

External Quality Assessment Scheme

Maternal serum screening (Pilot) Round 1, 2023

Thank you for participating in this pilot round. There will be a feedback survey attached to the reports. Please respond to the survey and give us important information on how we can make the EQA scheme better for you.

Specimens

Please find enclosed three lyophilized serum samples S001, S002 and S003, 1 ml each.

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

AFP
b-hCG
inhibin A
PAPP-A
free beta-hCG
unconjugated estriol (free estriol)

Storage and use

Lyophilized samples are stable at +2 ...8 °C until the closing date of the round.

Open the vial carefully, avoiding any loss of the material, and reconstitute with 1 ml of distilled water. Replace the rubber stopper, close the vial and leave to stand for 30 minutes before use. Ensure that all traces of dry material are dissolved by swirling gently. Reconstituted serum is stable for 7 days at +2°C to +8°C, if kept capped in original container and free from contamination. Only the required amount of product should be removed. After use, any residual product should not be returned to the original vial.

Analyze the samples as patient samples.

Result reporting

Log in to LabScala (www.labscala.com) with your username and password. Please fill in your contact information, sample arrival date and sample storage questions. Proceed from one page to another using the green buttons.

If you have any questions, please contact the EQA coordinator.

S001



S002



S003



2023-11-14

INSTRUCTIONS

Product no. 2707
LQ741623011-013/UK

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

The results should be reported no later than
December 7, 2023.

Inquiries

EQA Coordinator
Päivi Ranta
paivi.ranta@labquality.fi

Labquality Oy

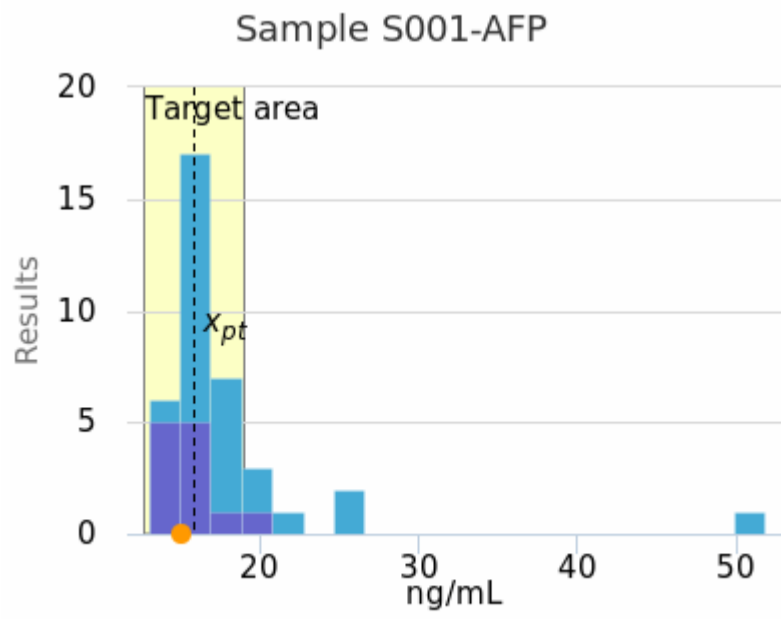
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200

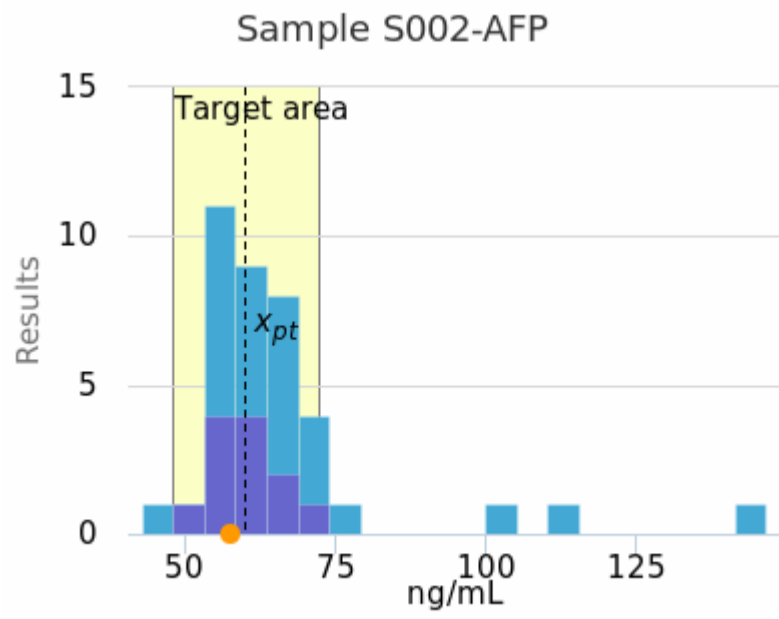
info@labquality.fi
www.labquality.com



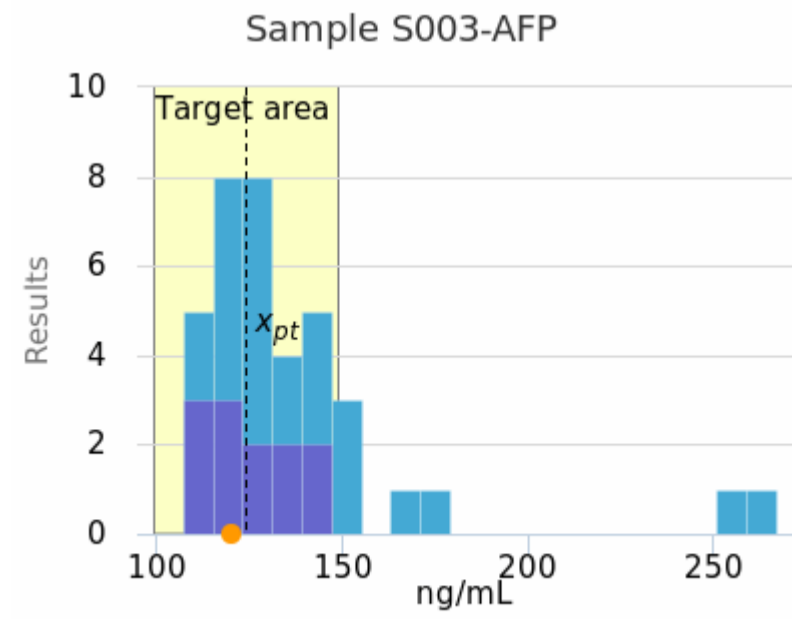
AFP | IMMULITE



■ All method groups
■ Siemens Immulite 2000, Advia Centaur & Atellica AFP
● Own result: 15.00 (07.12.2023) | Diff%: -5.47 | x_{pt} : 15.87
 Target area: 12.69-19.04 | Target: $\pm 20\%$



■ All method groups
■ Siemens Immulite 2000, Advia Centaur & Atellica AFP
● Own result: 57.60 (07.12.2023) | Diff%: -4.27 | x_{pt} : 60.17
 Target area: 48.13-72.20 | Target: $\pm 20\%$



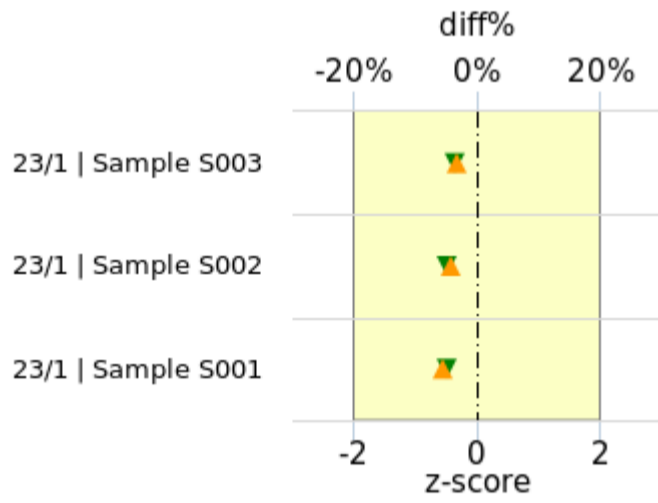
■ All method groups
■ Siemens Immulite 2000, Advia Centaur & Atellica AFP
● Own result: 120.00 (07.12.2023) | Diff%: -3.38 | x_{pt} : 124.19
 Target area: 99.36-149.03 | Target: $\pm 20\%$

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica AFP	15.87 ng/mL	1.73	0.50	10.9	12
All methods	17.21 ng/mL	2.60	0.43	15.1	37

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica AFP	60.17 ng/mL	5.10	1.47	8.5	12
All methods	63.94 ng/mL	12.65	2.08	19.8	38

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica AFP	124.19 ng/mL	11.80	3.41	9.5	12
All methods	130.84 ng/mL	15.67	2.65	12.0	37

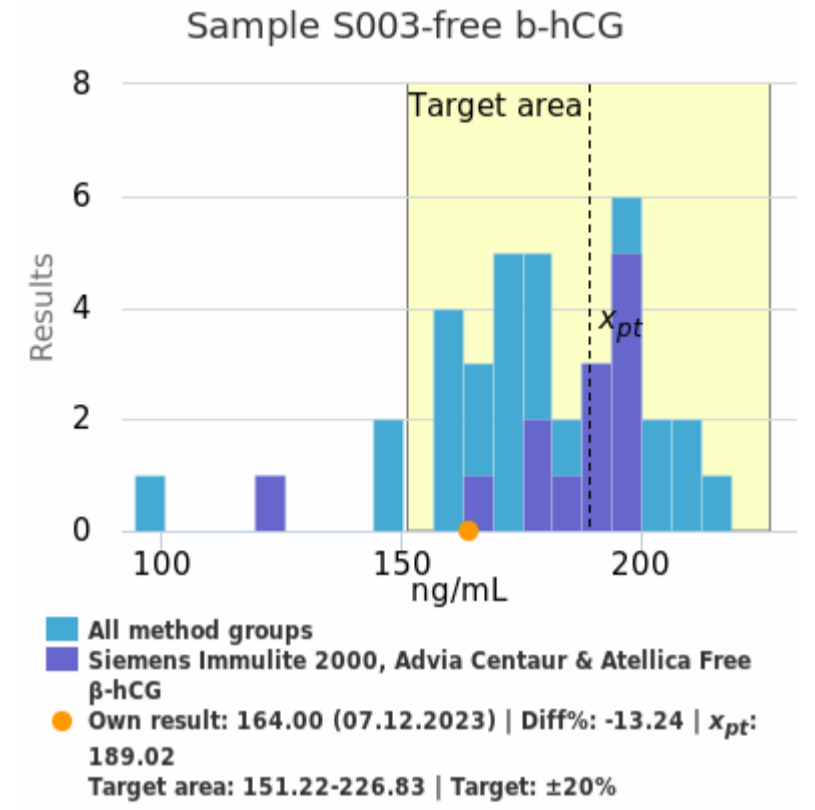
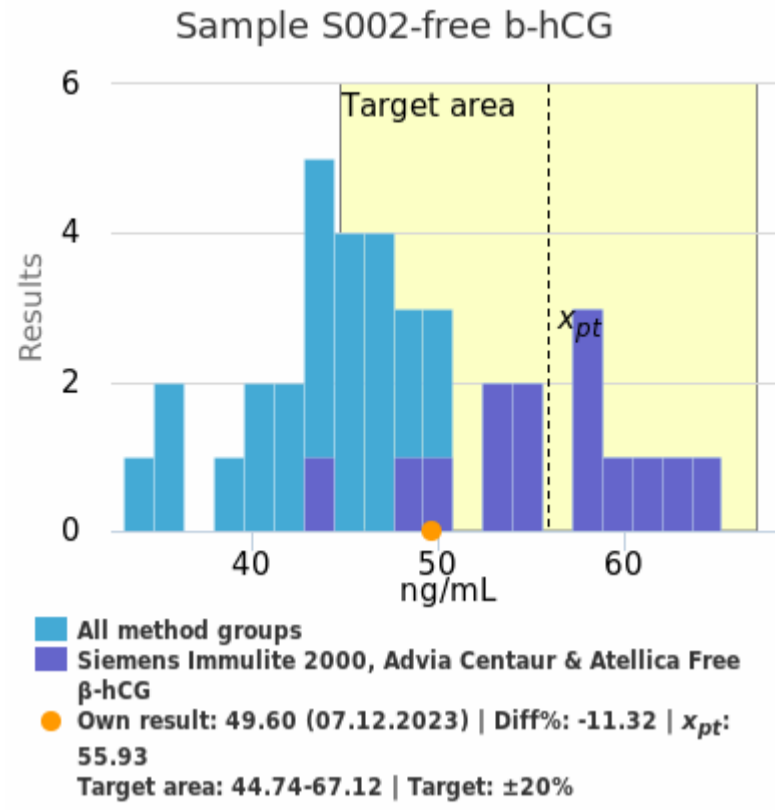
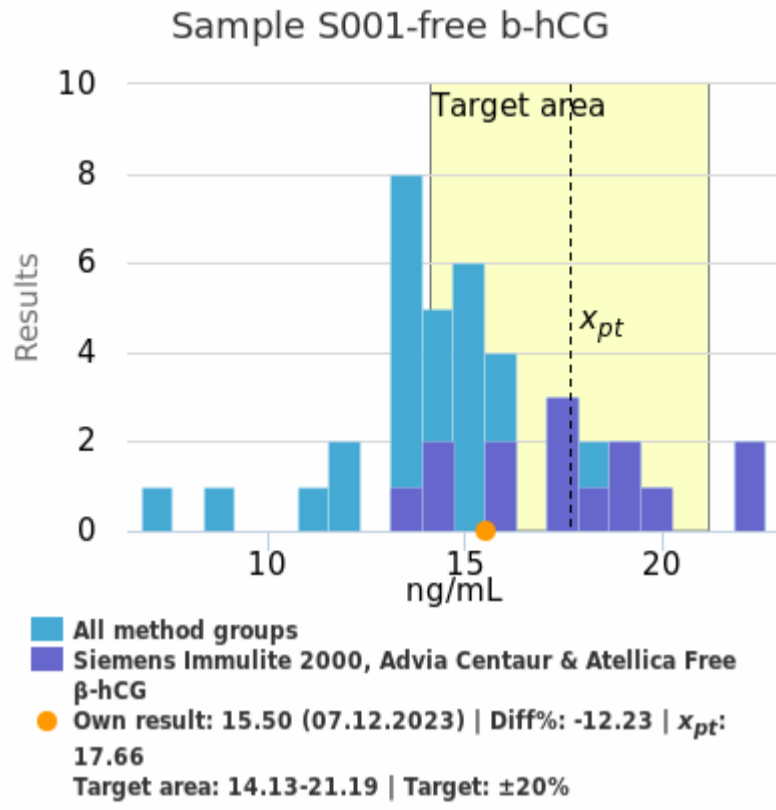
History



▲ diff%
▼ z-score

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S003	124.19	120.00	-3.38%	-0.36
23/1	Sample S002	60.17	57.60	-4.27%	-0.50
23/1	Sample S001	15.87	15.00	-5.47%	-0.50

free b-hCG | IMMULITE

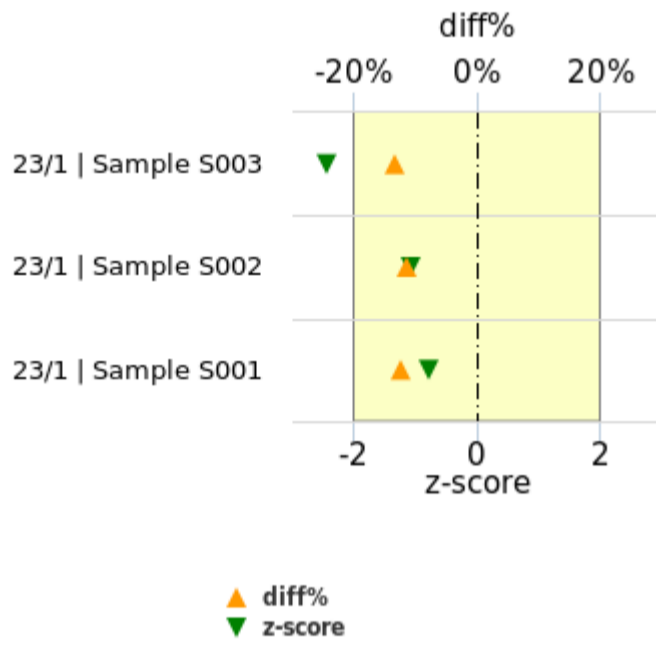


	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	17.66 ng/mL	2.76	0.74	15.6	14
All methods	15.17 ng/mL	3.12	0.51	20.6	38

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	55.93 ng/mL	5.92	1.58	10.6	14
All methods	48.19 ng/mL	7.74	1.26	16.1	38

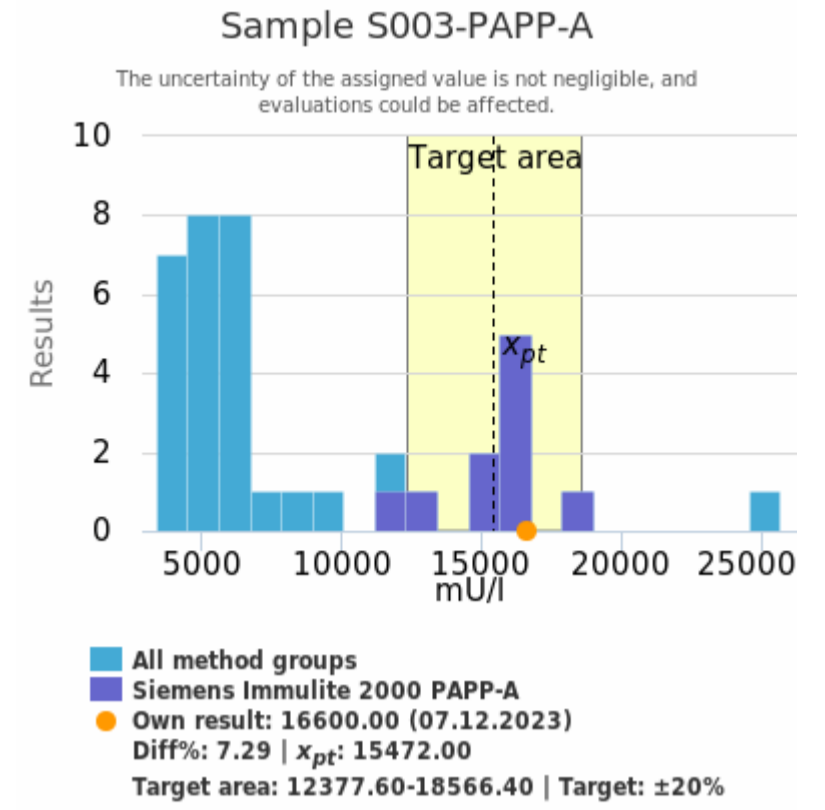
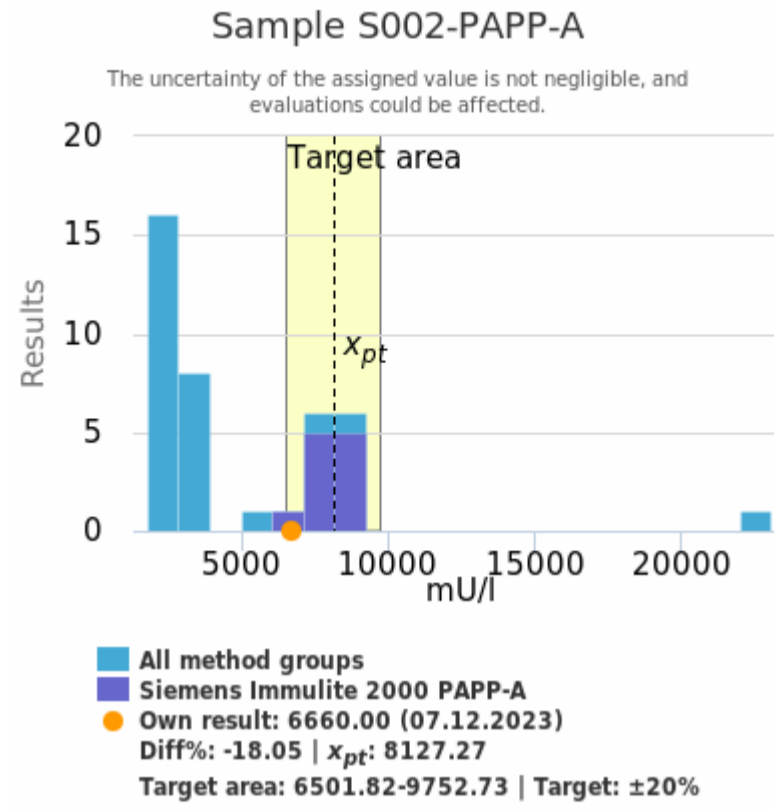
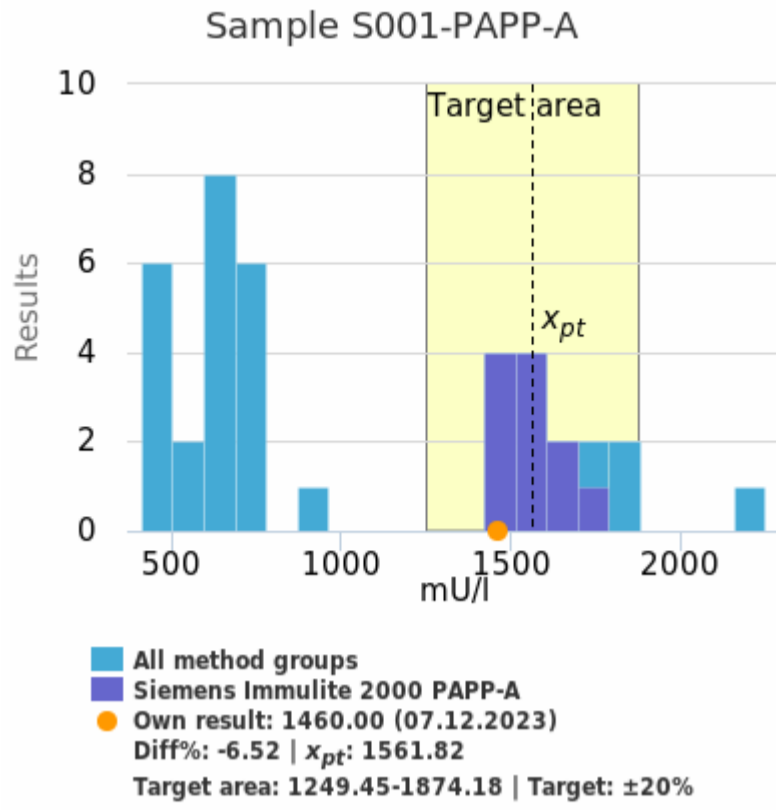
	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	189.02 ng/mL	10.32	2.98	5.5	13
All methods	179.82 ng/mL	20.45	3.41	11.4	37

