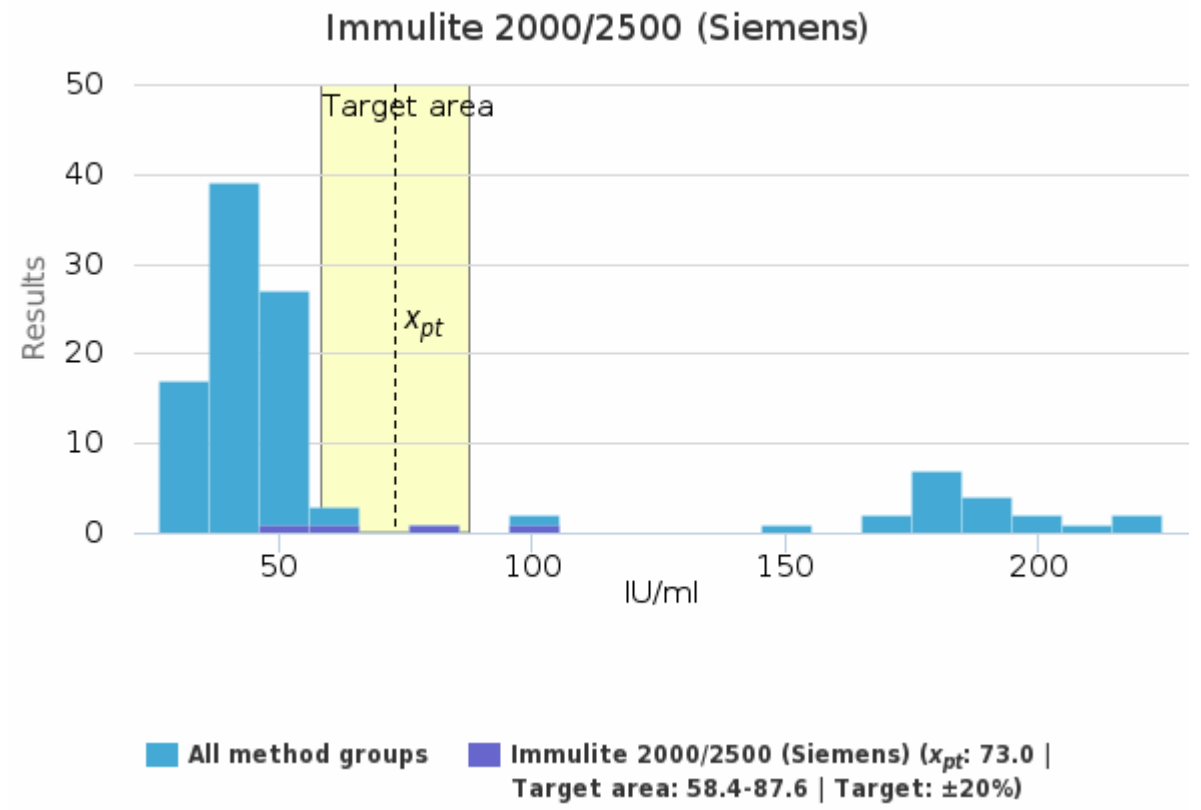
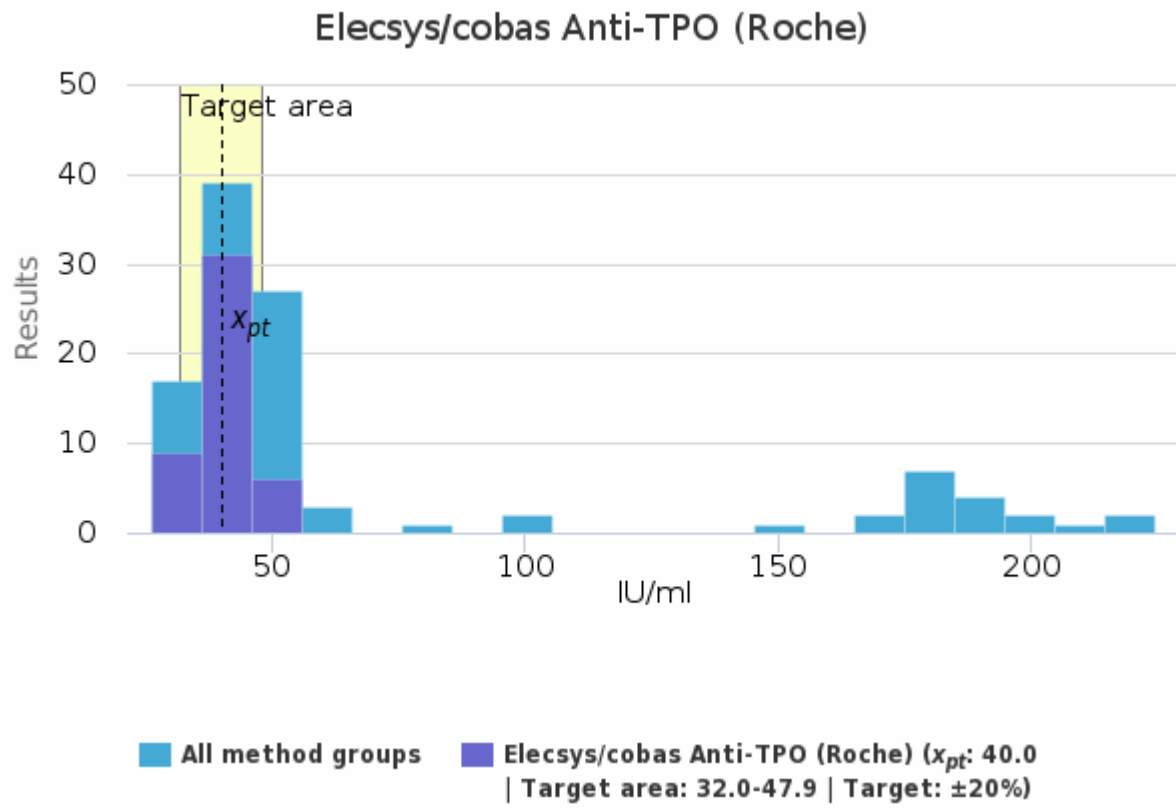
■ All method groups ■ Access (Beckman Coulter) (x_{pt} : 34.4 | Target area: 27.5-41.3 | Target: $\pm 20\%$)

Advia Centaur aTG / aTPO (Siemens)



■ All method groups ■ Advia Centaur aTG / aTPO (Siemens) (x_{pt} : 209.8 | Target area: 167.9-251.8 | Target: $\pm 20\%$)



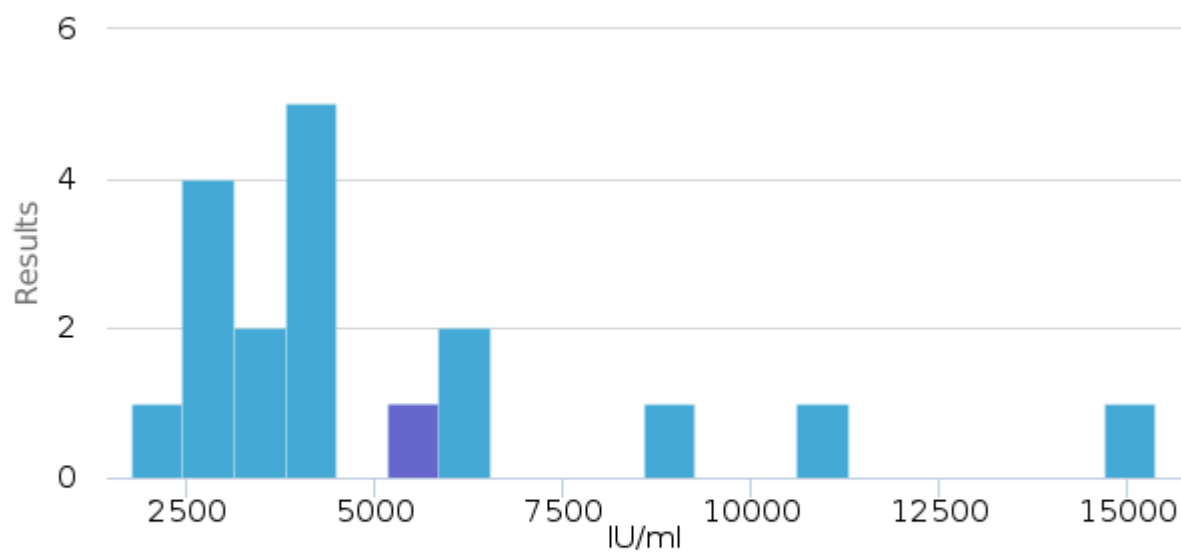


Sample S002 | TyglAb, IU/ml

Methodics	Positive	No interpretation	Total
Access (Beckman Coulter)	3	-	3
Advia Centaur aTG / aTPO (Siemens)	3	-	3
Alegria Anti-TG (Orgentec)	1	-	1
Alinity i Anti-Tg	4	1	5
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	1
Architect (Abbott)	5	-	5
Atellica Solution Anti-TG (Siemens)	3	-	3
Elecsys/cobas Anti-TG (Roche)	24	2	26
Immulin 2000/2500 (Siemens)	4	-	4
IRMA (Beckman Coulter)	1	-	1
Maglumi Anti-TG (Snibe)	2	-	2
Phadia EliA (Thermo Scientific)	8	-	8
Vidas (bioMerieux)	1	-	1
Total	60	3	63

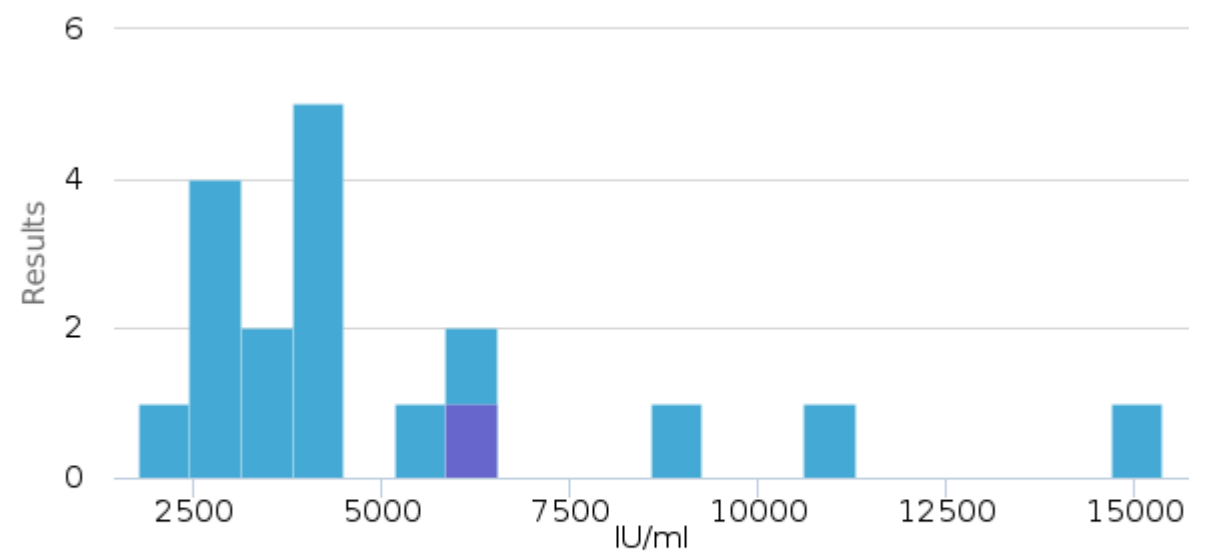
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Advia Centaur aTG / aTPO (Siemens)	-	-	-	-	-	5753.0	5753.0	-	1
Alegria Anti-TG (Orgentec)	-	-	-	-	-	6234.0	6234.0	-	1
Alinity i Anti-Tg	3527.0	3694.9	481.5	13.7	278.0	2984.0	3902.0	-	3
Anti-TG / Anti-TPO ELISA (Euroimmun)	-	-	-	-	-	1774.0	1774.0	-	1
Architect (Abbott)	3948.2	3915.1	195.0	4.9	112.6	3772.0	4157.7	-	3
Elecsys/cobas Anti-TG (Roche)	4000.0	4000.0	<0.1	<0.1	<0.1	4000.0	4000.0	-	2
Immulin 2000/2500 (Siemens)	4450.0	4450.0	2050.6	46.1	1450.0	3000.0	5900.0	-	2
IRMA (Beckman Coulter)	-	-	-	-	-	15367.3	15367.3	-	1
Maglumi Anti-TG (Snibe)	2800.0	2800.0	<0.1	<0.1	<0.1	2800.0	2800.0	-	2
Phadia EliA (Thermo Scientific)	-	-	-	-	-	9080.0	9080.0	-	1
Vidas (bioMerieux)	-	-	-	-	-	11130.0	11130.0	-	1
All	4641.0	3915.1	2389.9	51.5	579.6	1774.0	11130.0	1	18

Advia Centaur aTG / aTPO (Siemens)