History



Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S003	189.02	164.00	-13.24%	-2.42
23/1	Sample S002	55.93	49.60	-11.32%	-1.07
23/1	Sample S001	17.66	15.50	-12.23%	-0.78

PAPP-A | IMMULITE

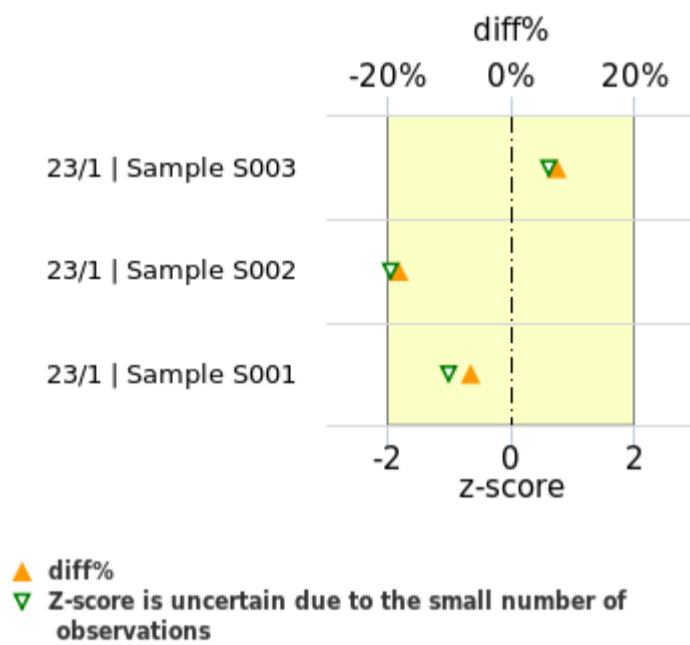


	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 PAPP-A	1561.82 mU/l	101.27	30.54	6.5	11
All methods	1023.11 mU/l	547.86	88.87	53.5	38

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 PAPP-A	8127.27 mU/l	758.38	228.66	9.3	11
All methods	4552.57 mU/l	2708.82	439.43	59.5	39

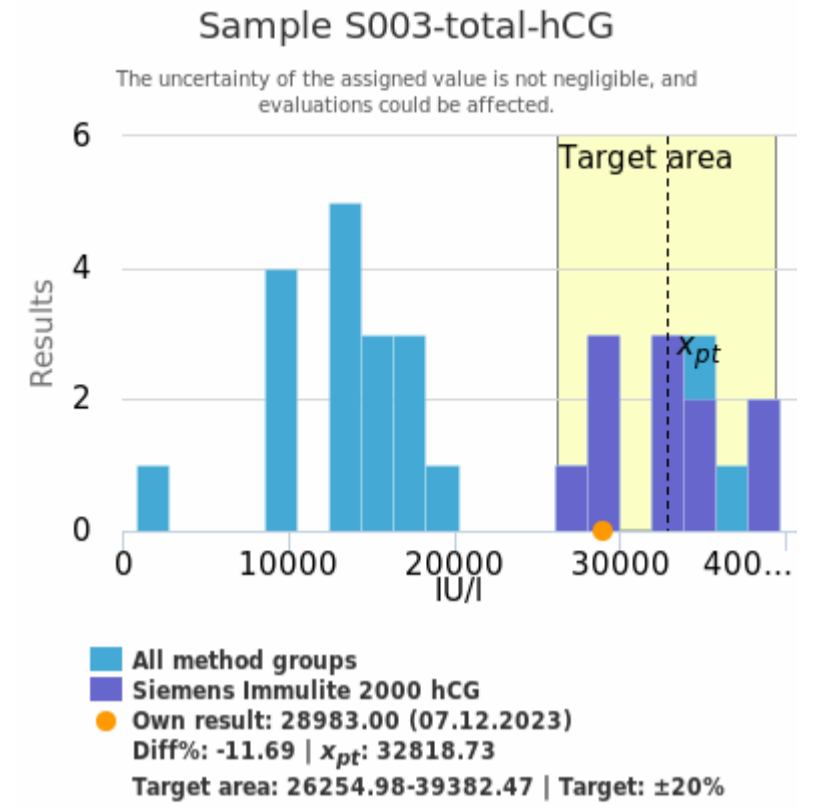
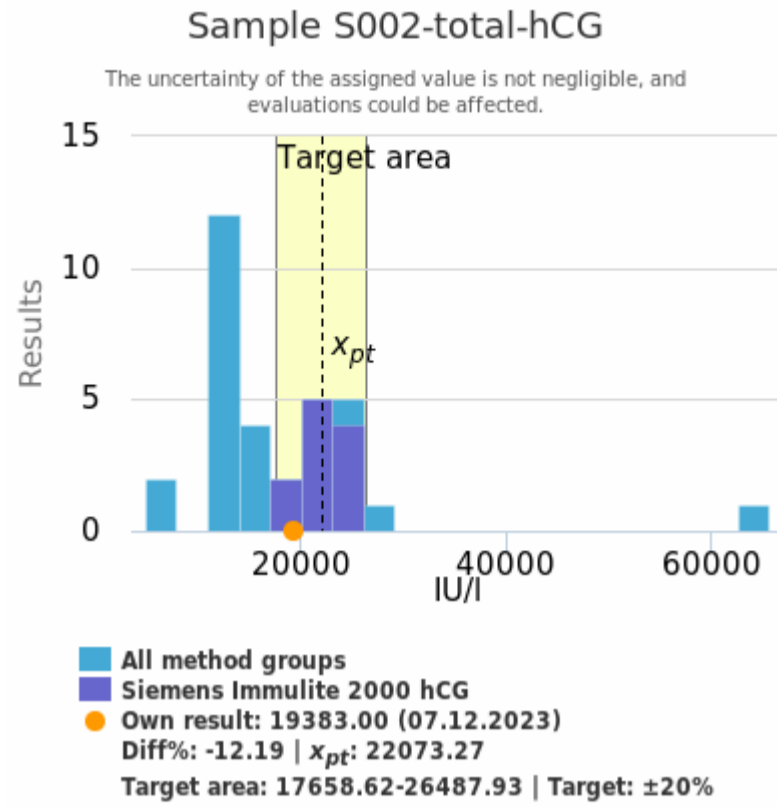
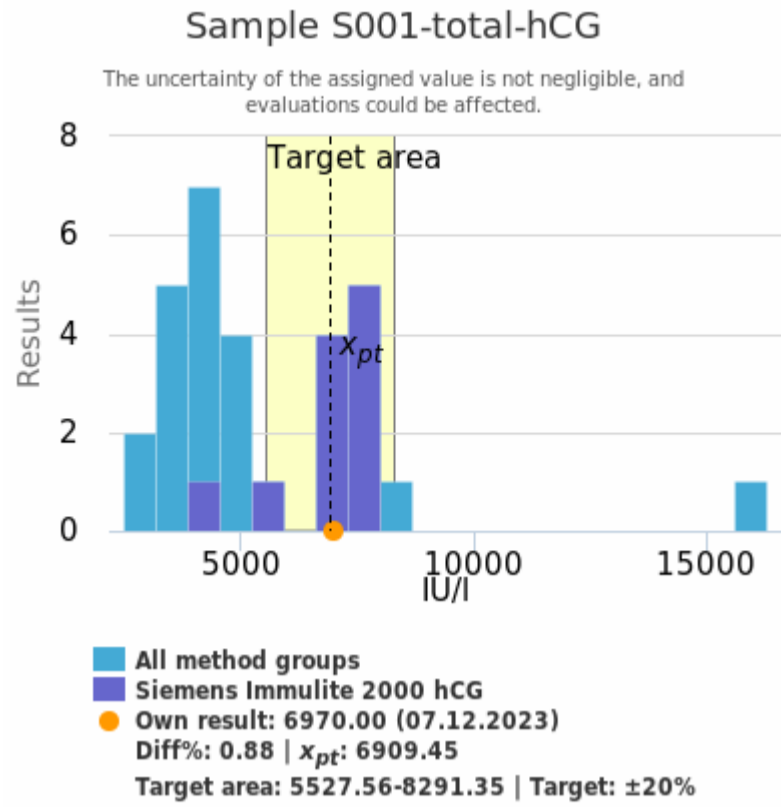
	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 PAPP-A	15472.00 mU/l	1845.72	583.67	11.9	10
All methods	8314.60 mU/l	4759.85	782.51	57.2	38

History



Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S003	15472.00	16600.00	7.29%	0.61
23/1	Sample S002	8127.27	6660.00	-18.05%	-1.93
23/1	Sample S001	1561.82	1460.00	-6.52%	-1.01

total-hCG | IMMULITE

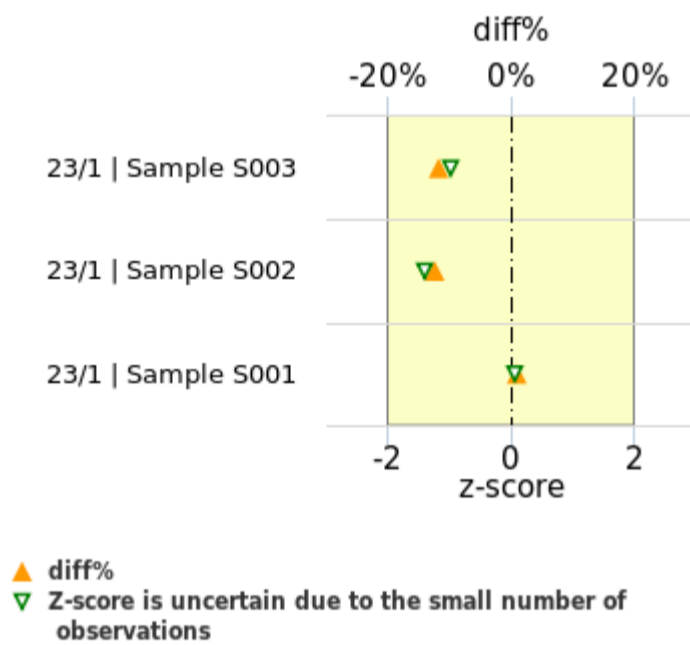


	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 hCG	6909.45 IU/l	1104.89	333.14	16.0	11
All methods	5277.22 IU/l	1728.08	320.90	32.7	30

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 hCG	22073.27 IU/l	1919.66	578.80	8.7	11
All methods	16891.58 IU/l	5752.82	1033.24	34.1	32

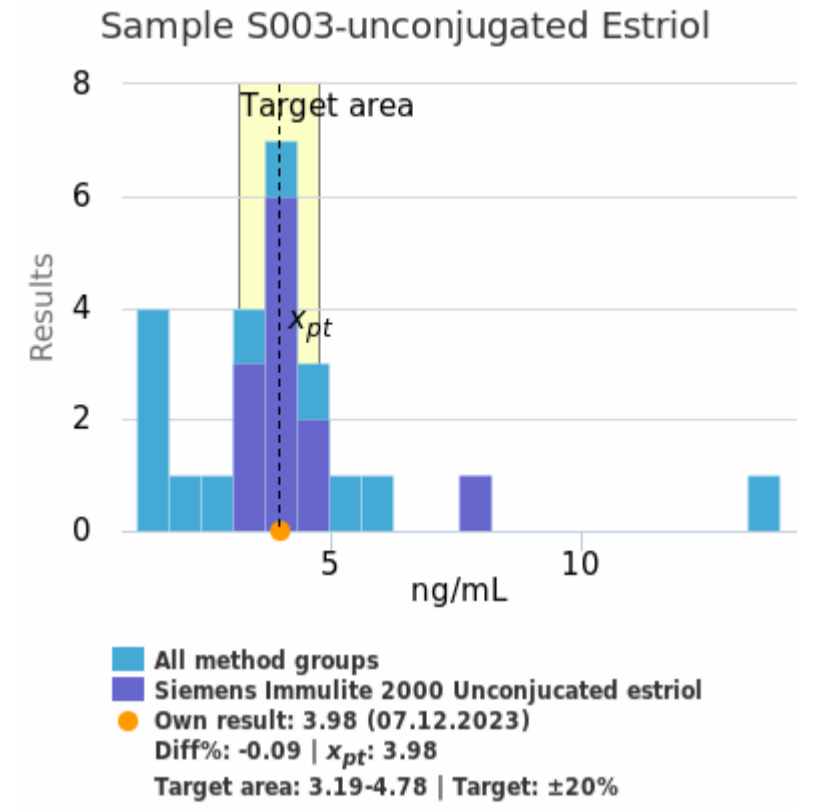
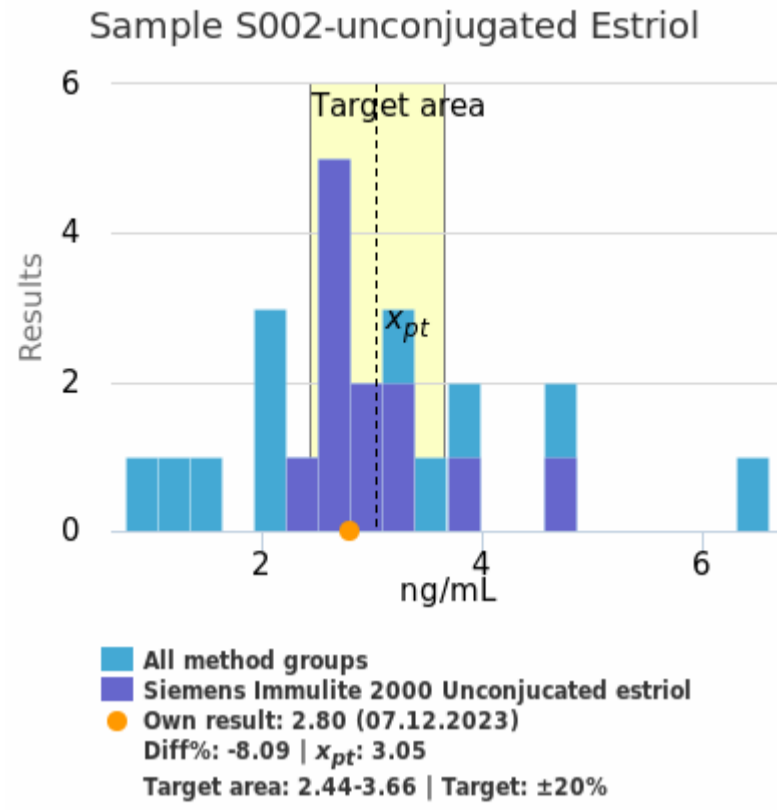
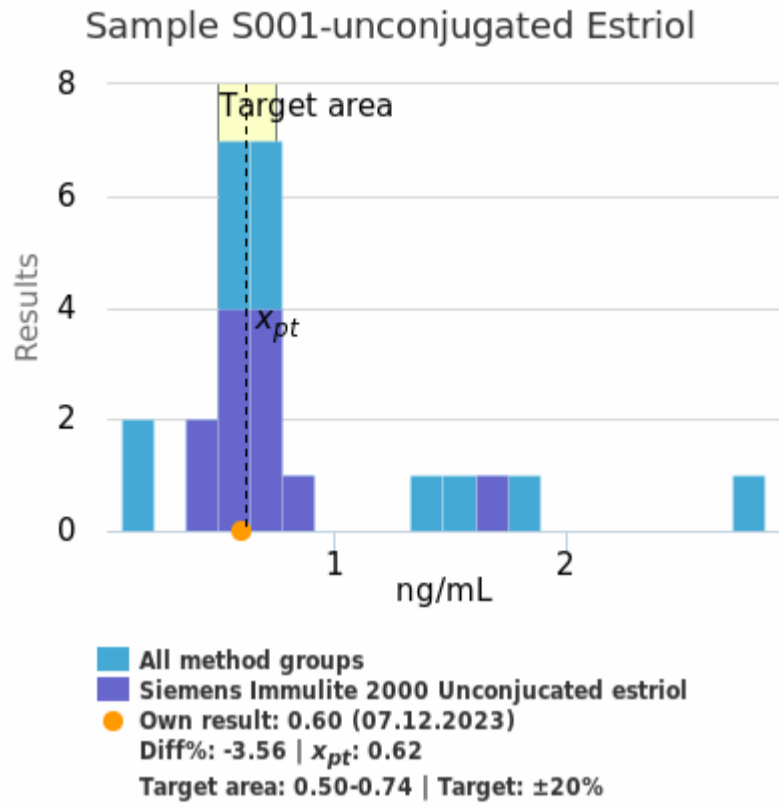
	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 hCG	32818.73 IU/l	3954.74	1192.40	12.1	11
All methods	21996.91 IU/l	10889.26	1988.10	49.5	30

History



Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S003	32818.73	28983.00	-11.69%	-0.97
23/1	Sample S002	22073.27	19383.00	-12.19%	-1.40
23/1	Sample S001	6909.45	6970.00	0.88%	0.05

unconjugated Estriol |IMMULITE

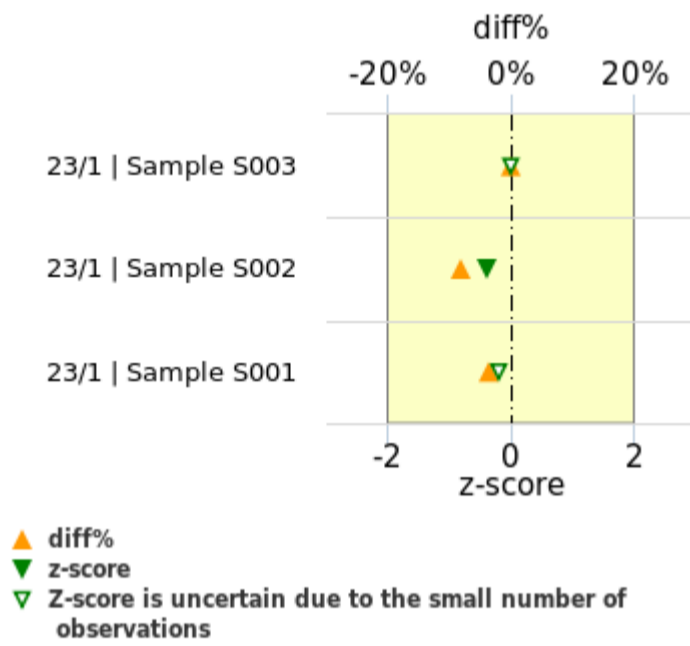


	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 Unconjugated estriol	0.62 ng/mL	0.11	0.03	17.6	12
All methods	0.75 ng/mL	0.43	0.09	58.0	24

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 Unconjugated estriol	3.05 ng/mL	0.62	0.18	20.3	12
All methods	2.79 ng/mL	0.98	0.21	35.1	23

	x_{pt}	sd	SEM	CV%	n
Siemens Immulite 2000 Unconjugated estriol	3.98 ng/mL	0.41	0.12	10.3	12
All methods	3.73 ng/mL	1.52	0.32	40.6	24

History



Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S003	3.98	3.98	-0.09%	-0.01
23/1	Sample S002	3.05	2.80	-8.09%	-0.40
23/1	Sample S001	0.62	0.60	-3.56%	-0.20

Report info**Participants**

50 participants from 18 countries.