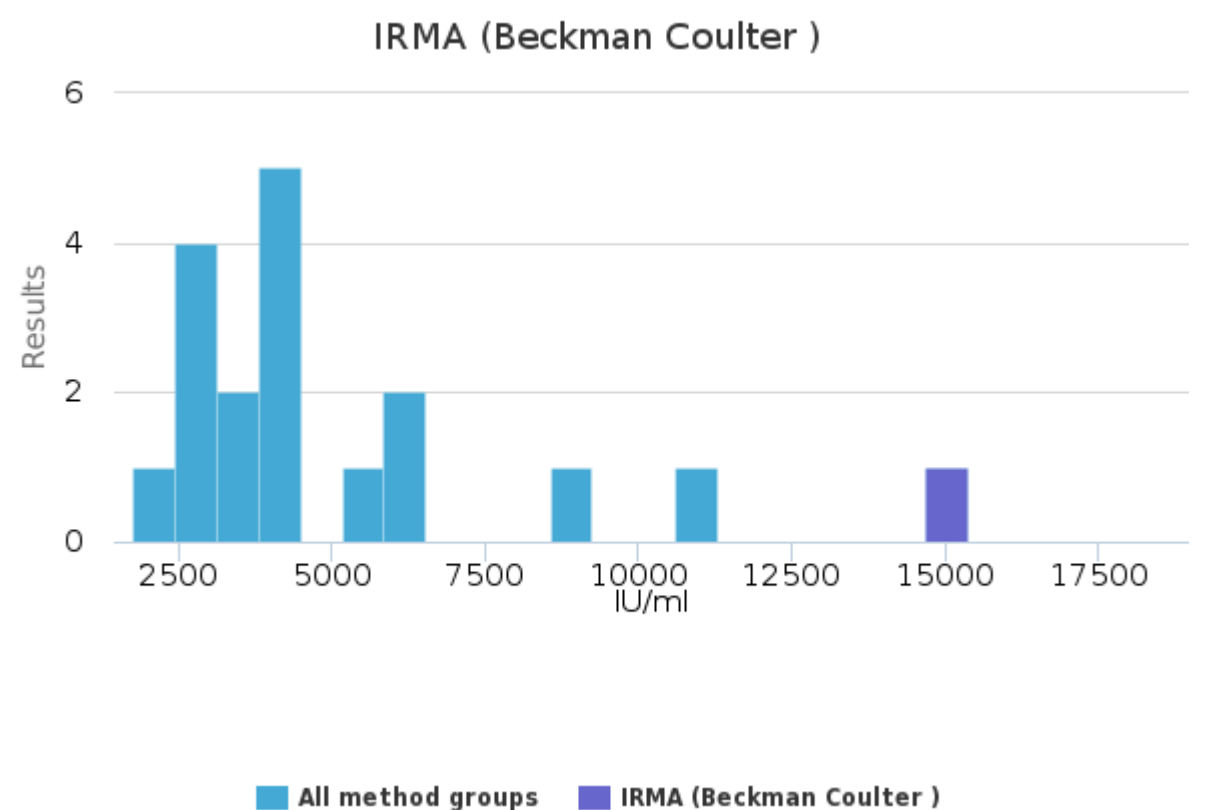
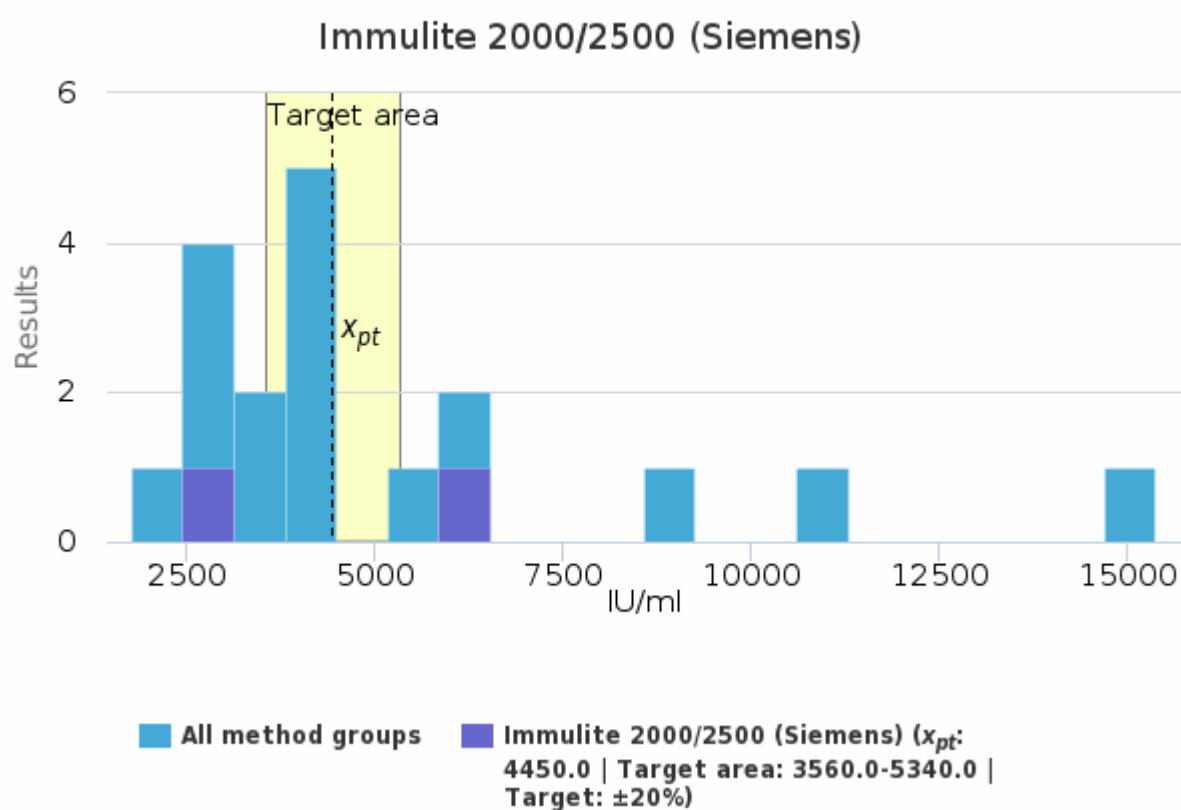
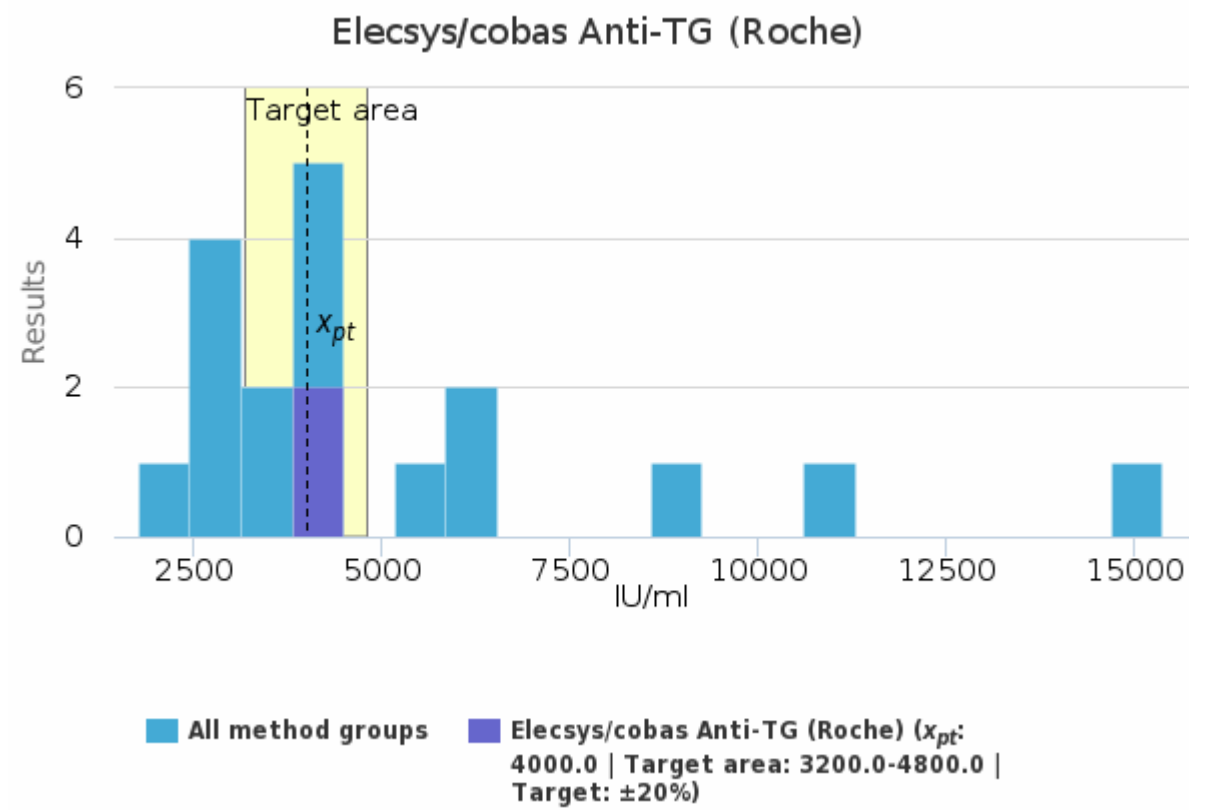
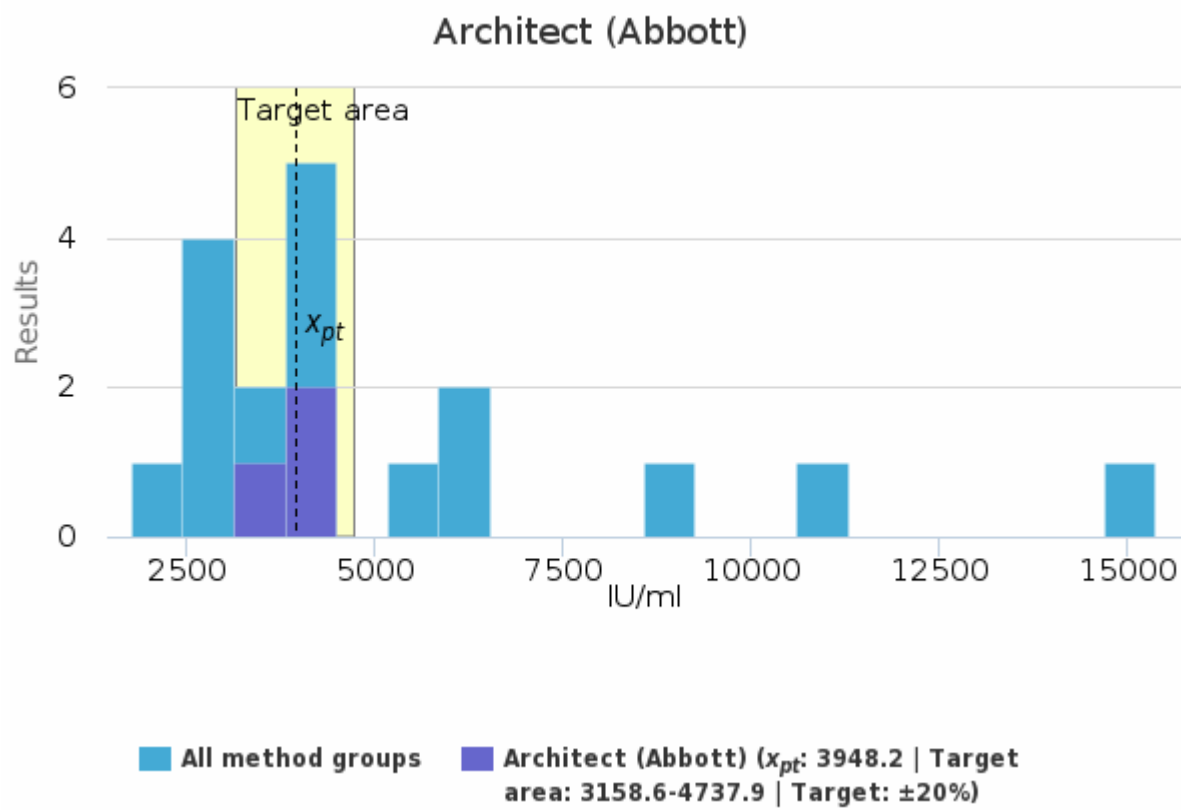
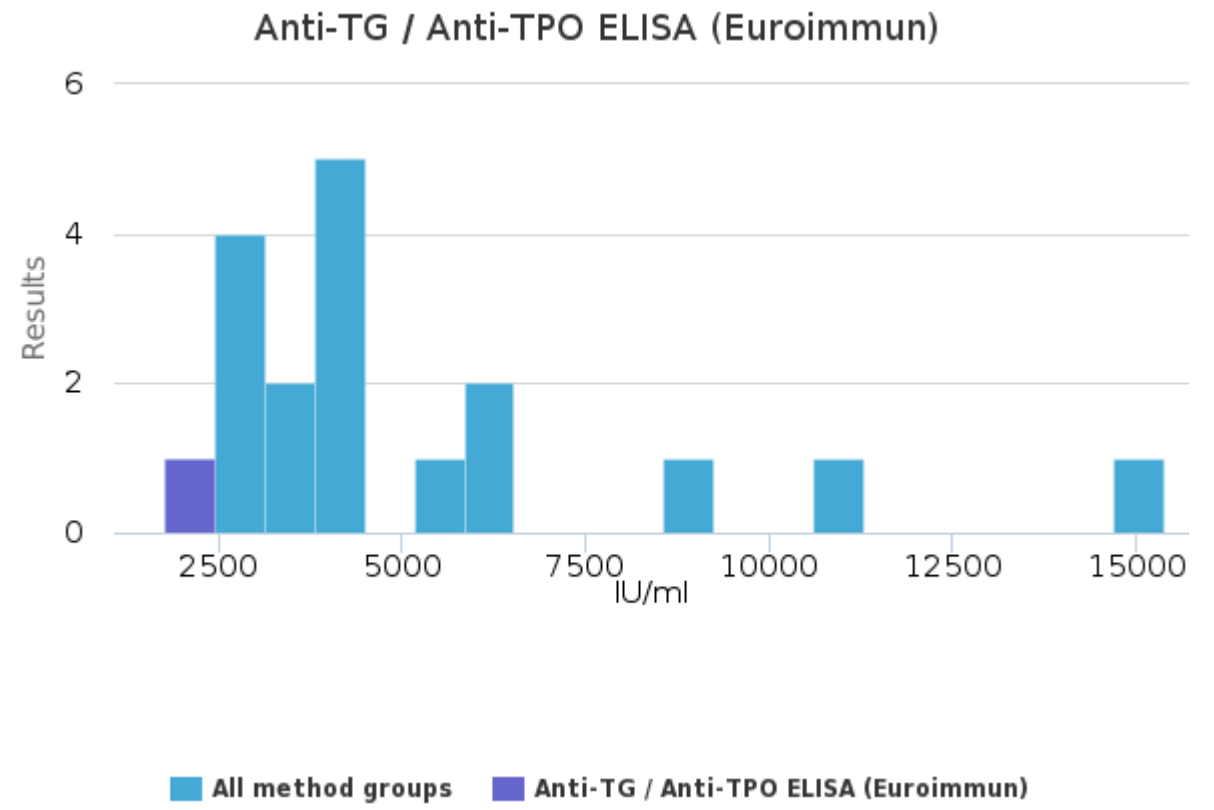
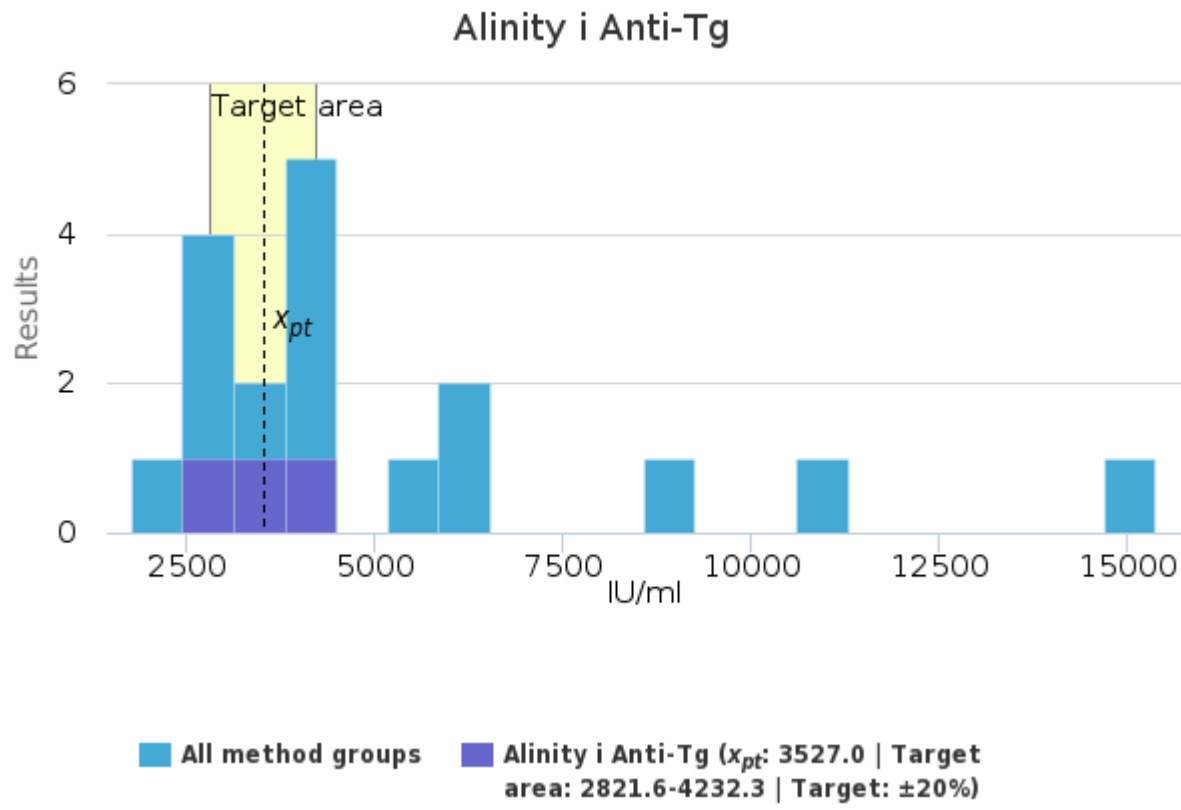