Report info

Your own result should be compared to others using the same method.

Assigned values (\bar{x}_p , 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.

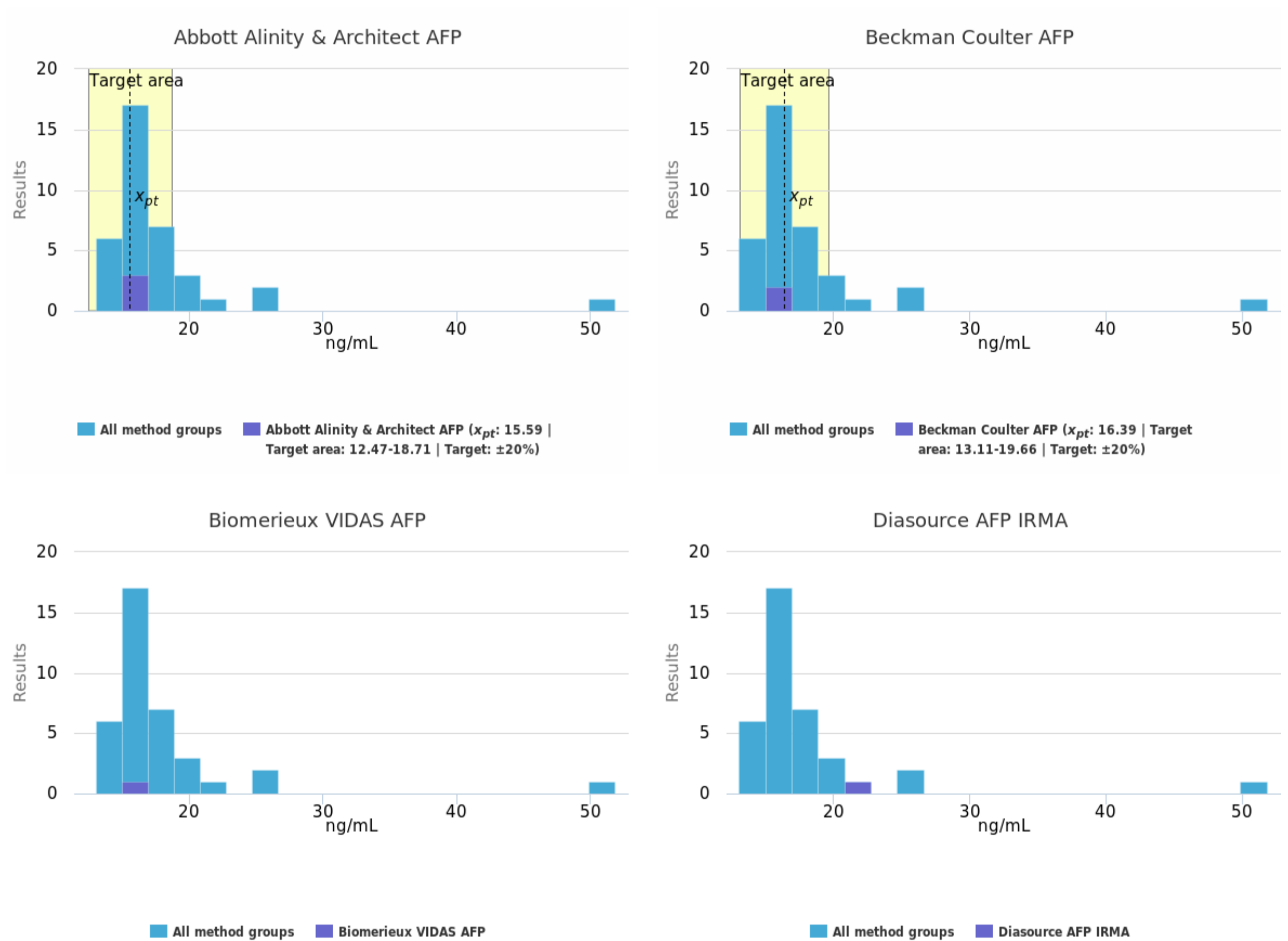
Results reported with $<$ or $>$ -signs cannot be included in the statistics.

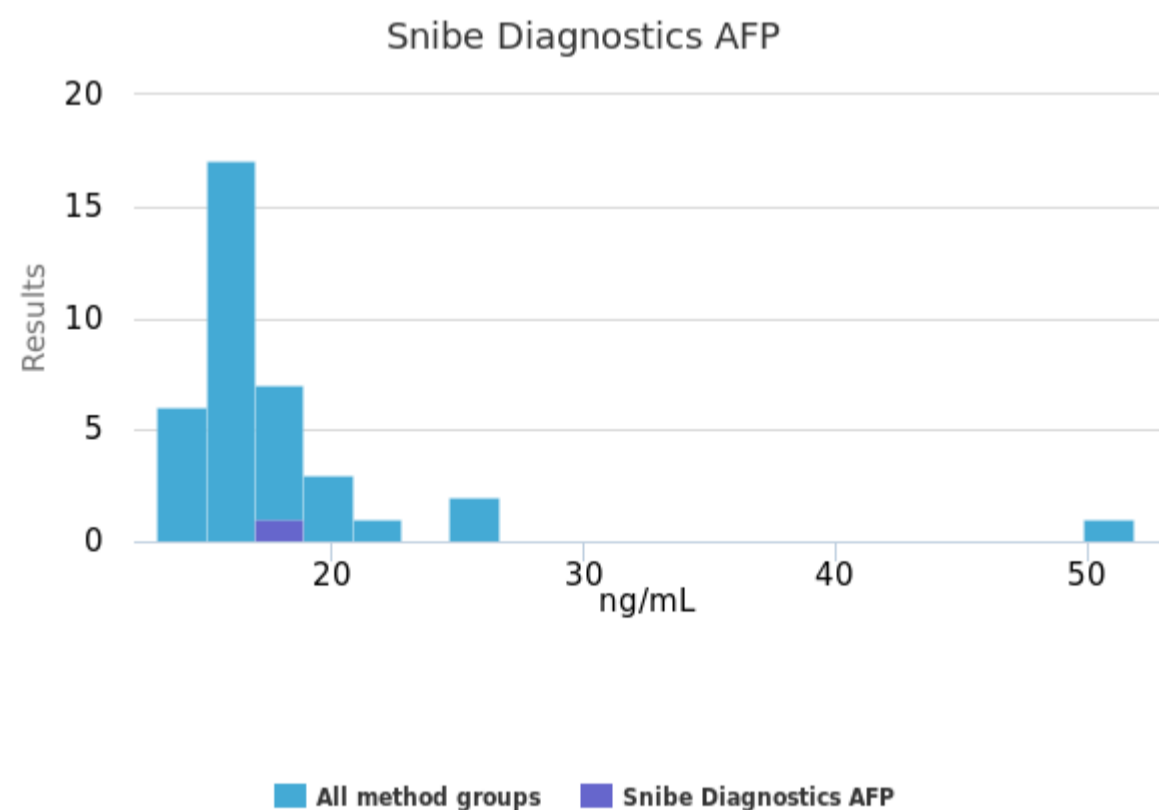
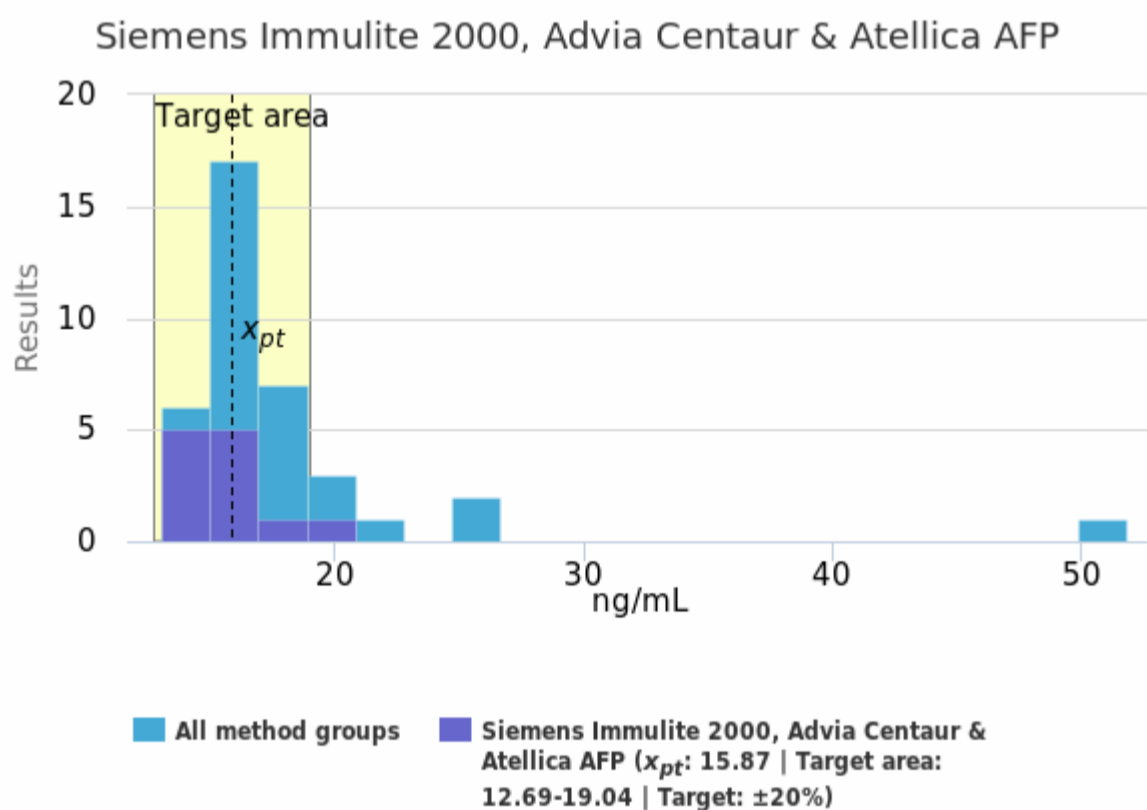
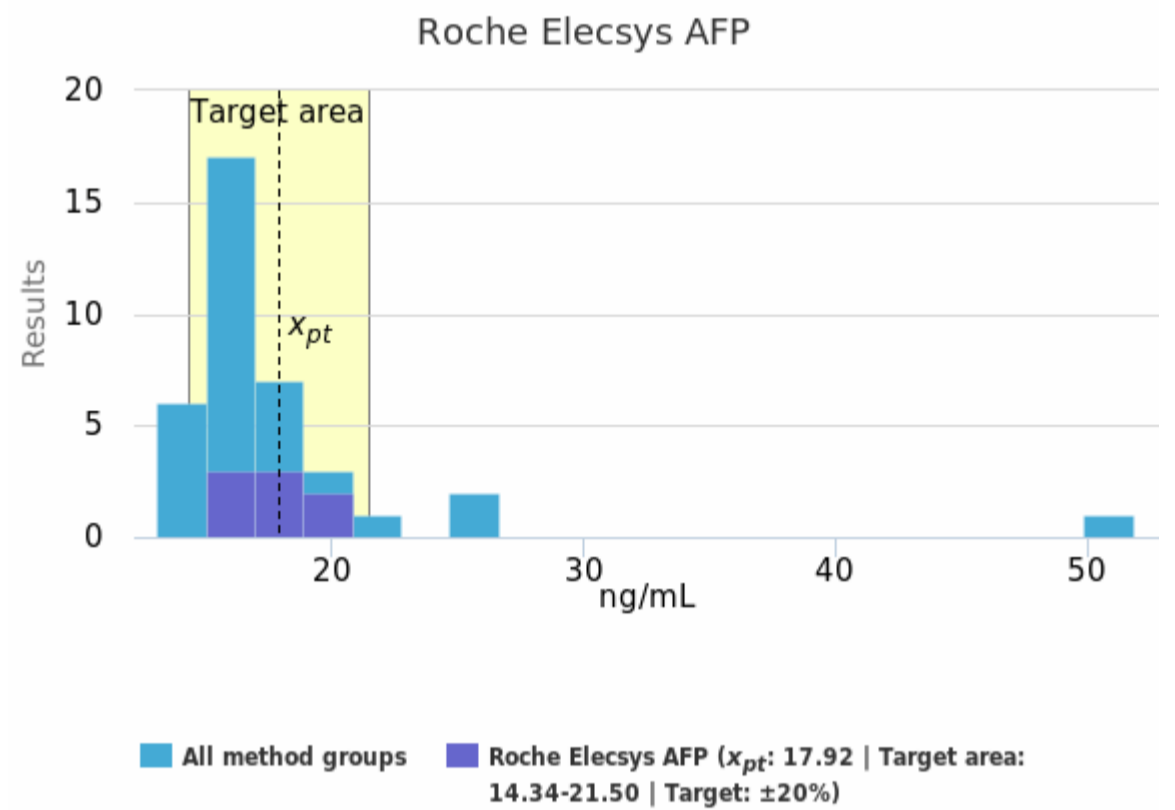
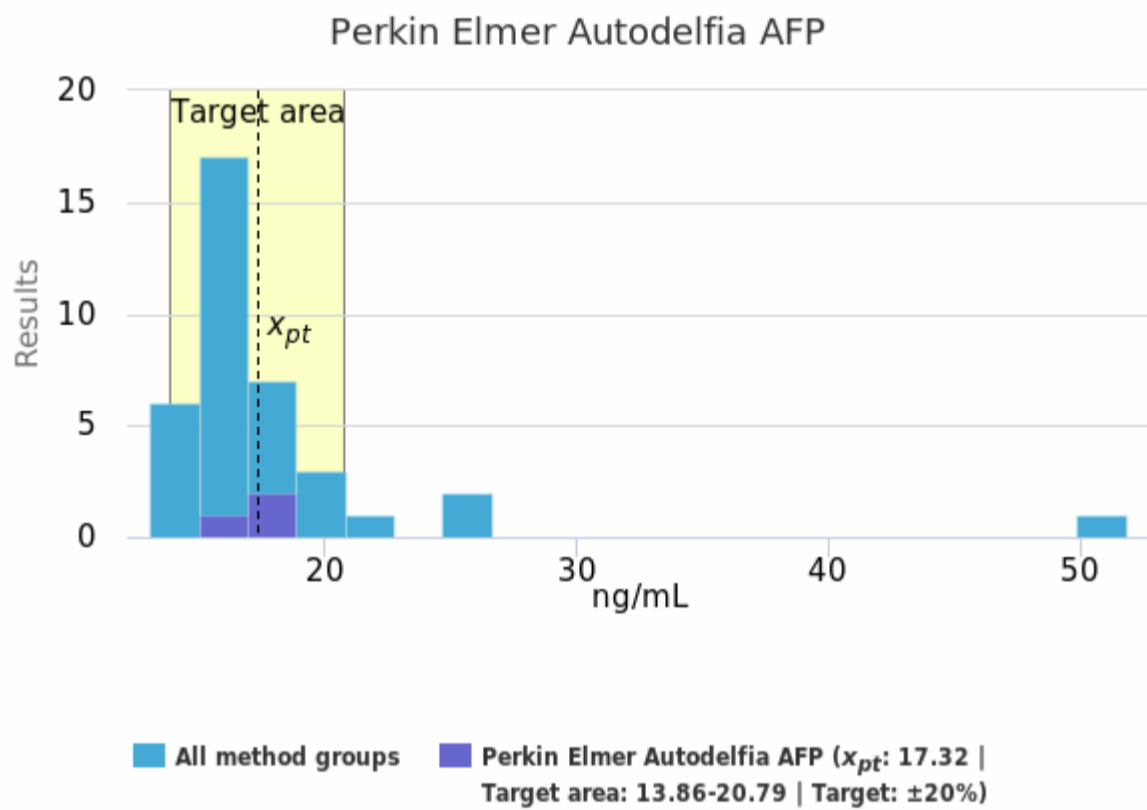
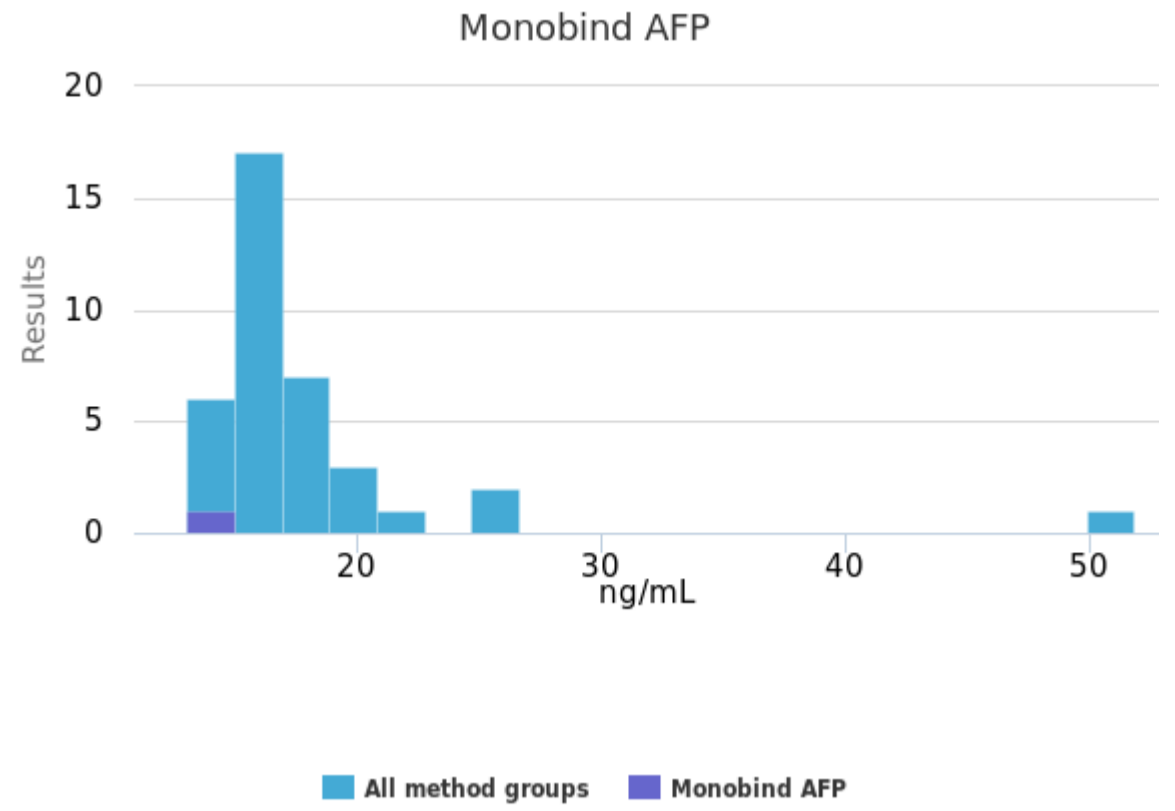
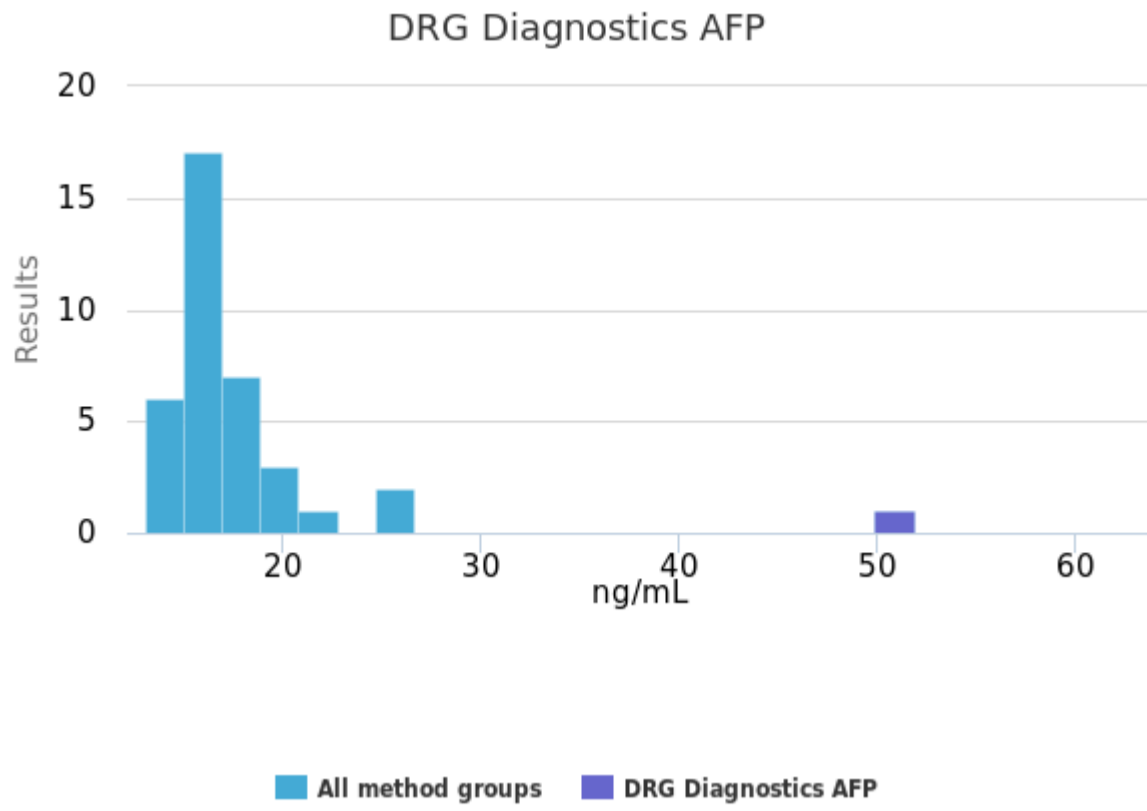
For information on report interpretation and performance evaluation, please see the "EOAS Interpretation guidelines" LabScala User instructions (top right corner ?Help link).

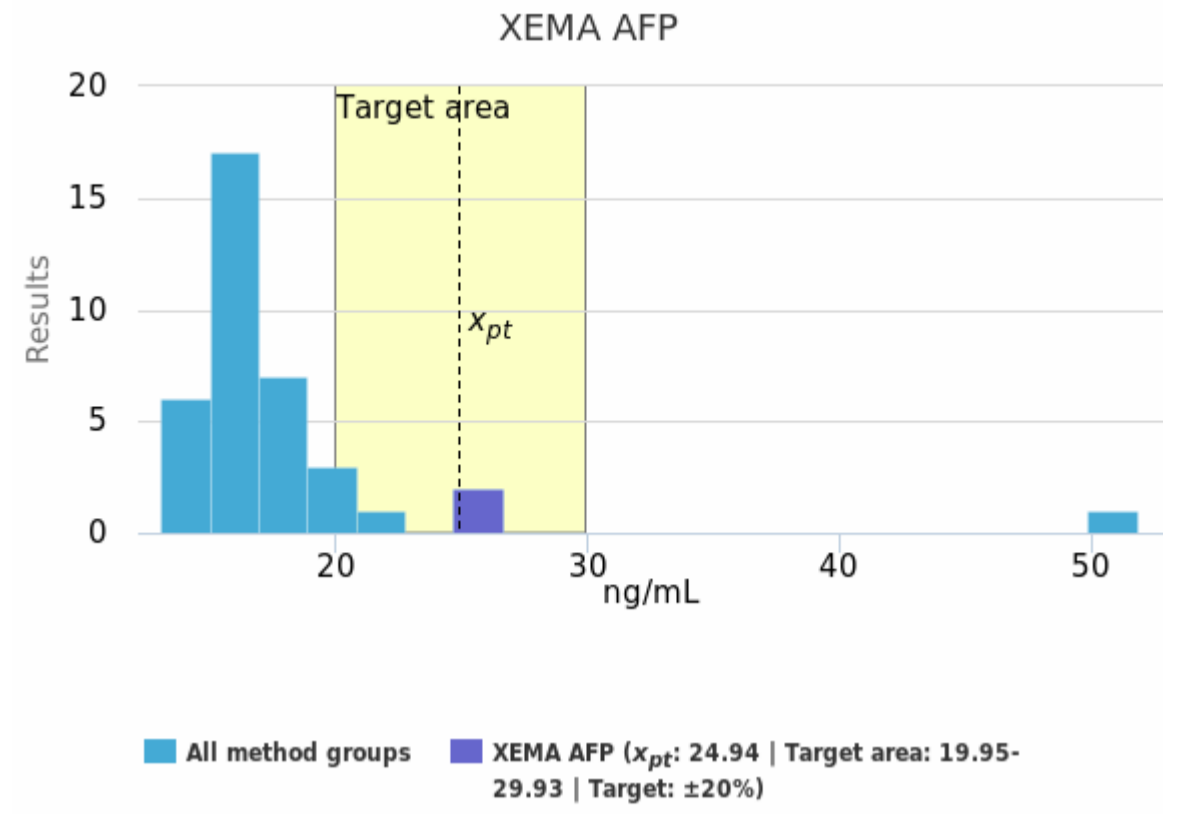
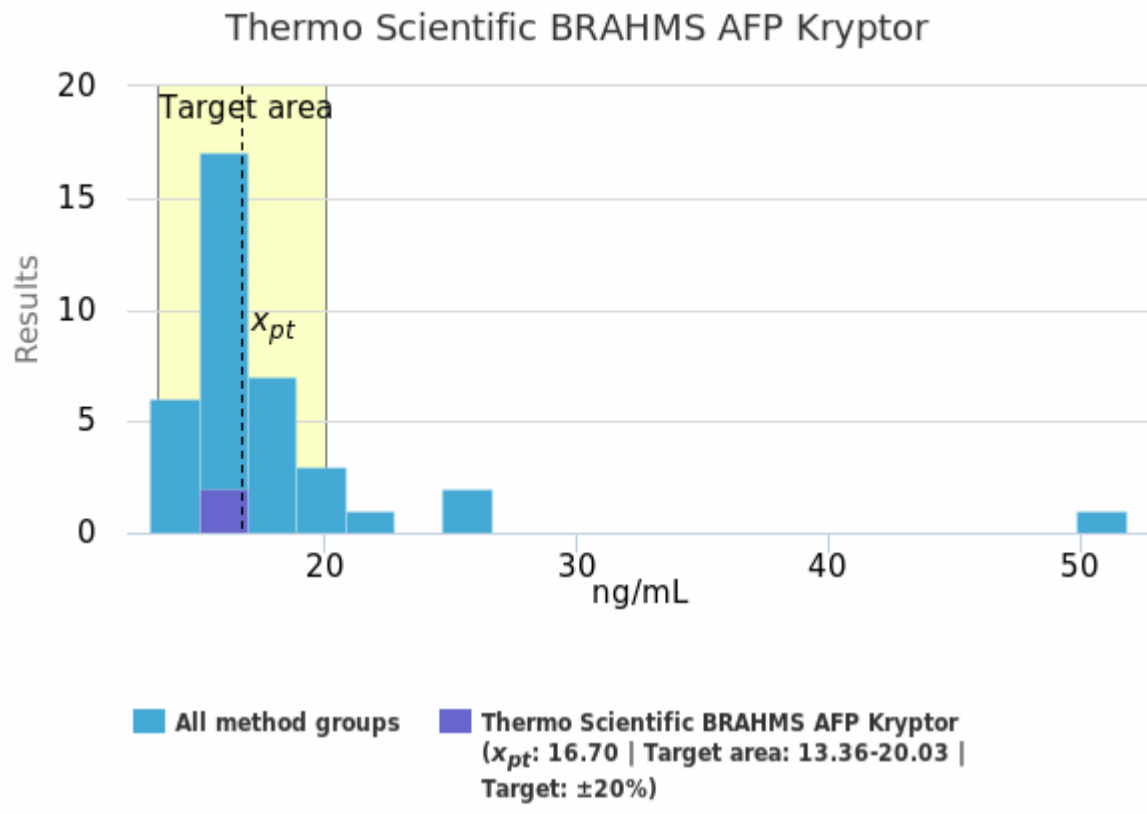
Sample S001 | AFP, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Alinity & Architect AFP	15.59	15.56	0.20	1.3	0.12	15.40	15.80	-	3
Beckman Coulter AFP	16.39	16.39	0.56	3.4	0.40	15.99	16.78	-	2
Biomerieux VIDAS AFP	-	-	-	-	-	15.55	15.55	-	1
Diasource AFP IRMA	-	-	-	-	-	22.39	22.39	-	1
DRG Diagnostics AFP	-	-	-	-	-	51.85	51.85	-	1
Monobind AFP	-	-	-	-	-	14.90	14.90	-	1
Perkin Elmer Autodelphia AFP	17.32	17.73	0.75	4.3	0.43	16.46	17.79	-	3
Roche Elecsys AFP	17.92	17.92	1.22	6.8	0.43	16.35	19.42	-	8
Siemens Immulite 2000, Advia Centaur & Atellica AFP	15.87	16.27	1.73	10.9	0.50	13.07	19.36	-	12
Snibe Diagnostics AFP	-	-	-	-	-	18.32	18.32	-	1
Thermo Scientific BRAHMS AFP Kryptor	16.70	16.70	0.13	0.8	0.10	16.60	16.79	-	2
XEMA AFP	24.94	24.94	0.15	0.6	0.11	24.83	25.05	-	2
All	17.21	16.74	2.60	15.1	0.43	13.07	25.05	1	37

Sample S001 | AFP, ng/mL | histogram summaries in LabScala



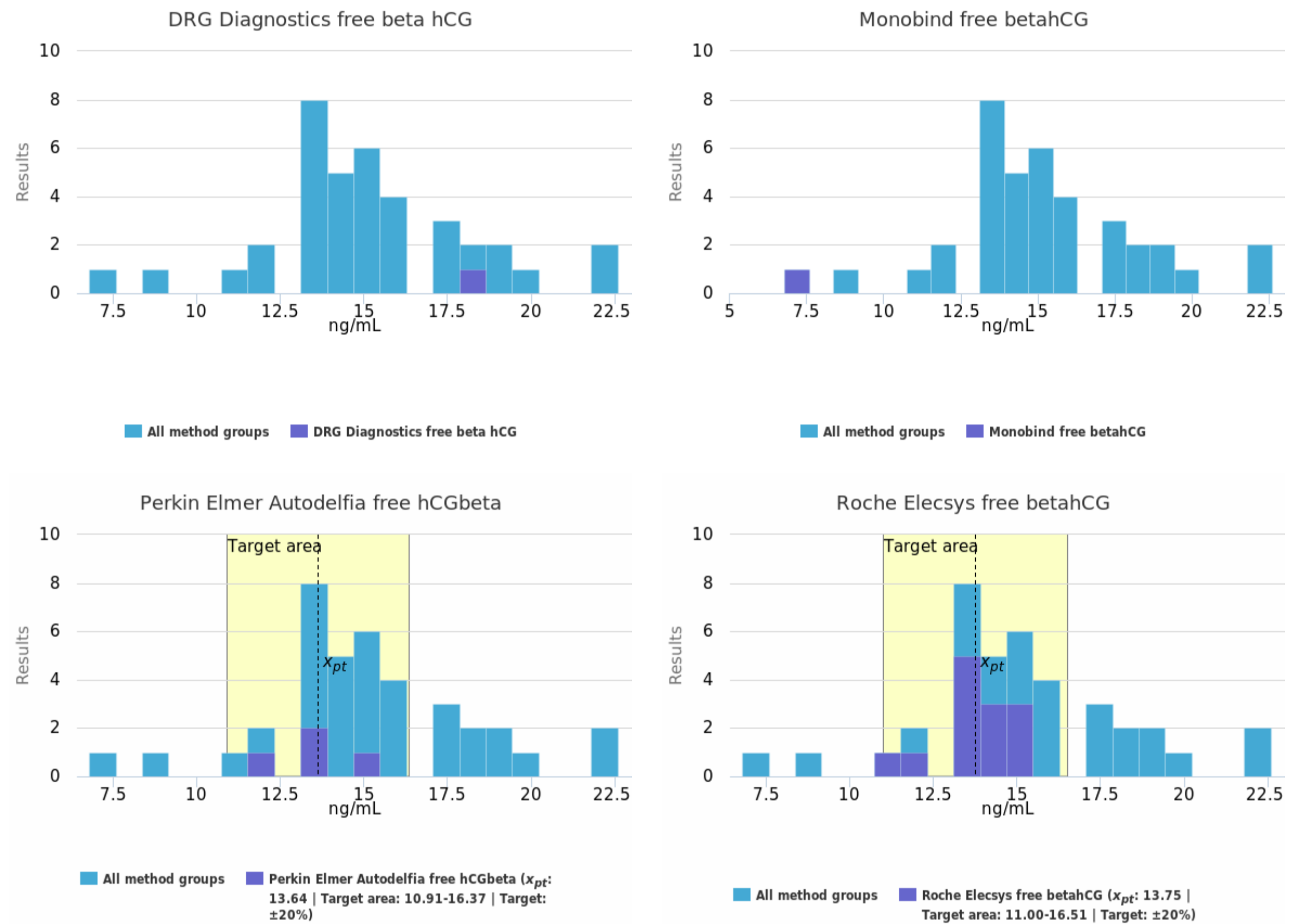




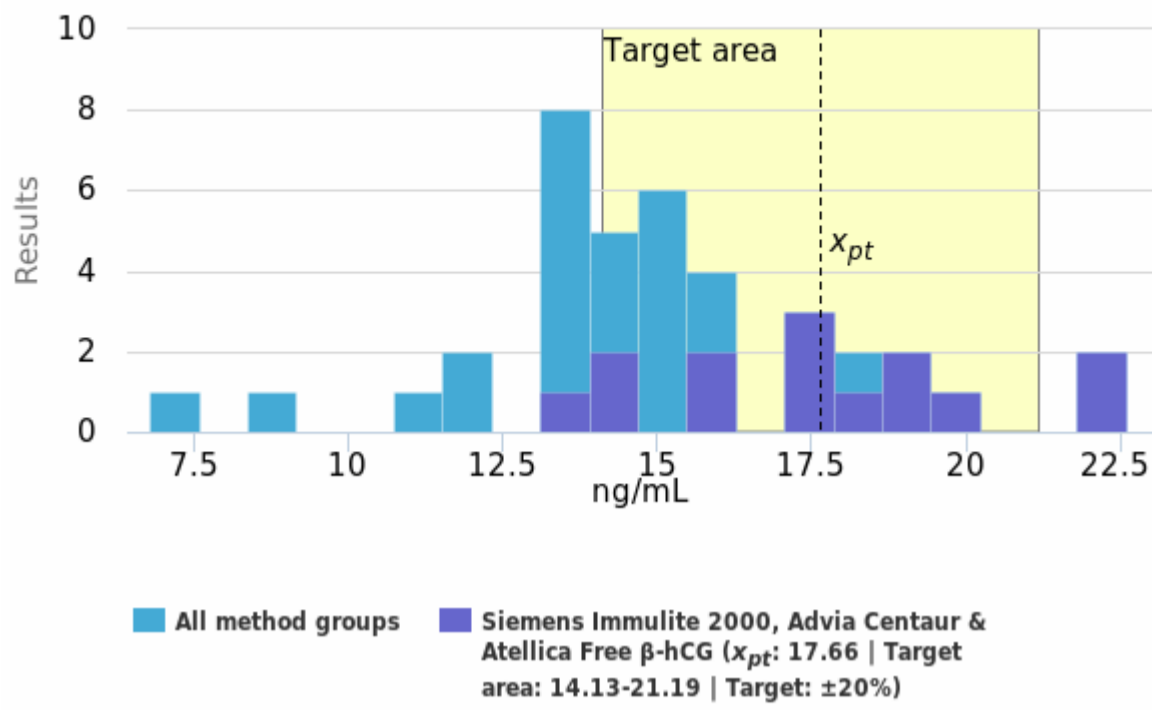
Sample S001 | free b-hCG, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics free beta hCG	-	-	-	-	-	18.30	18.30	-	1
Monobind free betahCG	-	-	-	-	-	6.80	6.80	-	1
Perkin Elmer Autodelfia free hCGbeta	13.64	13.53	1.27	9.3	0.64	12.20	15.30	-	4
Roche Elecsys free betahCG	13.75	13.85	1.12	8.1	0.31	11.33	15.06	-	13
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	17.66	17.30	2.76	15.6	0.74	13.90	22.60	-	14
Thermo Scientific BRAHMS Free betahCG Kryptor	15.39	15.31	0.68	4.4	0.34	14.80	16.13	-	4
XEMA Free beta hCG	-	-	-	-	-	9.04	9.04	-	1
All	15.17	14.81	3.12	20.6	0.51	6.80	22.60	-	38

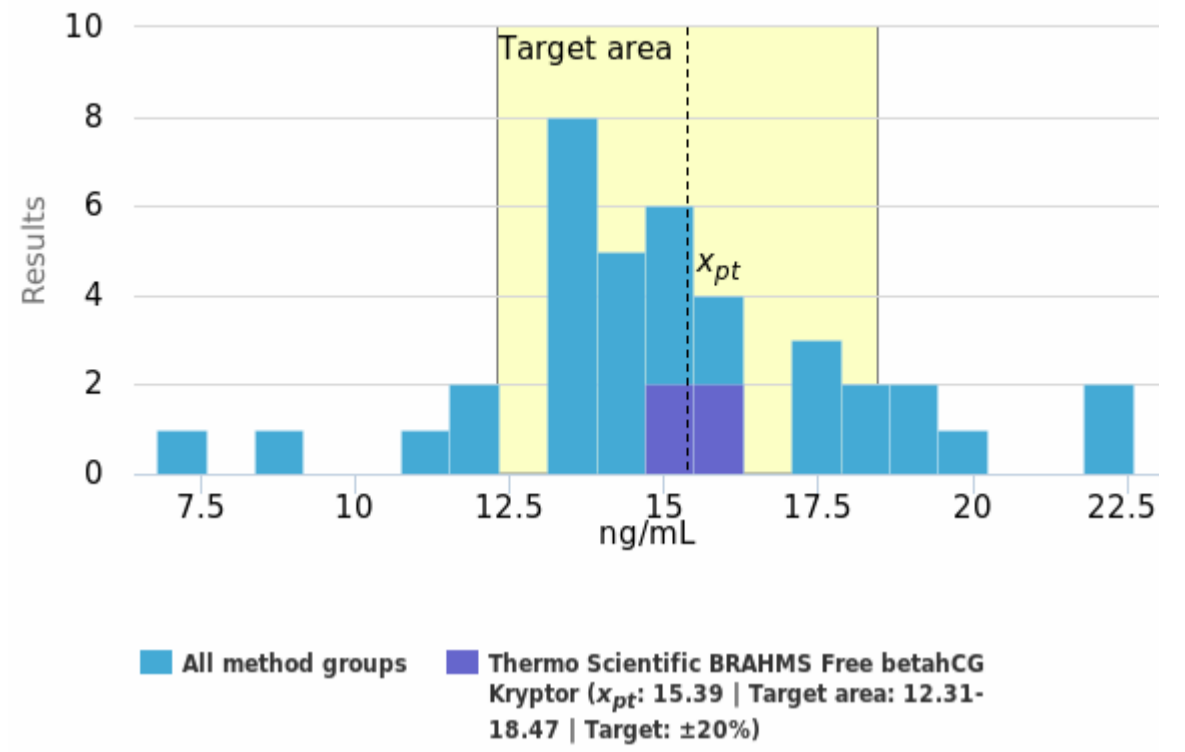
Sample S001 | free b-hCG, ng/mL | histogram summaries in LabScala