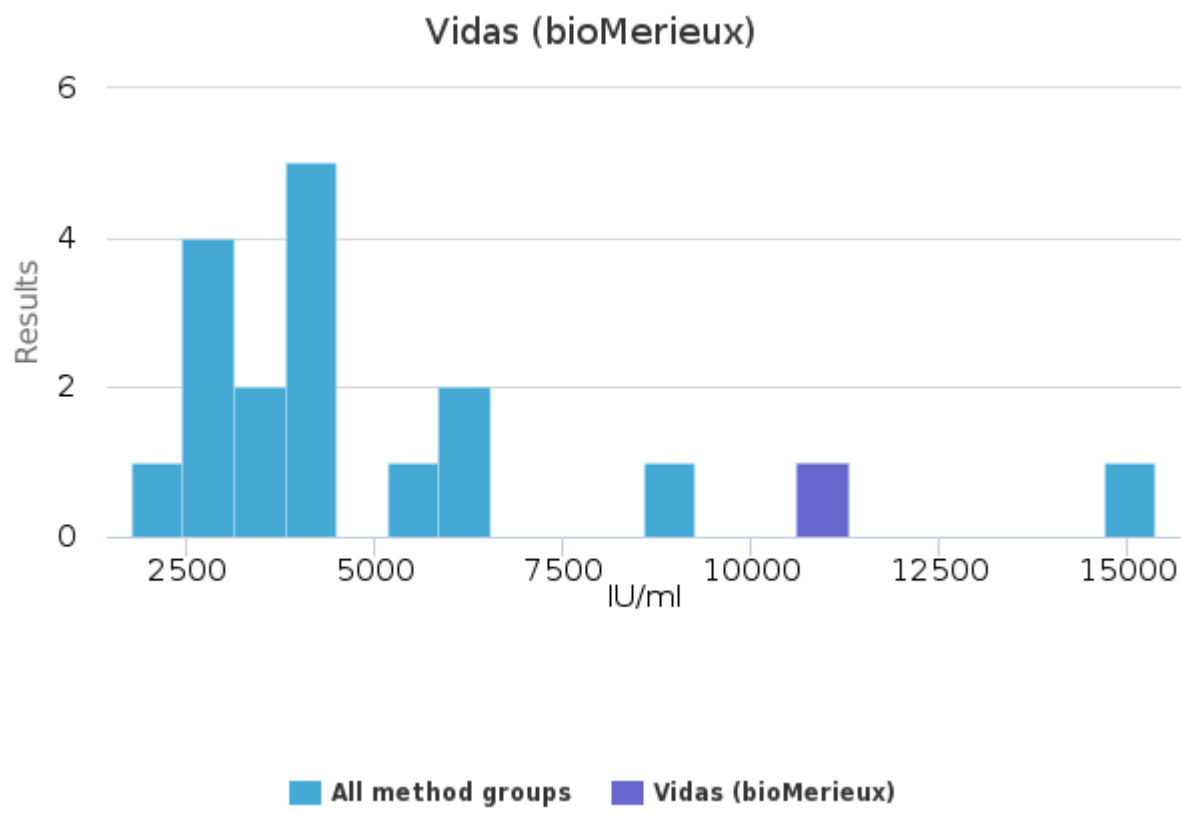
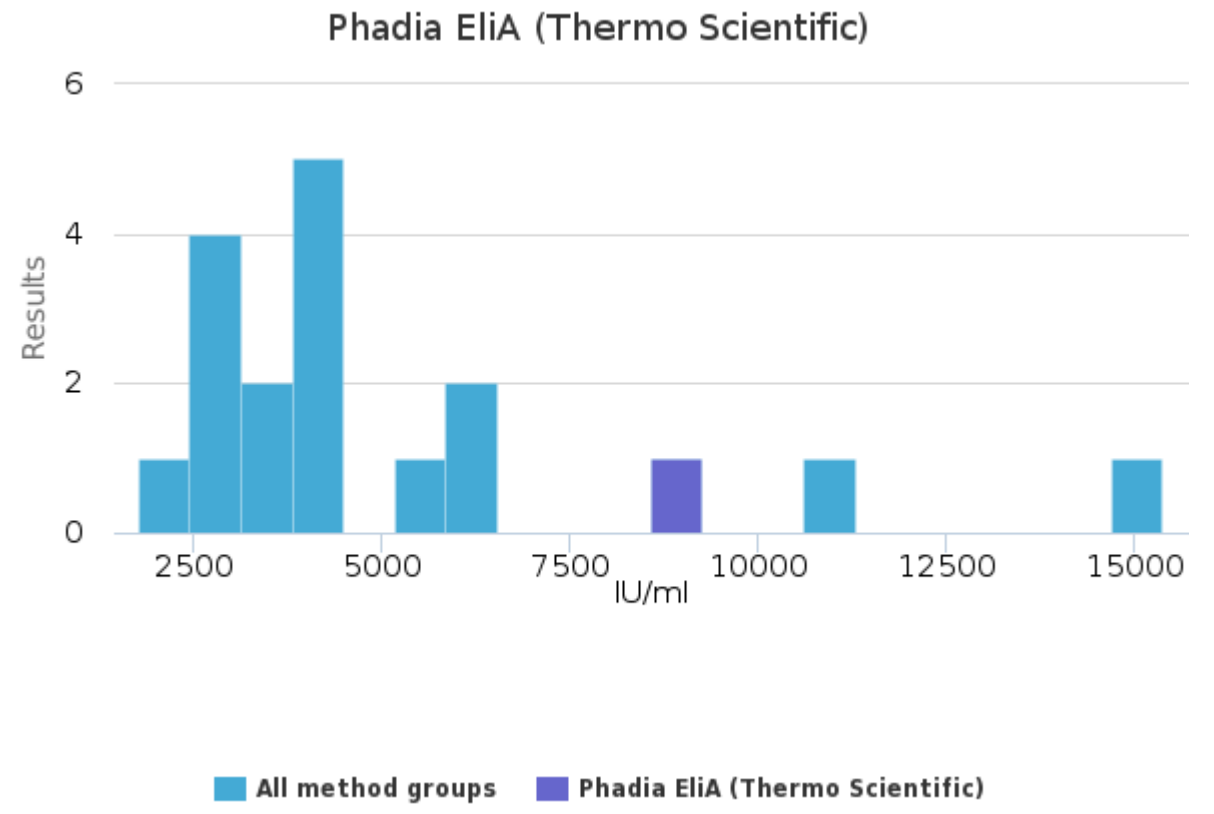
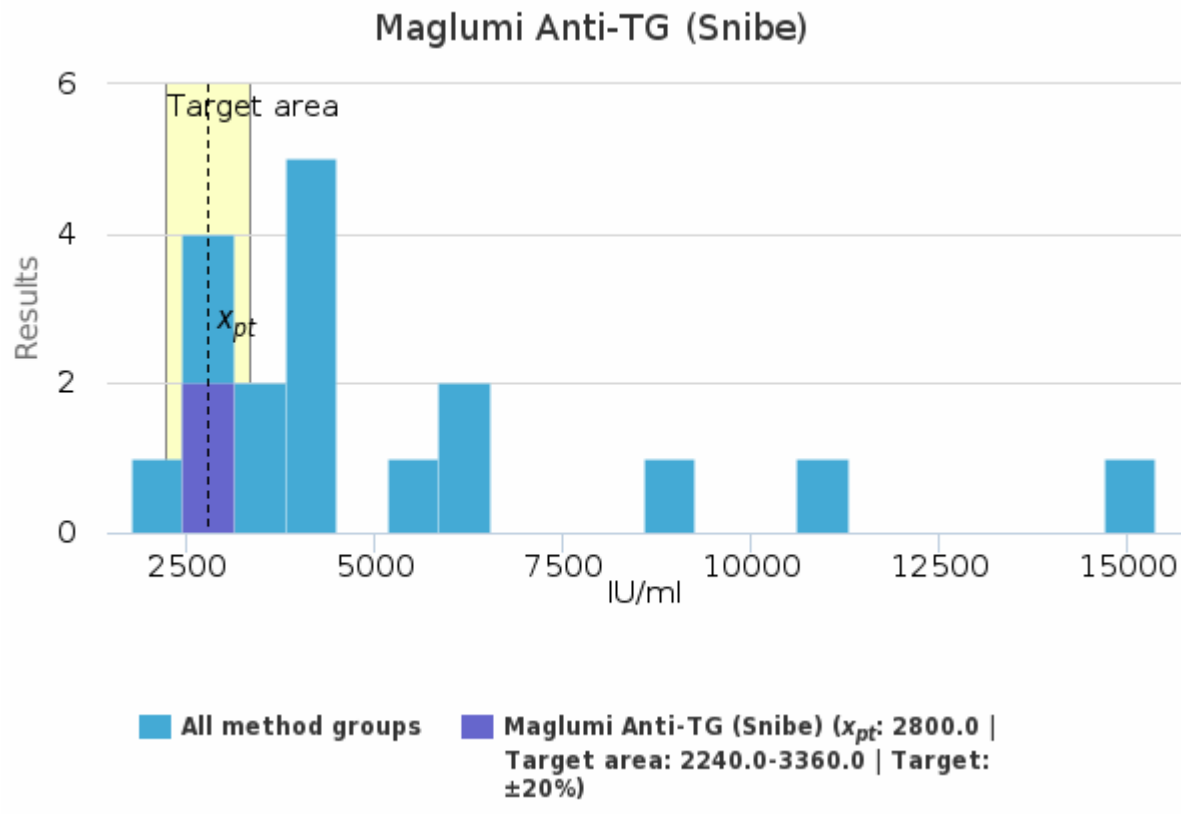
All method groups Advia Centaur aTG / aTPO (Siemens)