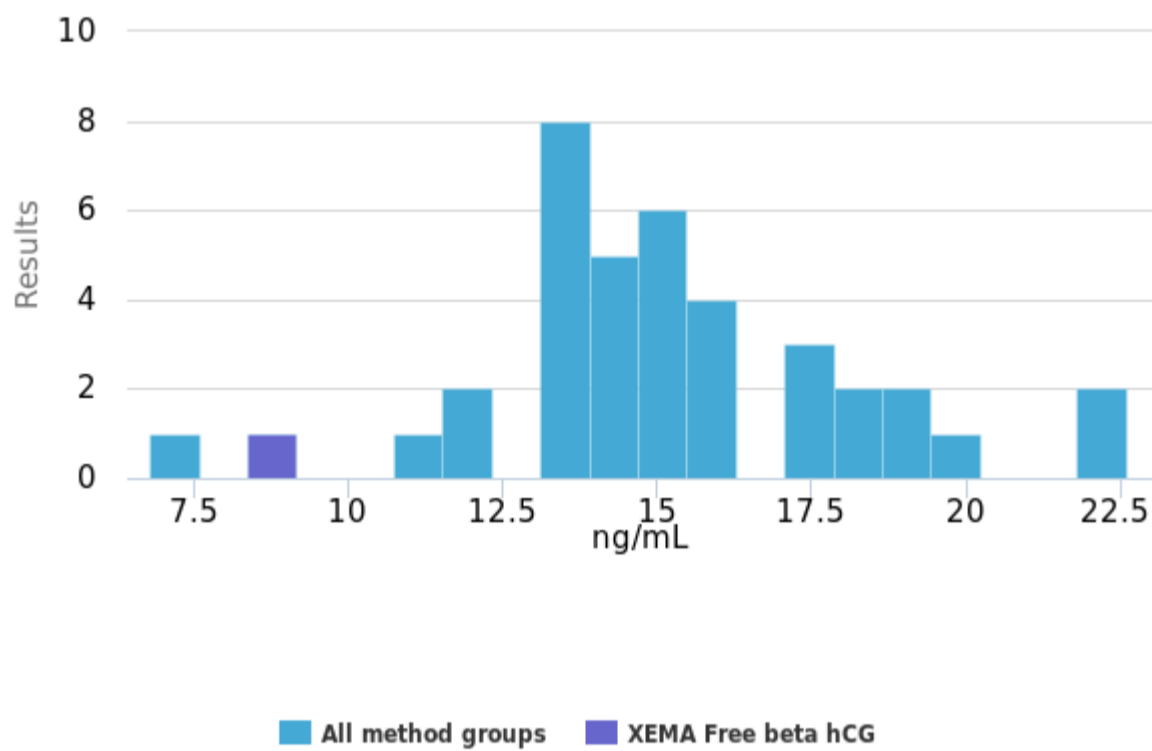
Siemens Immulite 2000, Advia Centaur & Atellica Free β -hCG



Thermo Scientific BRAHMS Free betahCG Kryptor



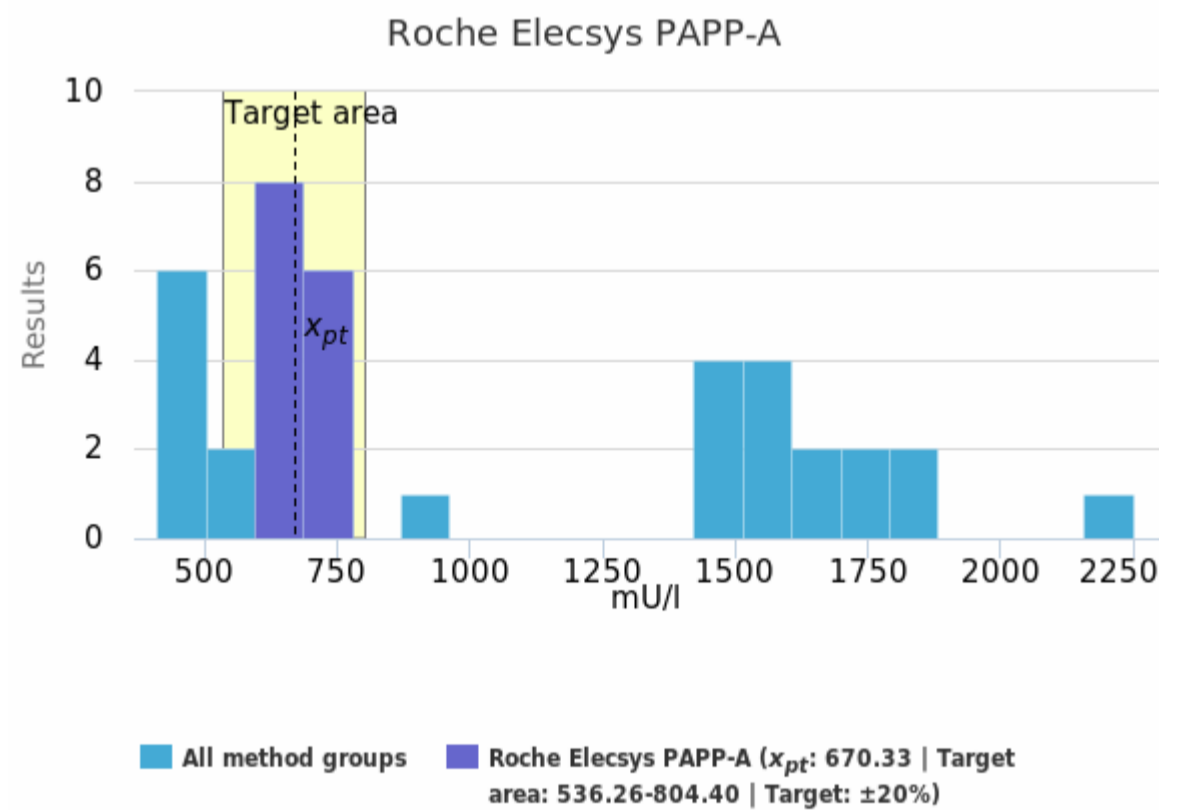
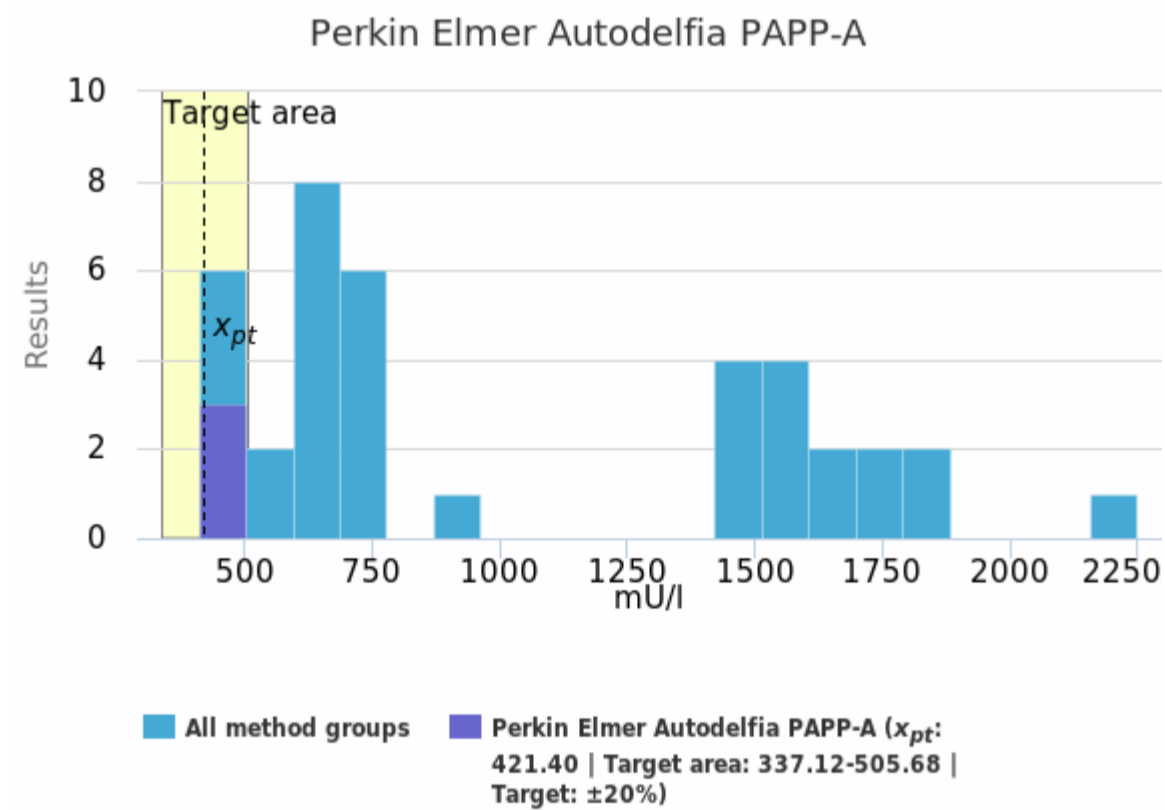
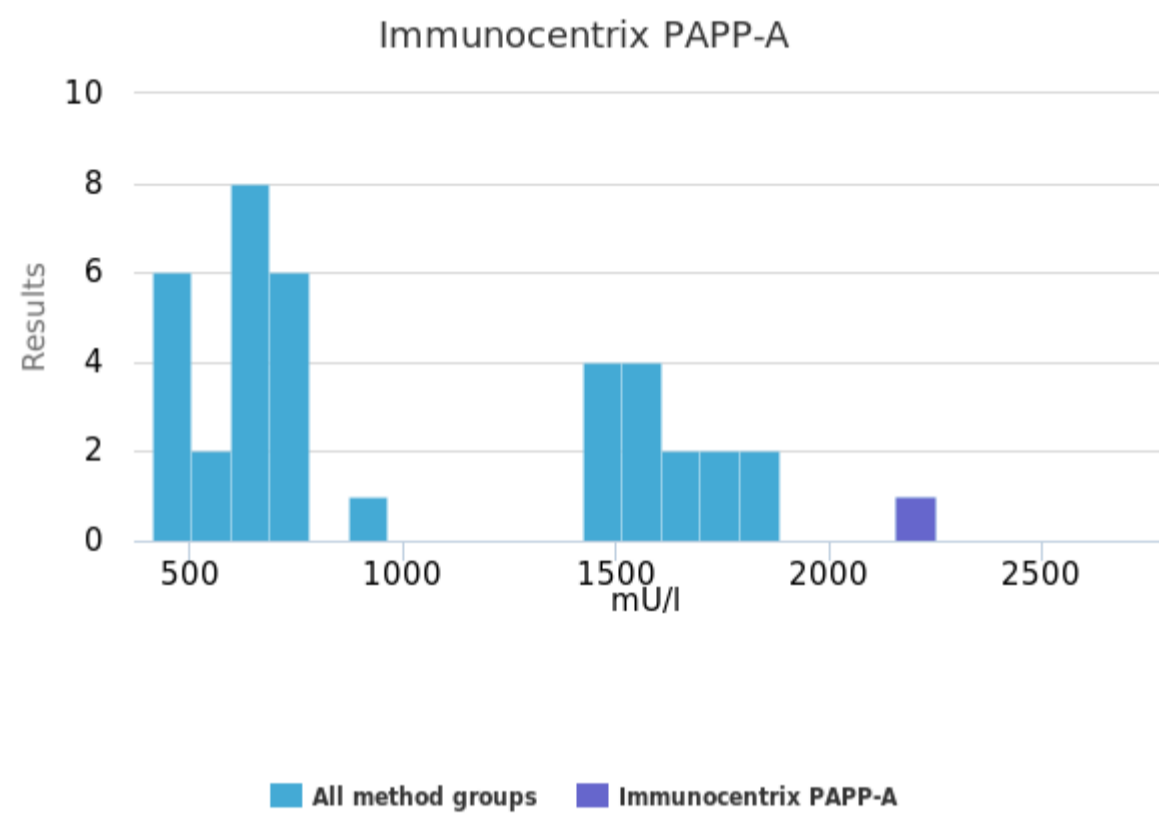
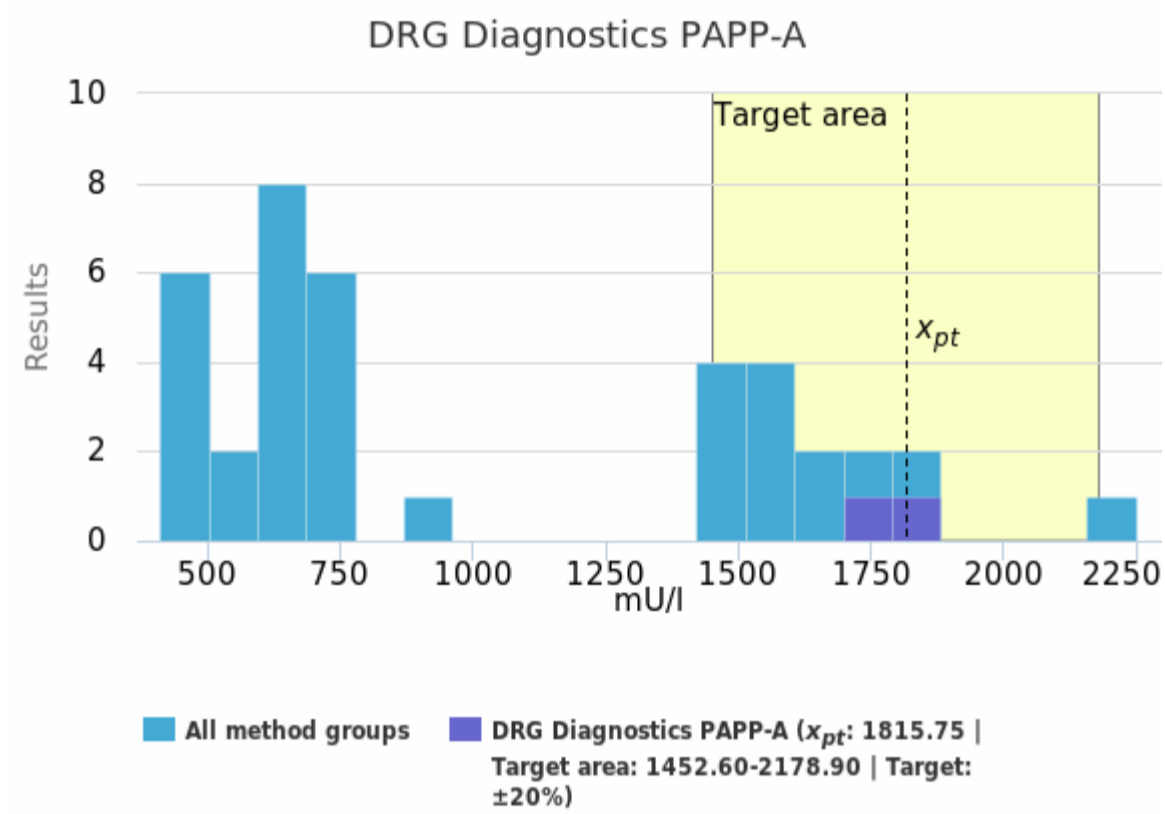
XEMA Free beta hCG

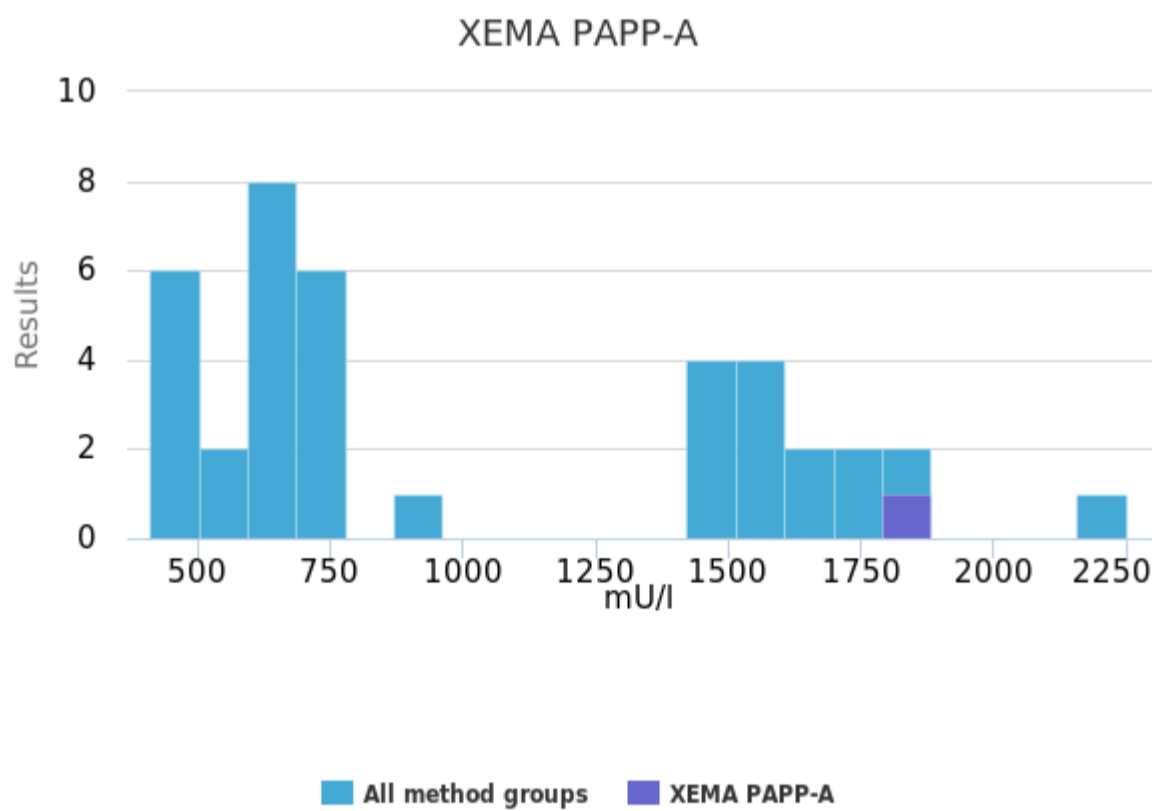
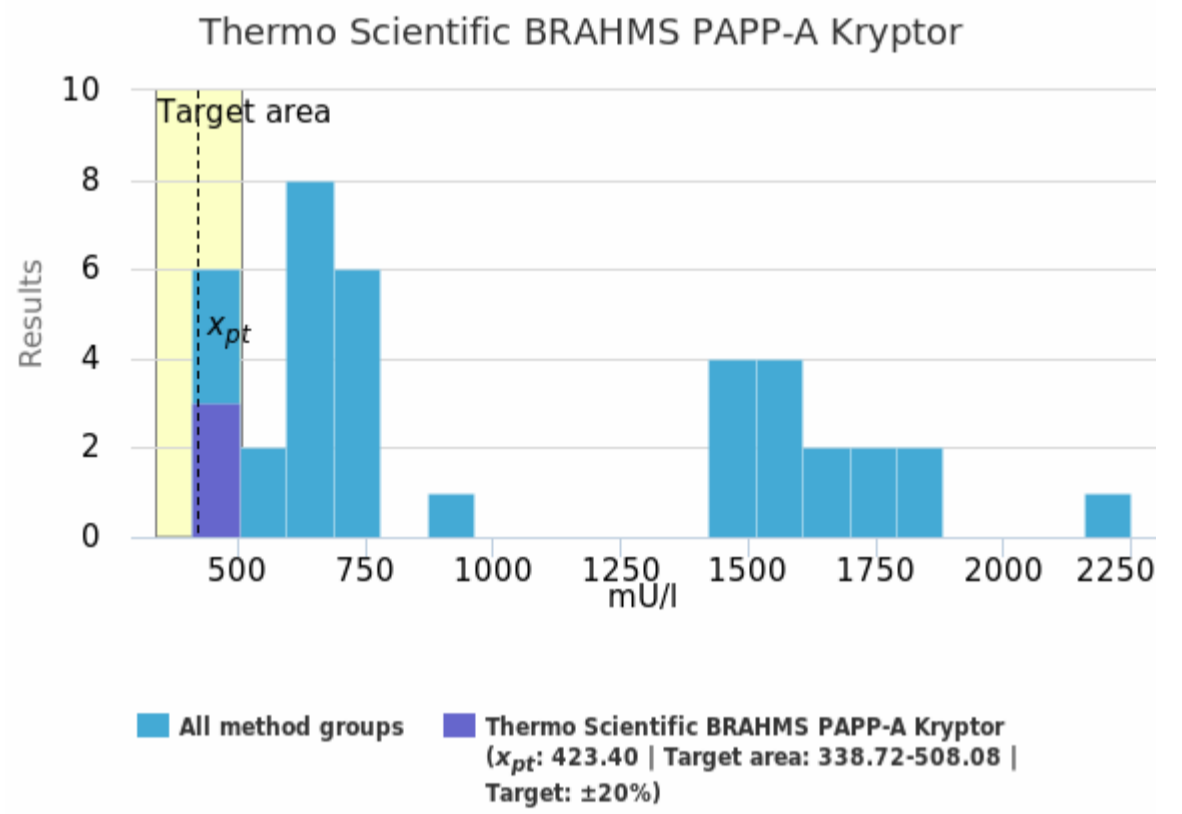
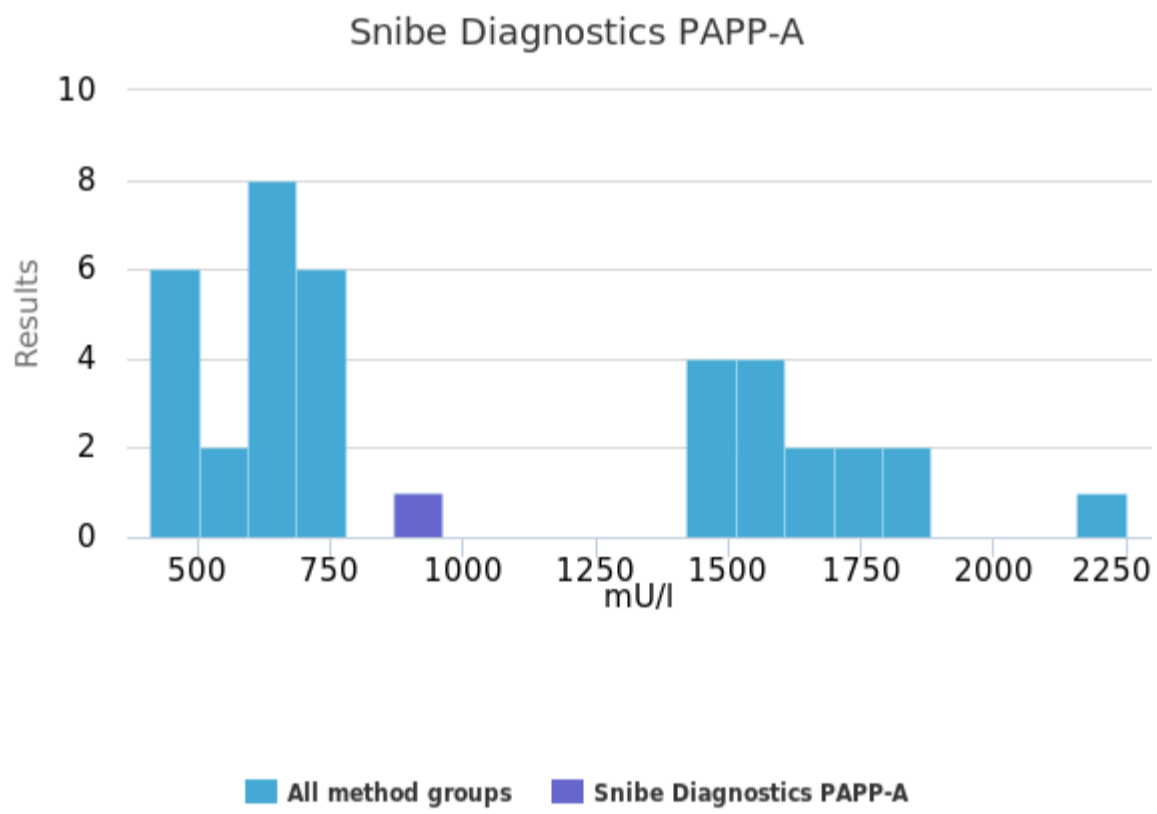
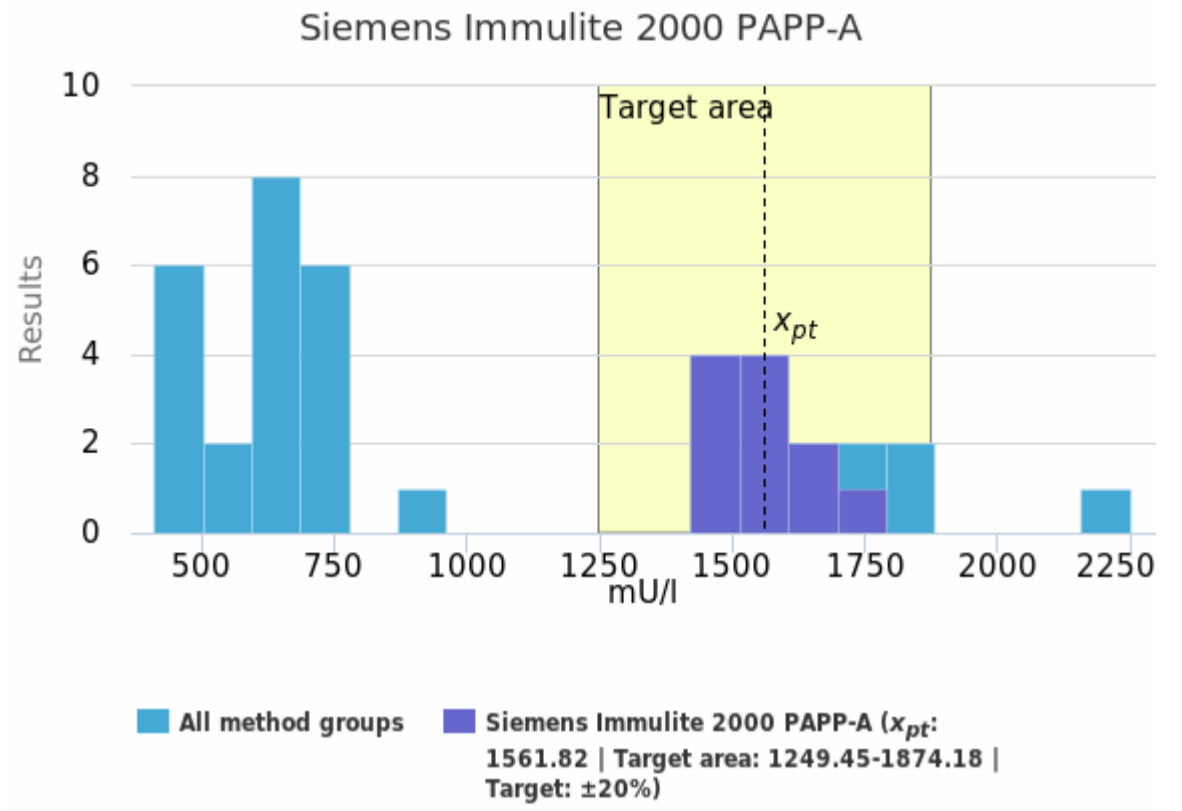
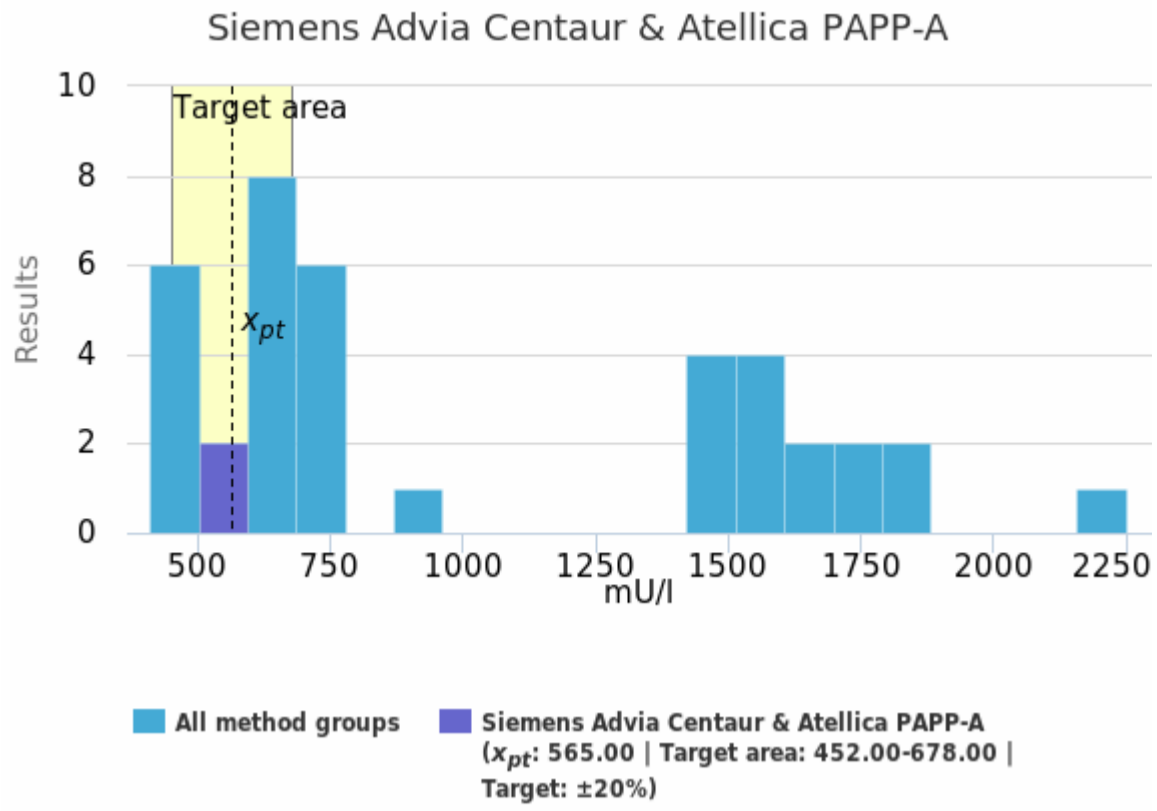


Sample S001 | PAPP-A, mU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics PAPP-A	1815.75	1815.75	41.37	2.3	29.25	1786.50	1845.00	-	2
Immunocentrix PAPP-A	-	-	-	-	-	2250.00	2250.00	-	1
Perkin Elmer Autodelfia PAPP-A	421.40	419.20	10.67	2.5	6.16	412.00	433.00	-	3
Roche Elecsys PAPP-A	670.33	665.00	51.12	7.6	13.66	600.00	747.40	-	14
Siemens Advia Centaur & Atellica PAPP-A	565.00	565.00	7.07	1.3	5.00	560.00	570.00	-	2
Siemens Immulite 2000 PAPP-A	1561.82	1570.00	101.27	6.5	30.54	1430.00	1730.00	-	11
Snibe Diagnostics PAPP-A	-	-	-	-	-	922.50	922.50	-	1
Thermo Scientific BRAHMS PAPP-A Kryptor	423.40	421.00	6.92	1.6	3.99	418.00	431.20	-	3
XEMA PAPP-A	-	-	-	-	-	1845.00	1845.00	-	1
All	1023.11	723.97	547.86	53.5	88.87	412.00	2250.00	-	38