Alegria Anti-TG (Orgentec)



All method groups Alegria Anti-TG (Orgentec)

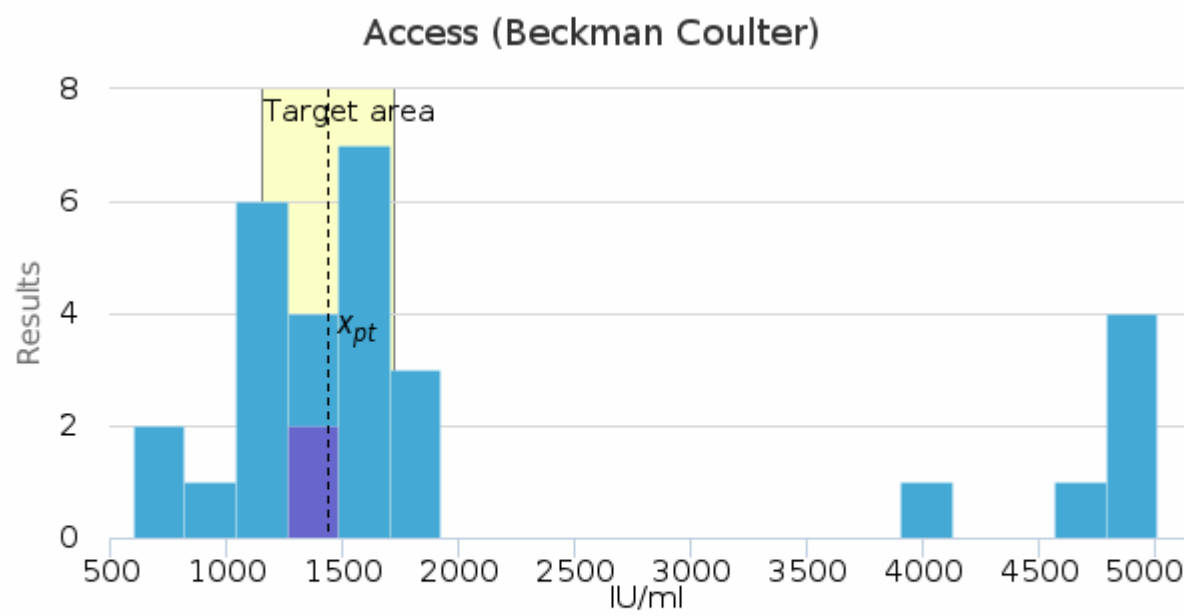




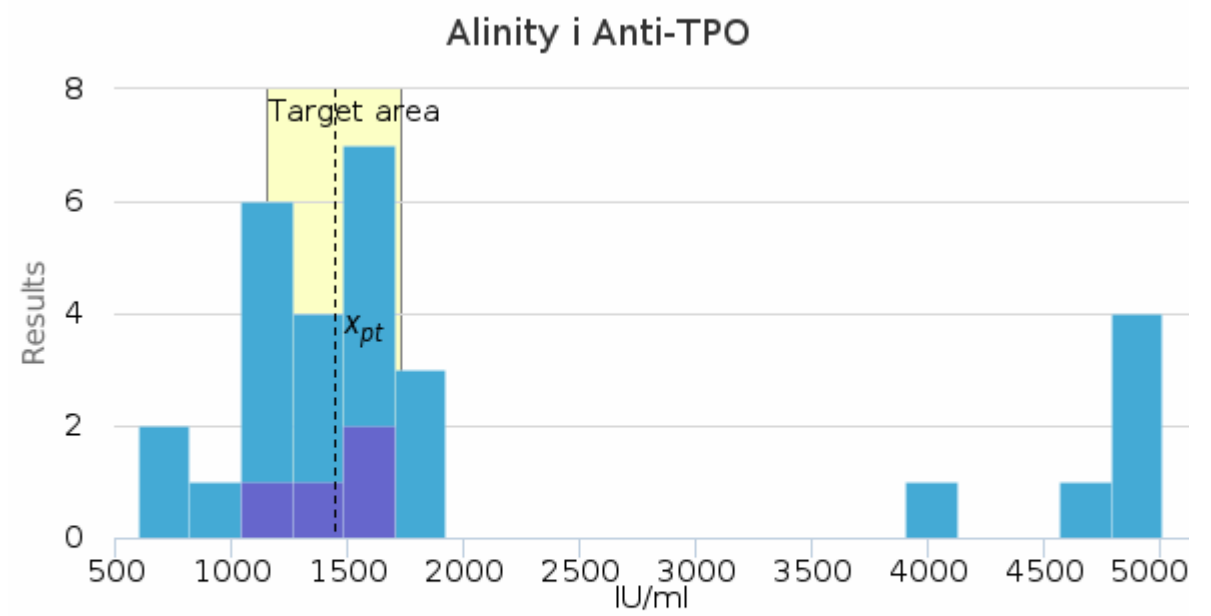
Sample S002 | TPOAb, IU/ml

Methodics	Positive	No interpretation	Total
Access (Beckman Coulter)	3	1	4
Advia Centaur aTG / aTPO (Siemens)	6	-	6
Alegria Anti-TPO (Orgentec)	1	-	1
Alinity i Anti-TPO	10	3	13
Anti-TG / Anti-TPO ELISA (Euroimmun)	1	-	1
Architect (Abbott)	8	-	8
Atellica Solution Anti-TPO (Siemens)	11	3	14
Diesse Chorus a-TPO	1	-	1
Elecsys/cobas Anti-TPO (Roche)	43	3	46
Immulin 2000/2500 (Siemens)	4	-	4
IRMA (Beckman Coulter)	1	-	1
Maglumi Anti-TPO (Snibe)	2	-	2
Phadia EliA (Thermo Scientific)	8	-	8
Vidas (bioMérieux)	2	-	2
Total	101	10	111