Sample S001 | PAPP-A, mU/l histogram summaries in LabScala

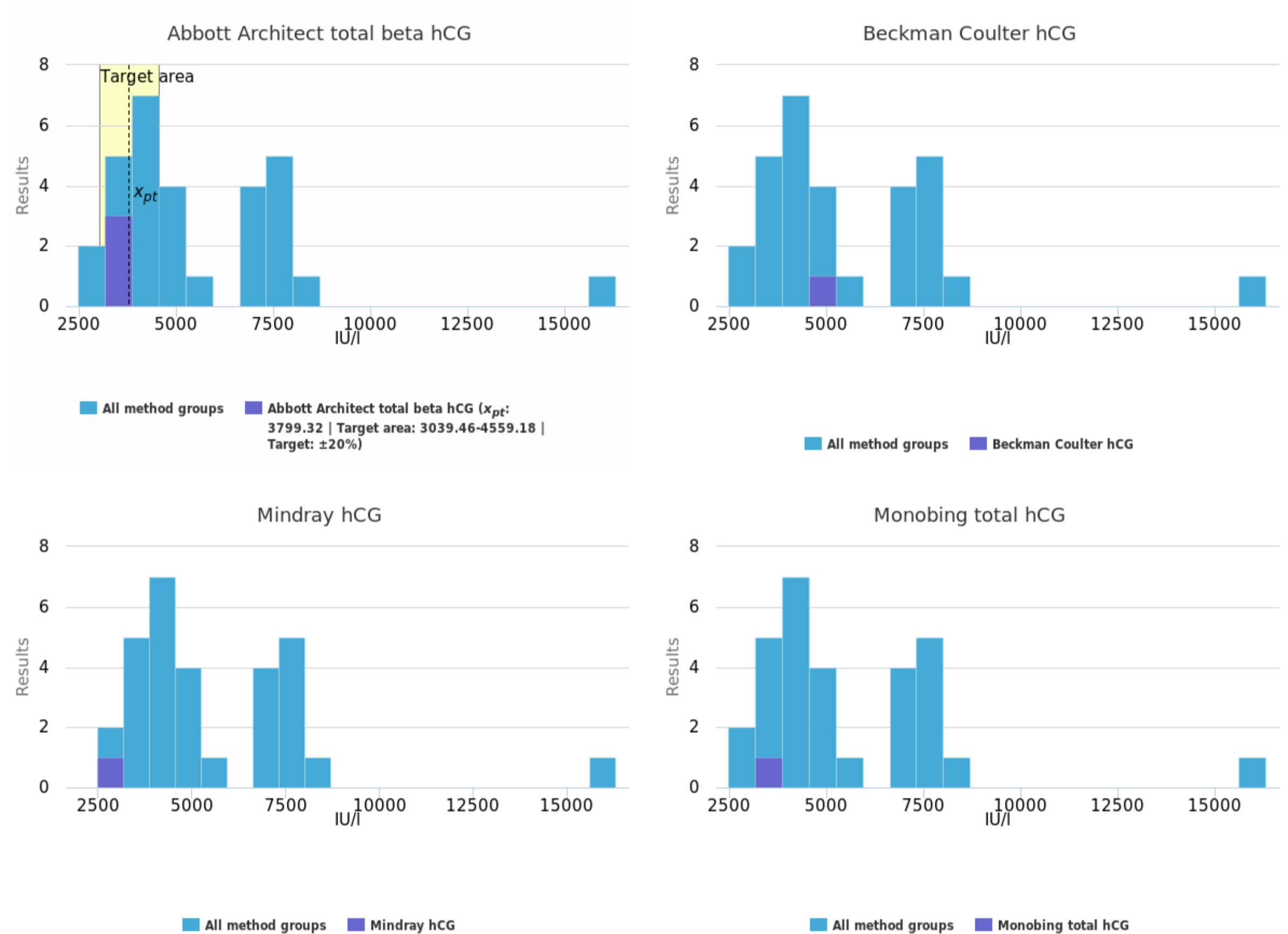


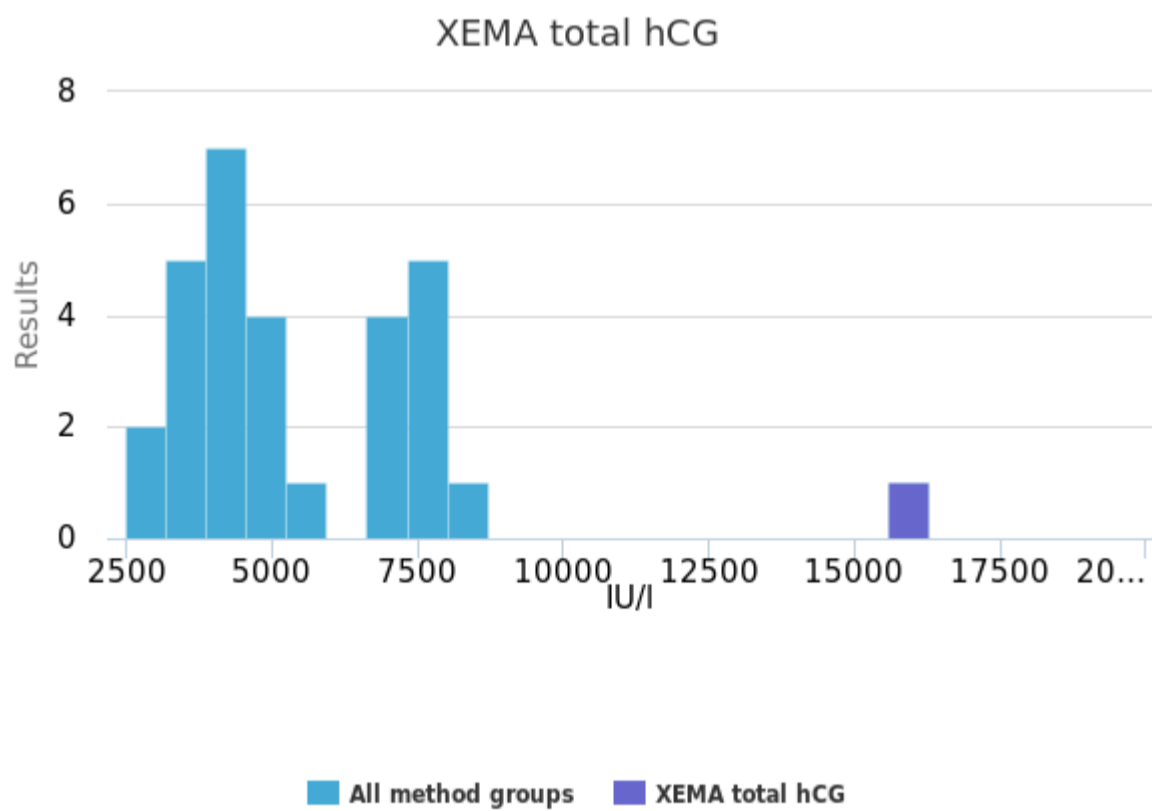
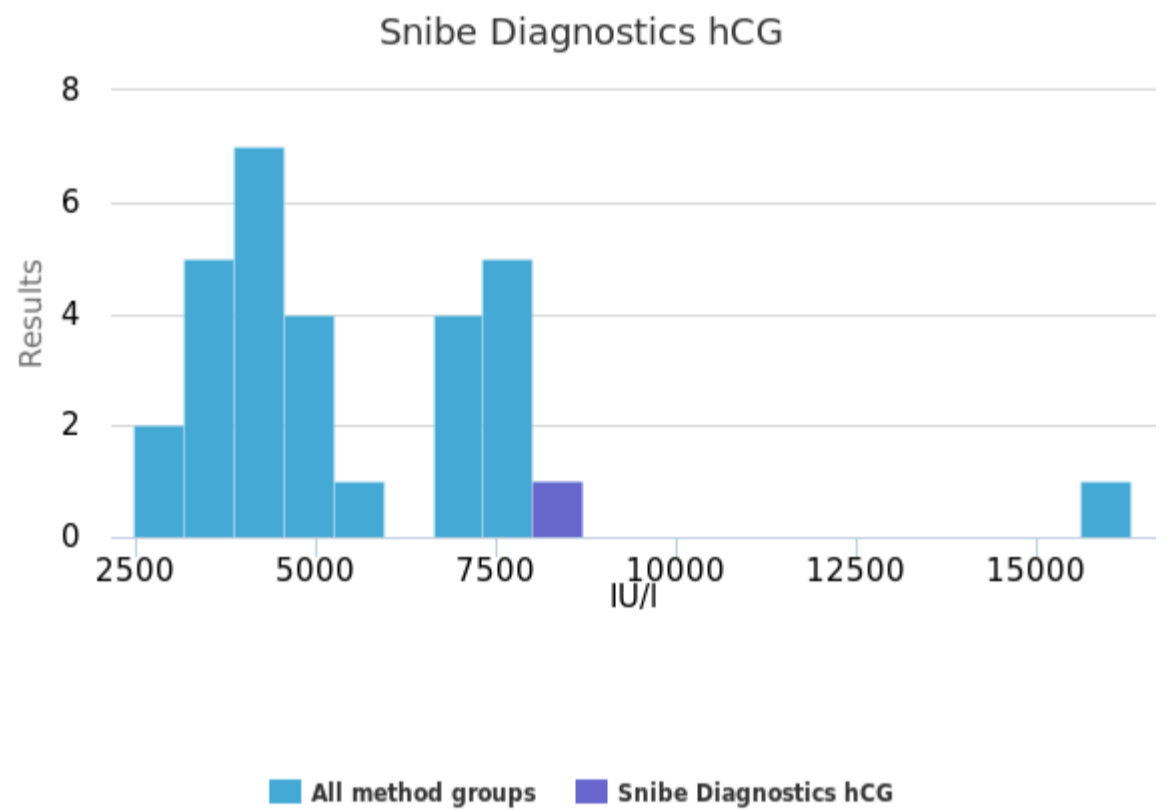
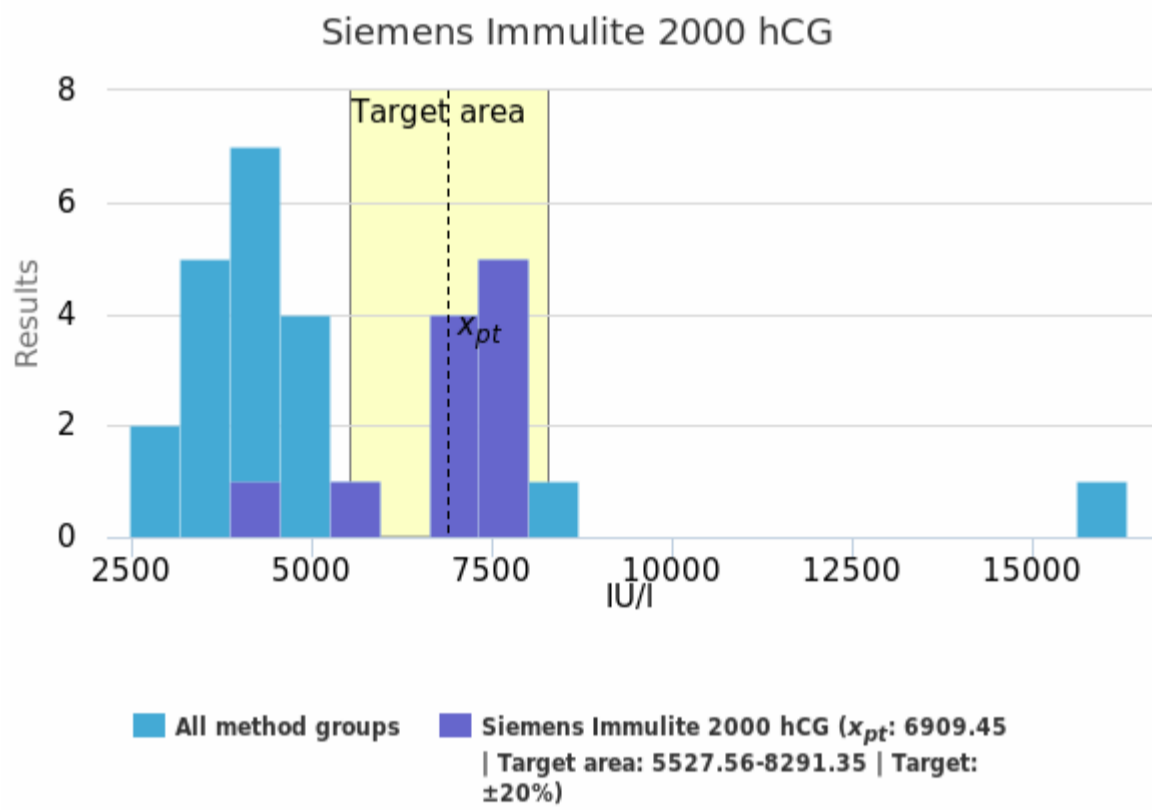
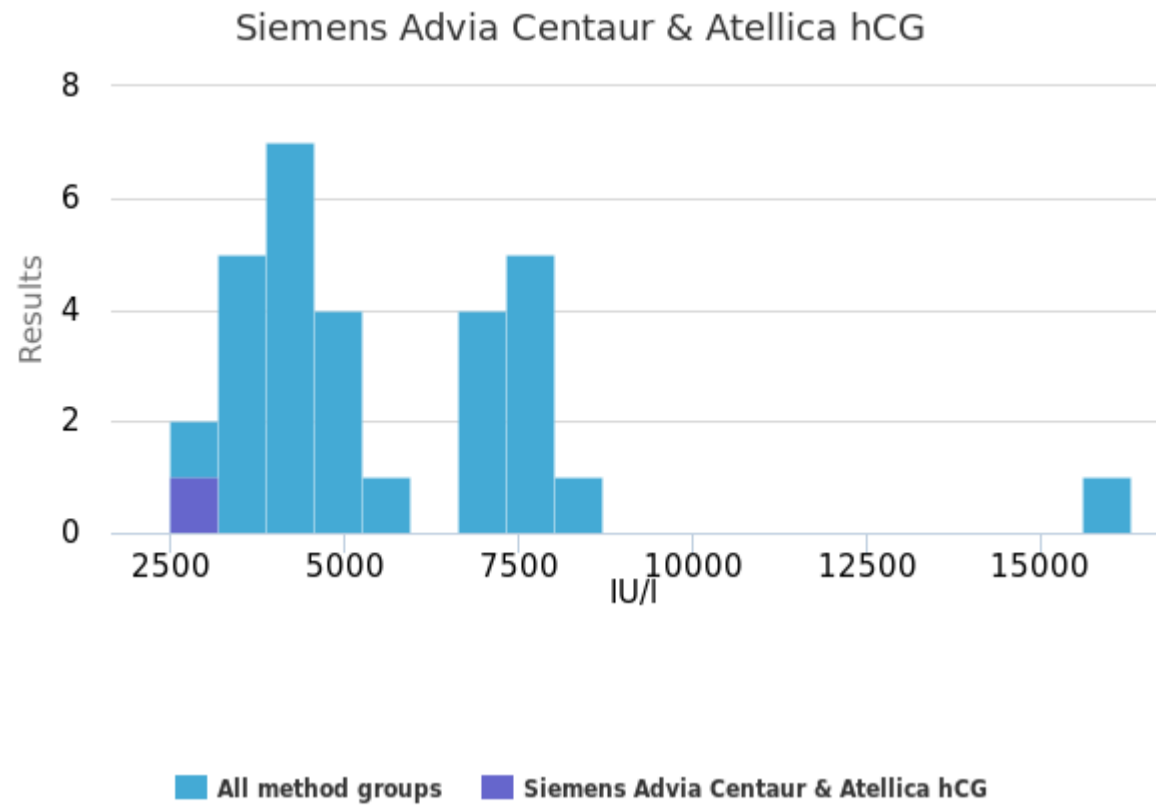
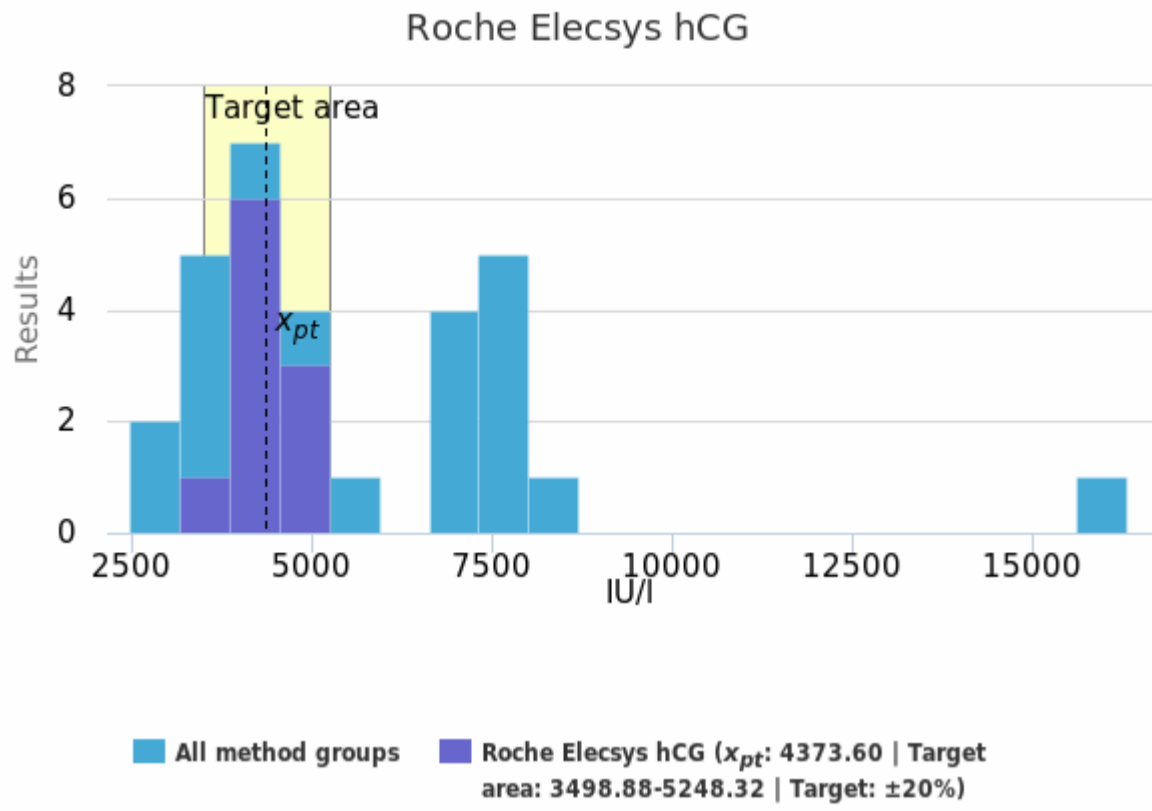


Sample S001 | total-hCG, IU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Architect total beta hCG	3799.32	3787.60	31.38	0.8	18.12	3775.49	3834.87	-	3
Beckman Coulter hCG	-	-	-	-	-	5208.00	5208.00	-	1
Mindray hCG	-	-	-	-	-	2500.40	2500.40	-	1
Monobing total hCG	-	-	-	-	-	3660.00	3660.00	-	1
Roche Elecsys hCG	4373.60	4321.50	433.12	9.9	136.96	3814.00	5184.00	-	10
Siemens Advia Centaur & Atellica hCG	-	-	-	-	-	2495.00	2495.00	-	1
Siemens Immulite 2000 hCG	6909.45	7234.00	1104.89	16.0	333.14	4129.00	7752.00	-	11
Snibe Diagnostics hCG	-	-	-	-	-	8038.00	8038.00	-	1
XEMA total hCG	-	-	-	-	-	16294.00	16294.00	-	1
All	5277.22	4709.00	1728.08	32.7	320.90	2495.00	8038.00	1	30

Sample S001 | total-hCG, IU/l histogram summaries in LabScala

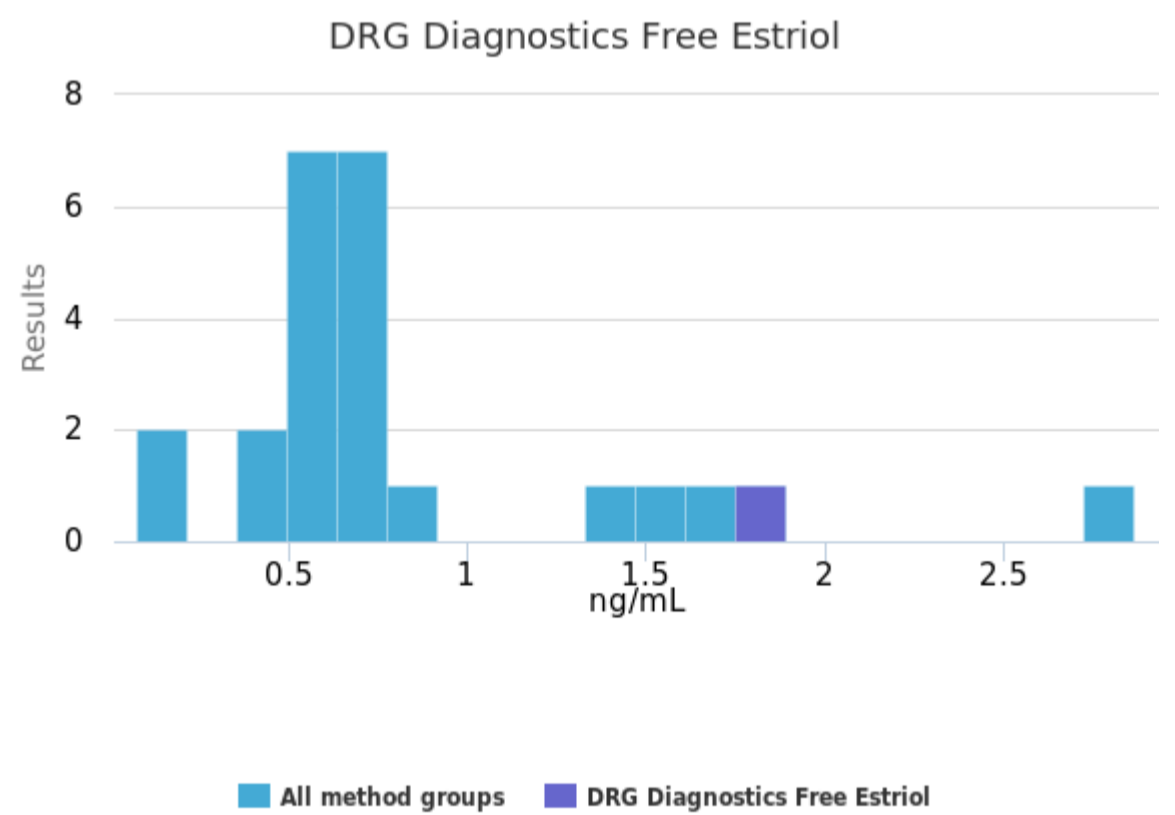
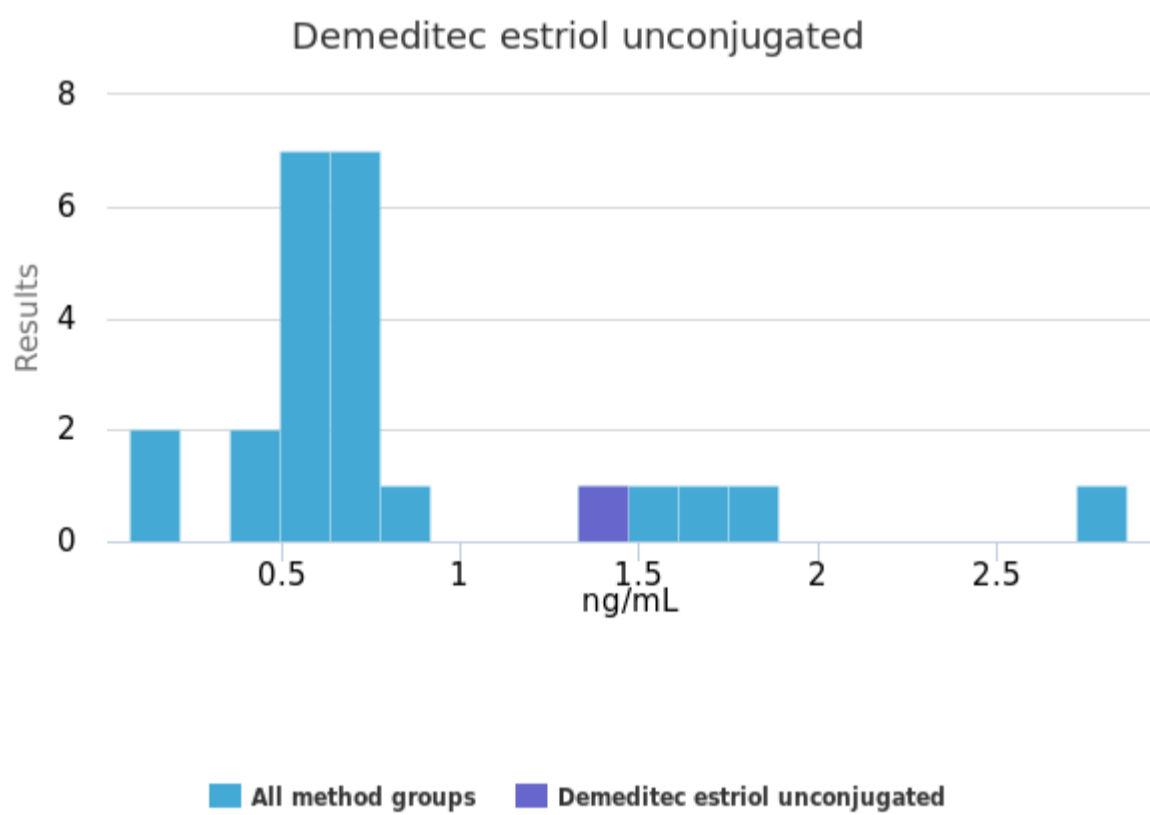
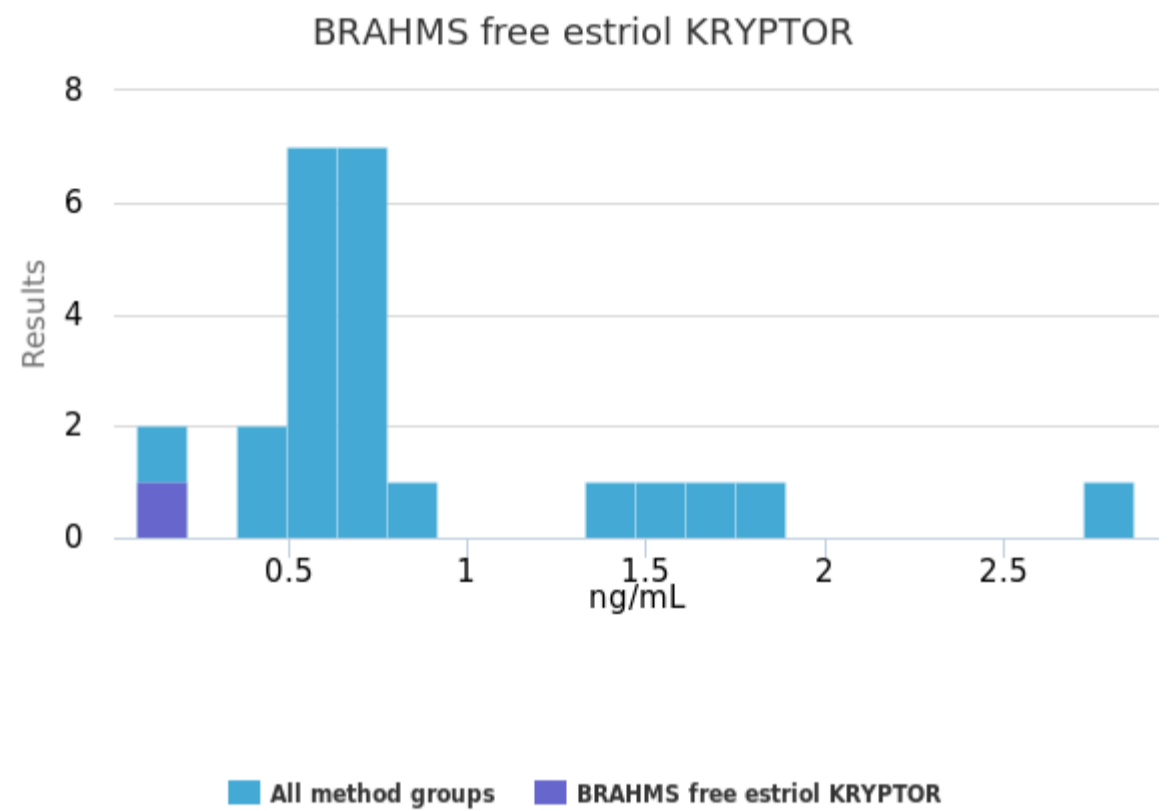
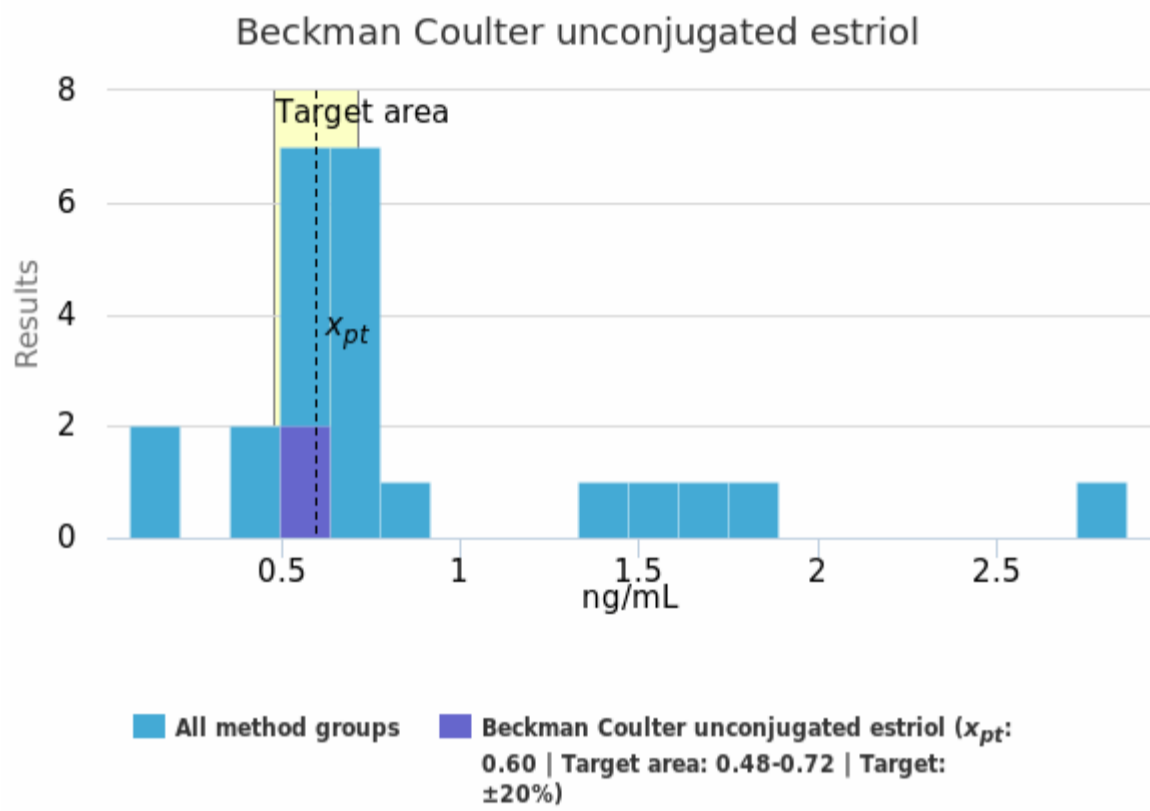