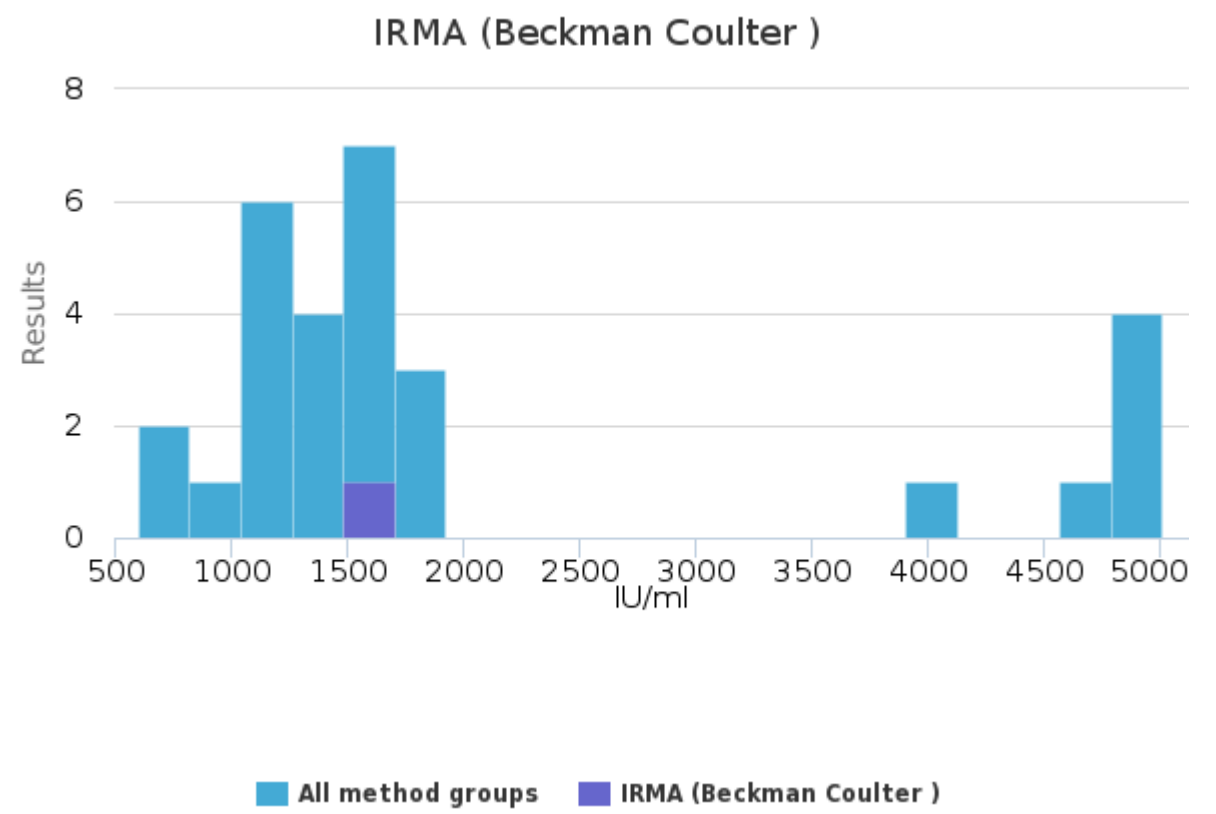
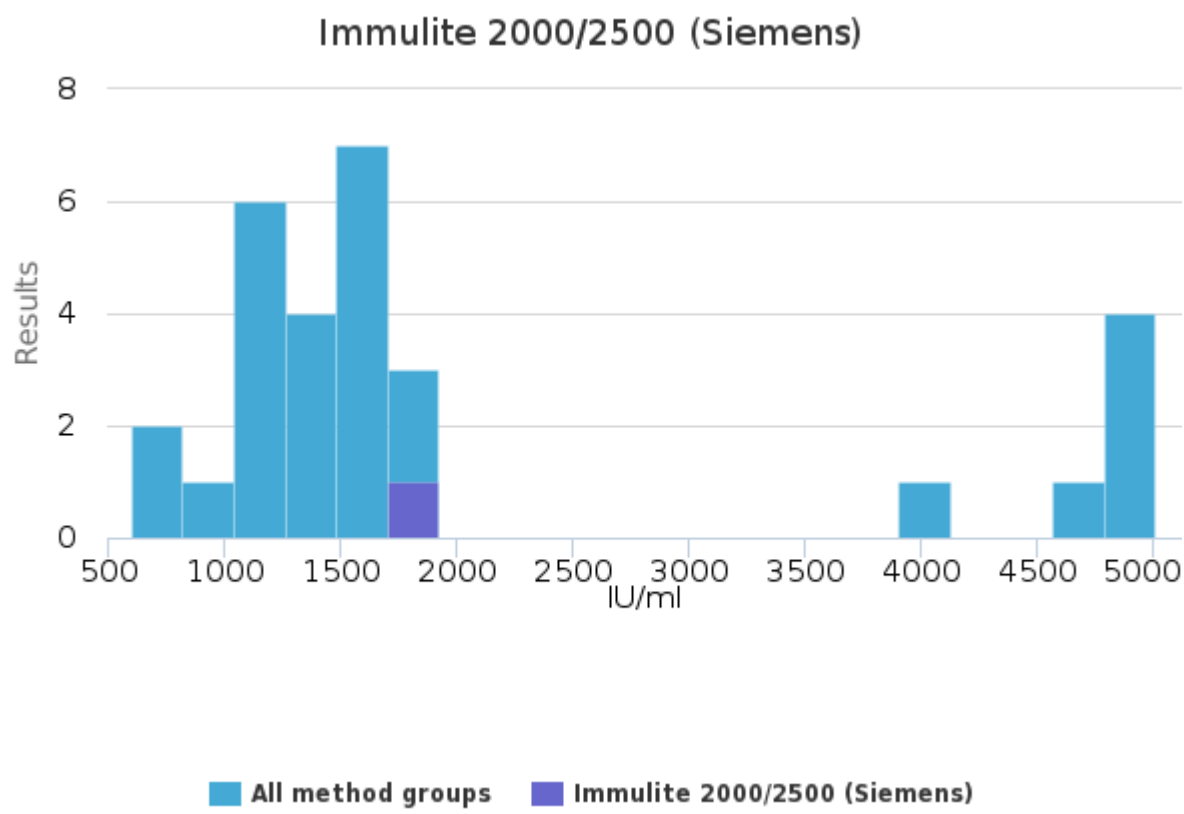
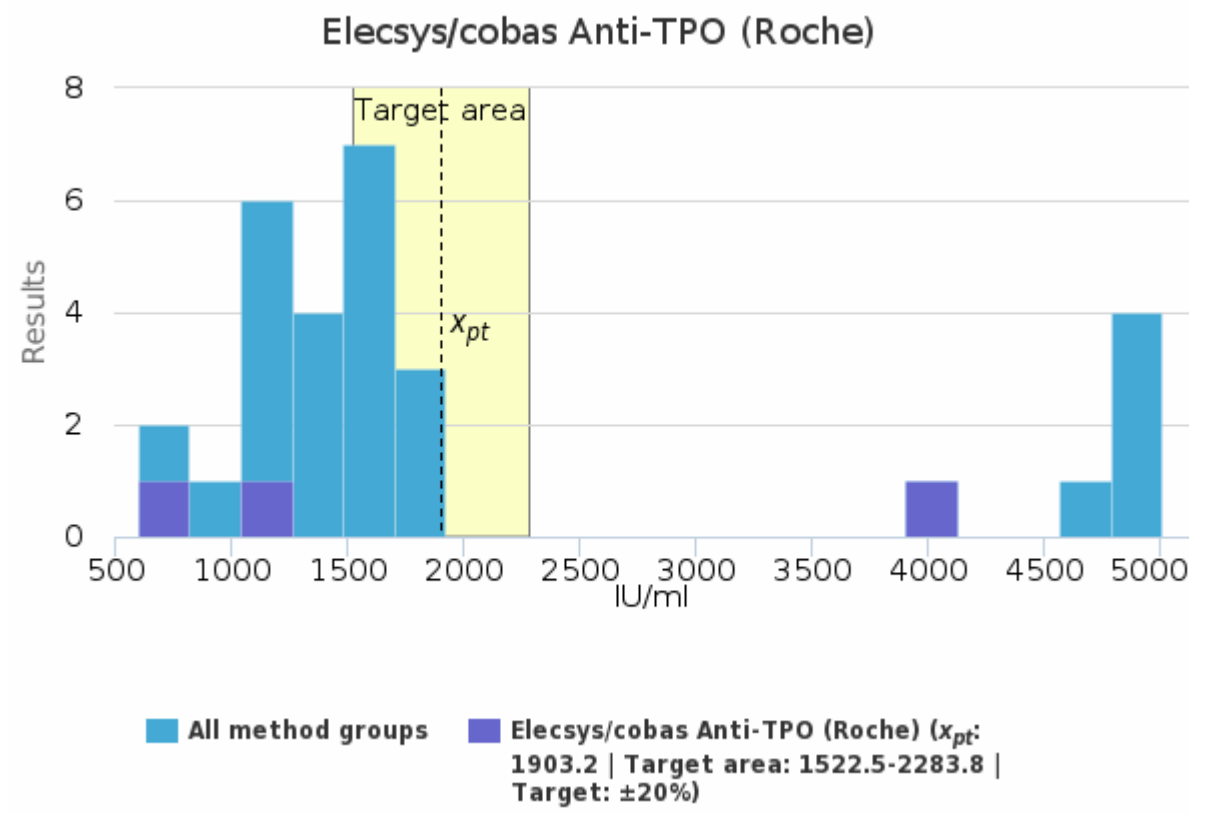
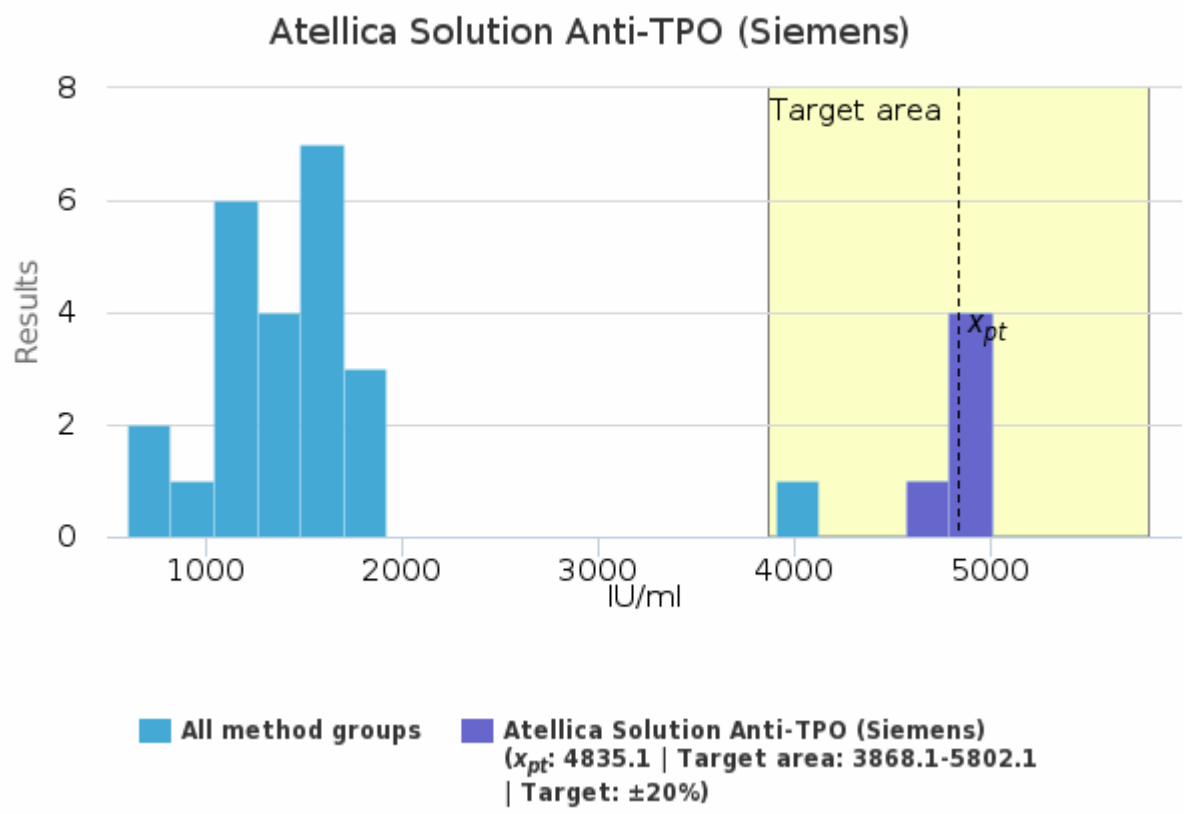
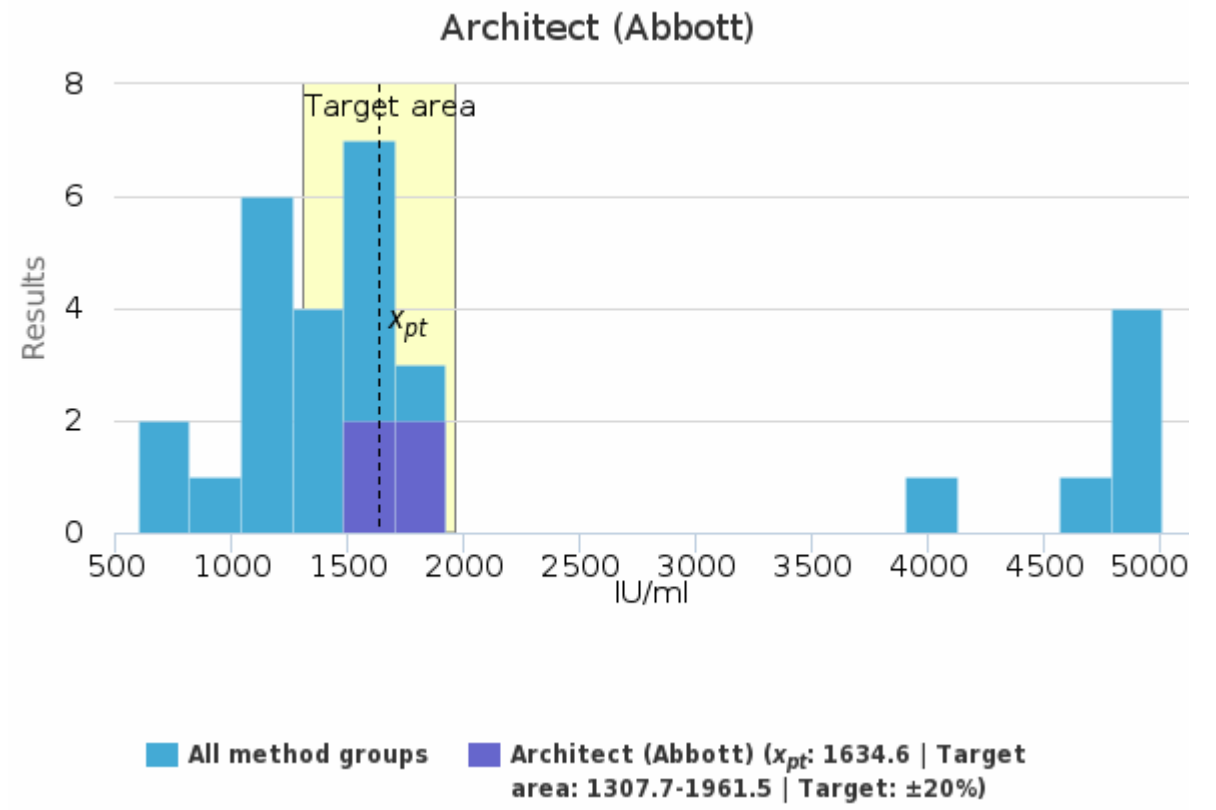
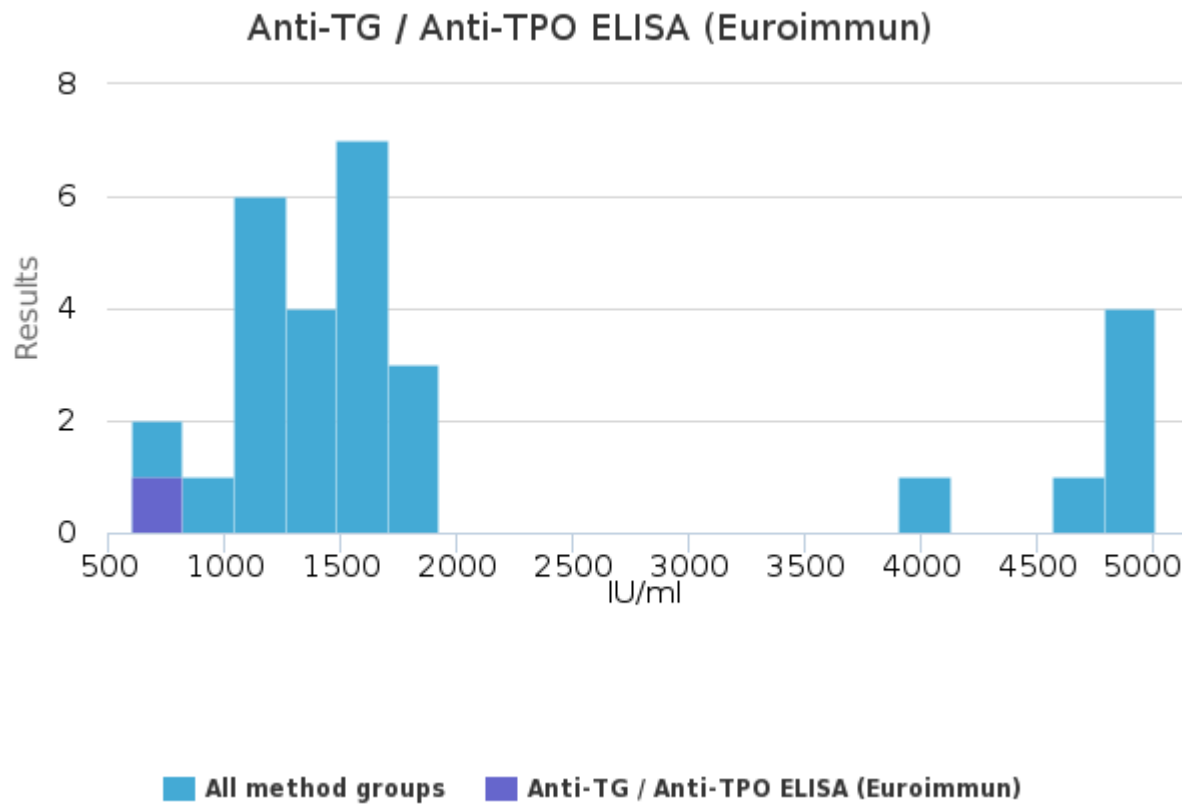
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Access (Beckman Coulter)	1438.5	1438.5	54.4	3.8	38.5	1400.0	1477.0	-	2
Alinity i Anti-TPO	1445.9	1522.1	201.9	14.0	101.0	1152.8	1586.6	-	4
Anti-TG / Anti-TPO ELISA (Euroimmun)	-	-	-	-	-	776.0	776.0	-	1
Architect (Abbott)	1634.6	1634.8	109.6	6.7	54.8	1530.3	1738.4	-	4
Atellica Solution Anti-TPO (Siemens)	4835.1	4808.0	129.1	2.7	57.7	4662.4	5007.8	-	5
Elecsys/cobas Anti-TPO (Roche)	1903.2	1109.5	1833.7	96.3	1058.7	600.0	4000.0	-	3
Immulin 2000/2500 (Siemens)	-	-	-	-	-	1735.0	1735.0	-	1
IRMA (Beckman Coulter)	-	-	-	-	-	1621.2	1621.2	-	1
Maglumi Anti-TPO (Snibe)	-	-	-	-	-	1000.0	1000.0	-	1
Phadia EliA (Thermo Scientific)	1256.3	1180.5	197.9	15.7	80.8	1072.0	1580.0	-	6
Vidas (bioMérieux)	-	-	-	-	-	1540.0	1540.0	-	1
All	2044.6	1540.0	1413.5	69.1	262.5	600.0	5007.8	-	29

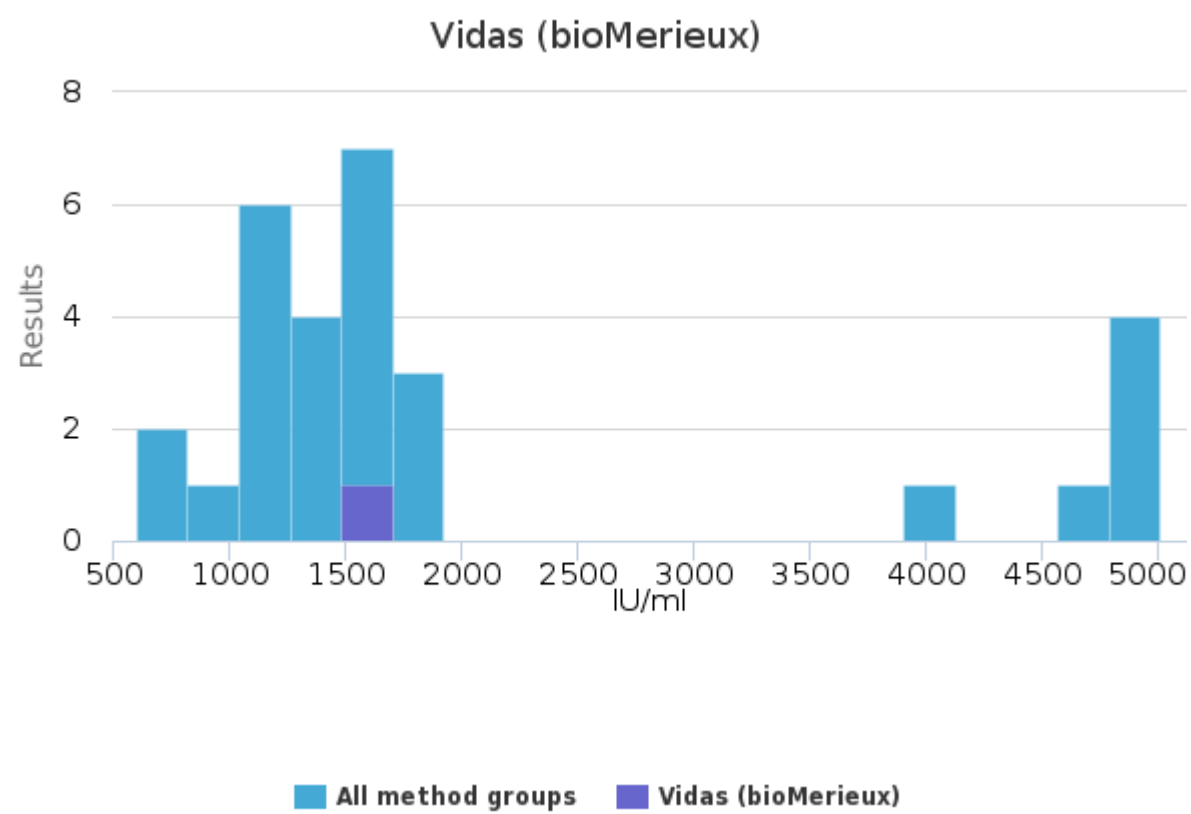
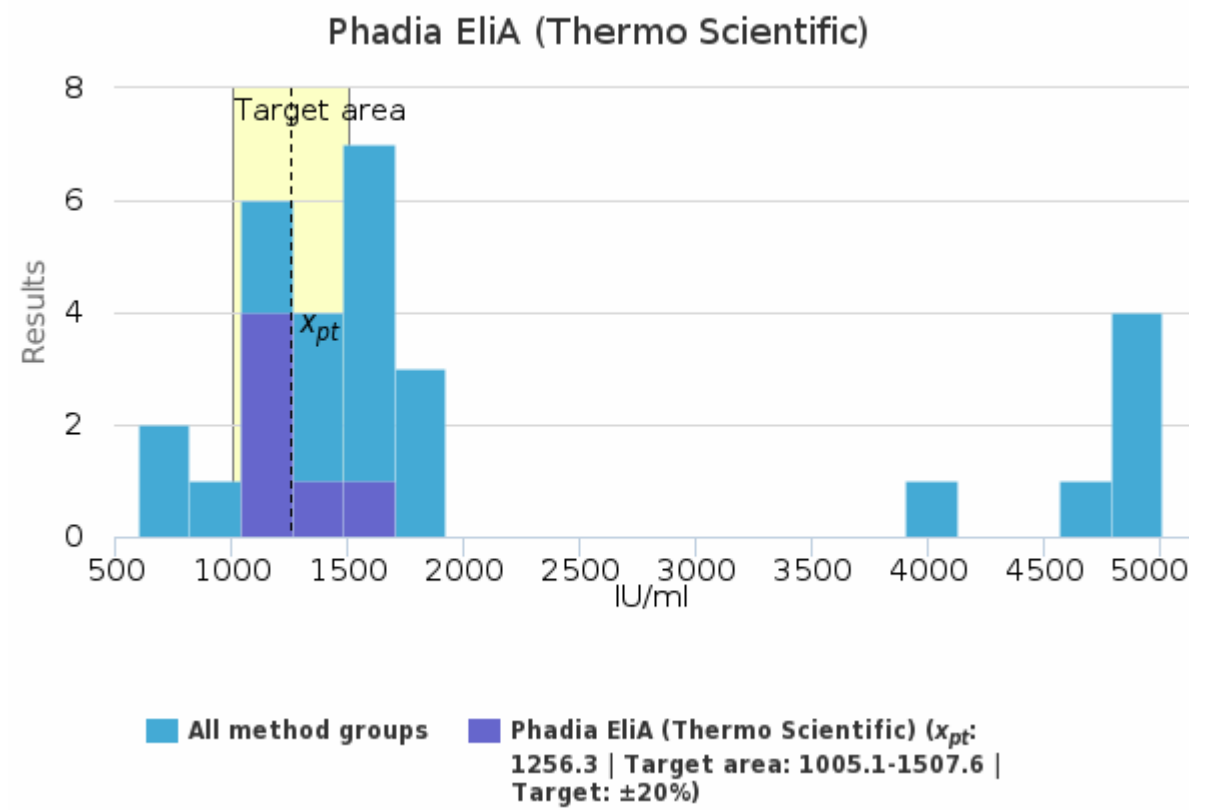
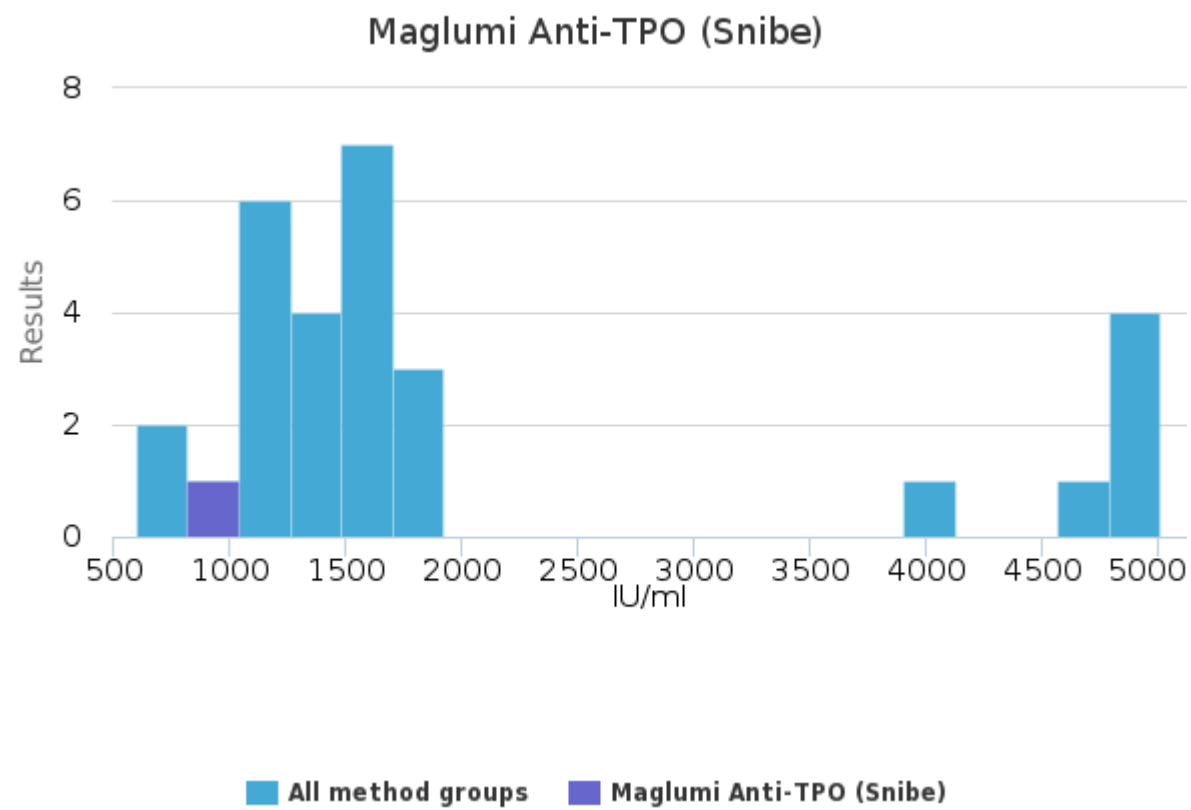


■ All method groups ■ Access (Beckman Coulter) (x_{pt} : 1438.5 | Target area: 1150.8-1726.2 | Target: $\pm 20\%$)



■ All method groups ■ Alinity i Anti-TPO (x_{pt} : 1445.9 | Target area: 1156.7-1735.1 | Target: $\pm 20\%$)





Report info**Participants**

107 participants from 14 countries.

Report info

Qualitative and quantitative results are presented in the same report. Always compare your results to those obtained with the same test kit.

The qualitative results are divided into groups according to the method stated by the laboratory and presented in laboratory-specific tables. Accepted results are marked with green colour and laboratory's own result with a black radio button .

The quantitative results from the positive specimens are presented as histograms. Quantitative results reported with < or > -signs are not processed. Results reported as ratios, titres, absorbances and without a unit are manually removed and not statistically processed.

Assigned values (target values) are mean 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 participant specific report your own result is shown with an orange dot. The target area is presented as a yellow area in the picture. In the history graphs you are able to see your performance graphically with both against the assigned value (xpt) and the z-score area of -2 ... +2.

If you have not reported any results you will get a note: "You have not responded in time, only global report is available".

For information on report interpretation and performance evaluation, please see the "EQAS Interpretation guidelines" in LabScala User instructions. In case you have any questions regarding the reports, please contact the EOA Coordinator.

External Quality Assessment Scheme

Thyroid gland antibodies Round 1, 2023

Specimens

Samples of this EQA round were human plasma or serum. Based on the pre-testing and the results obtained in the round, the samples were homogeneous, stable and suitable for the external quality assessment scheme. The materials were sent without temperature control packaging.

The expected results were as follows:

Sample S001 (LQ717523011)
Thyroglobulin antibodies Negative
Thyroid peroxidase antibodies Low positive

Sample S002 (LQ717523012)
Thyroglobulin antibodies High positive
Thyroid peroxidase antibodies High positive

Pre-test methods: Siemens Immulite 2000/2500 TyglAb and Siemens Advia Centaur XP3 TPOAb.

Report info

Please see the description of the data analysis on the last page of the laboratory-specific reports and global 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

Samples were chosen so that sample S001 was low positive for thyroid peroxidase antibodies and negative for thyroglobulin antibodies whereas sample S002 was high positive for both antibodies. The results of the samples were mainly reported correctly.

Postanalytical part

The most of laboratories do not provide clinical interpretation (80%, n=85) or recommend additional analysis (91%, n=85).

Exceptions

In sample S001, borderline TPOAb results were also accepted.

Annex 1. Numbers of < and > results reported from samples by analyte and method.

End of report

2023-04-14

FINAL REPORT

Product no. 5920

Subcontracting: Sample pretesting

Samples sent	2023-03-07
Round closed	2023-03-30
Expected results	2023-04-04
Final report	2023-04-14

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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Annex 1. Numbers of < and > results reported from samples by analyte and method.

Method	S001 TyglAb	S001 TPOAb	S002 TyglAb	S002 TPOAb
Access (Beckman Coulter)			3/3 >results	2/4 >results
Advia Centaur aTG / aTPO (Siemens)	1/2 <results	1/6 <results	2/3 >results	6/6 >results
Alegria Anti-TPO (Orgentec)				1/1 >results
Alinity i Anti-Tg / Anti-TPO			2/5 >results	9/13 >results
Architect (Abbott)			2/5 >results	4/8 >results
Atellica Solution Anti-TG / Anti-TPO (Siemens)	2/3 <results	1/14 <results	3/3 >results	6/14 >results
Diesse Chorus a-TPO				1/1 >results
Elecsys/cobas Anti-TG / Anti-TPO (Roche)	5/25 <results		23/26 >results	42/45 >results
Immulite 2000/2500 (Siemens)	3/4 <results		3/4 >results	3/4 >results
Maglumi Anti-TPO (Snibe)				1/2 >results
Phadia EliA (Thermo Scientific)	1/7 <results		6/7 >results	1/7 >results
Vidas (bioMerieux)				1/2 >results