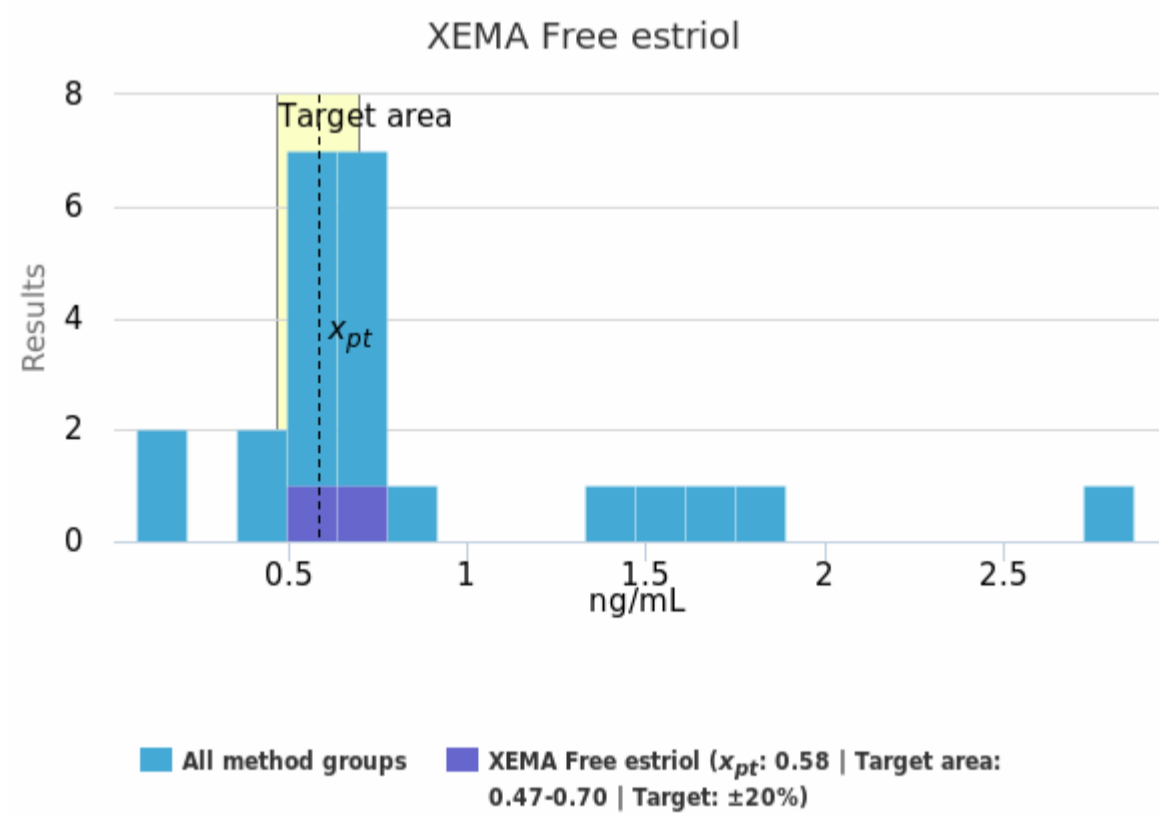
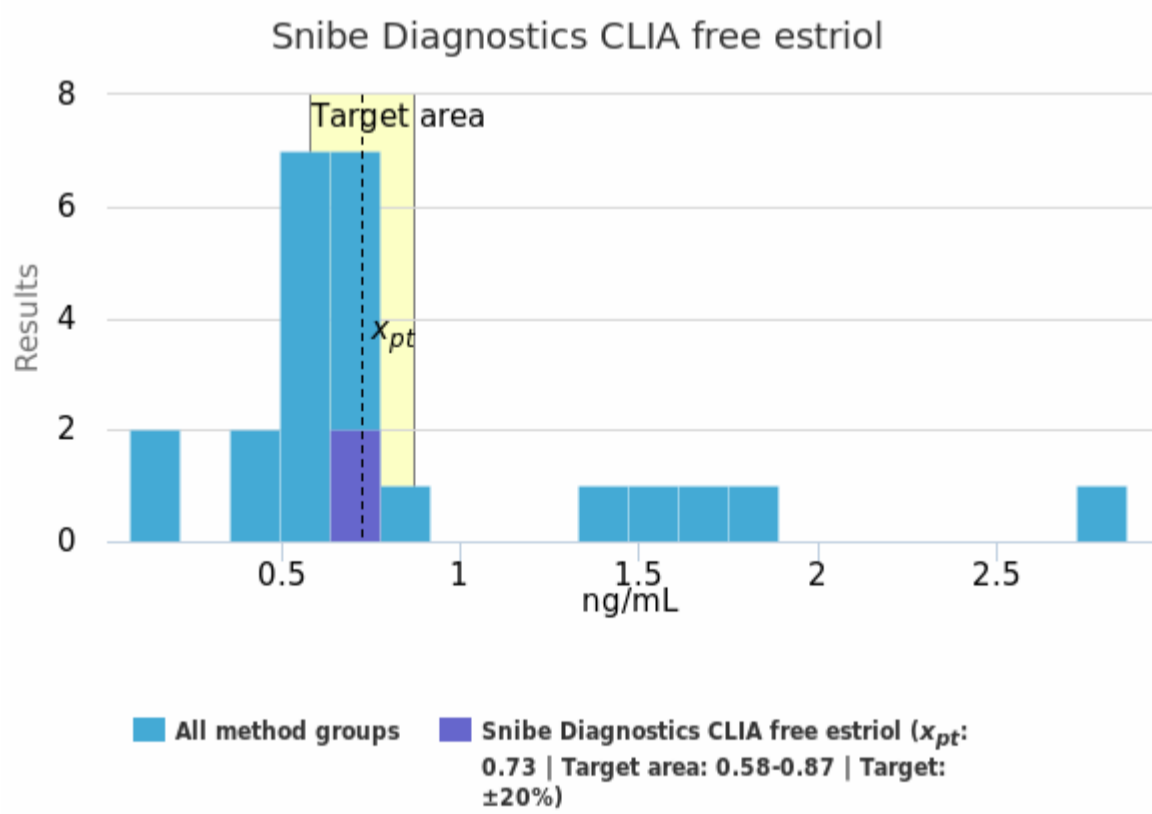
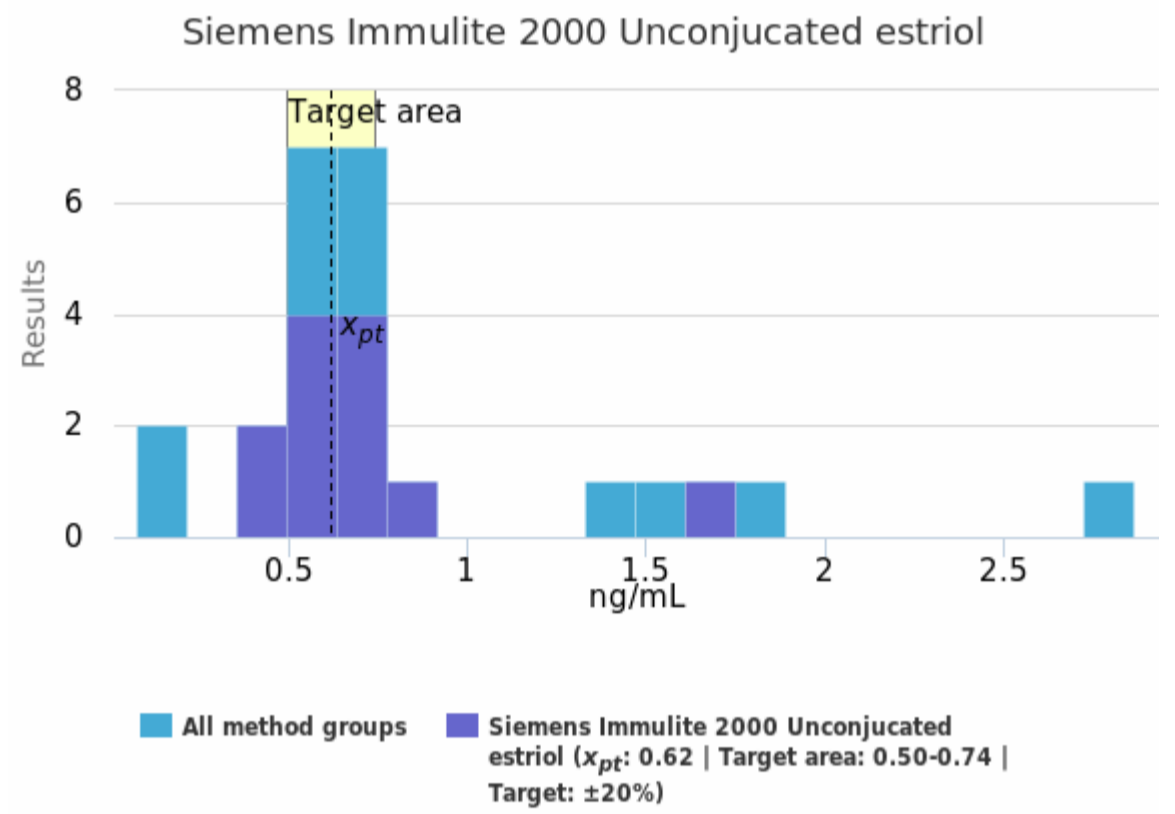
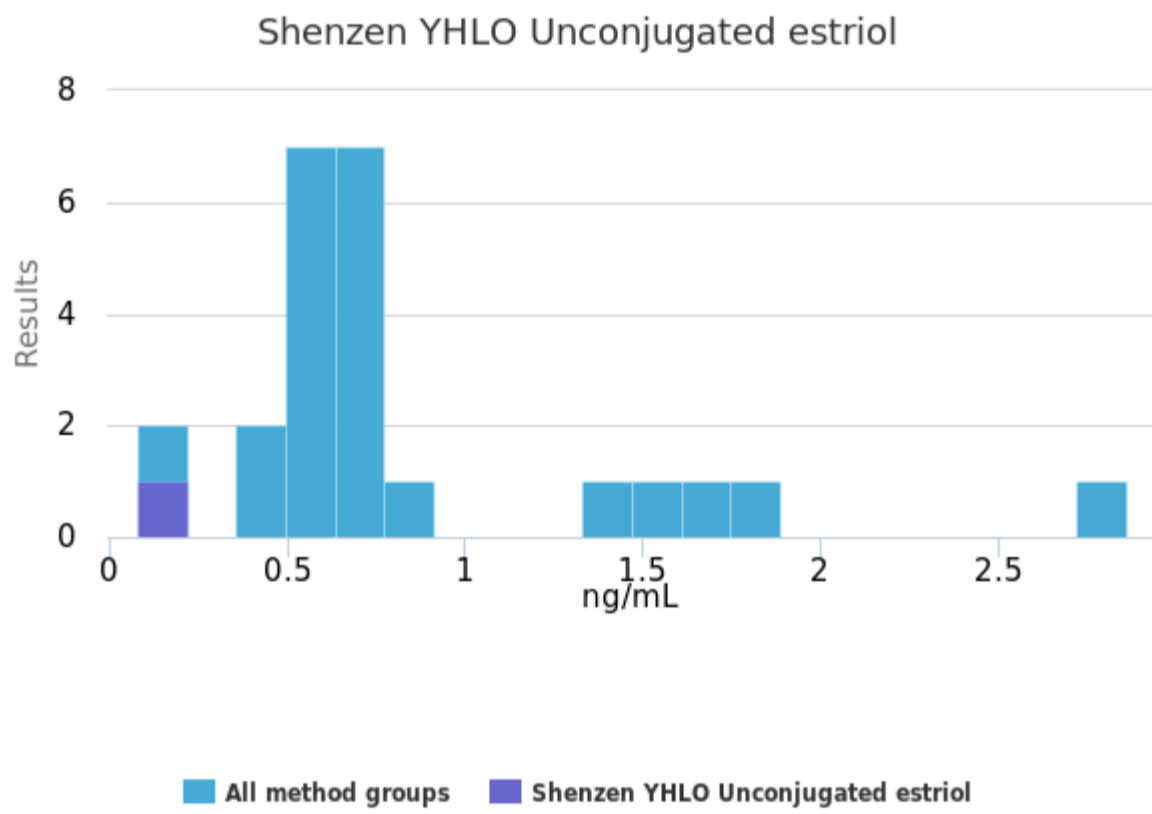
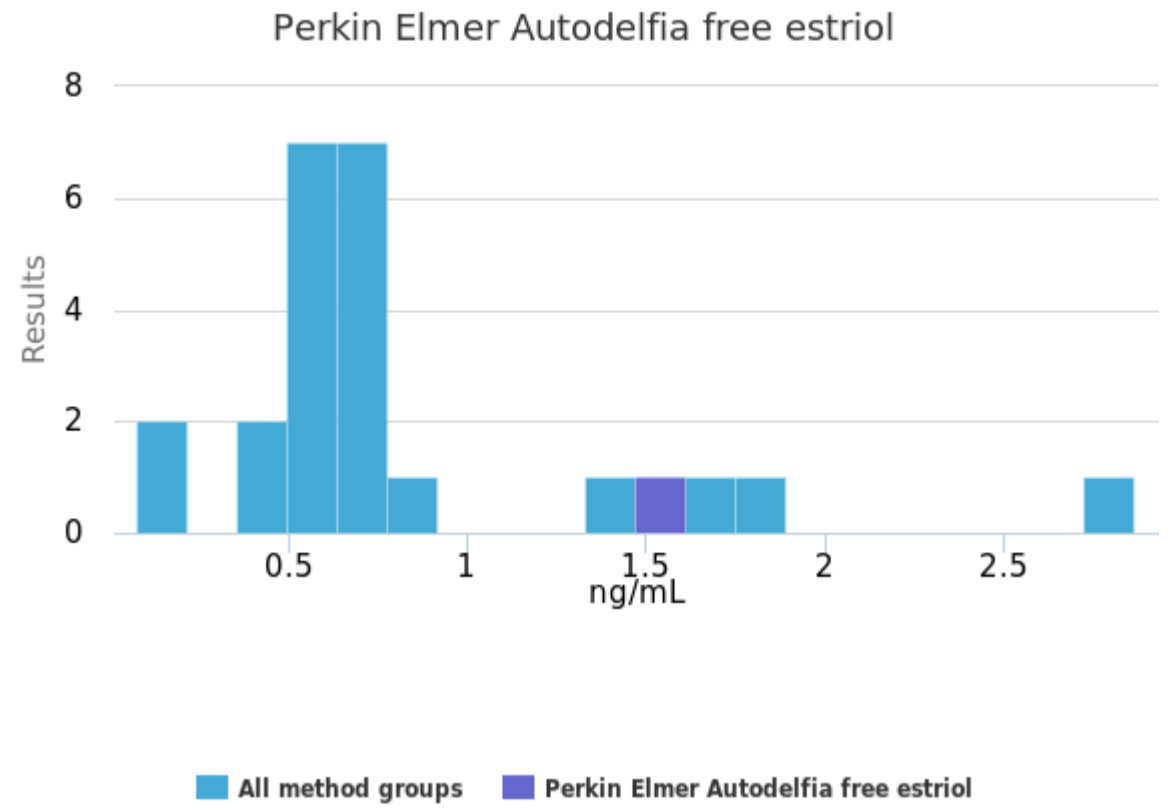
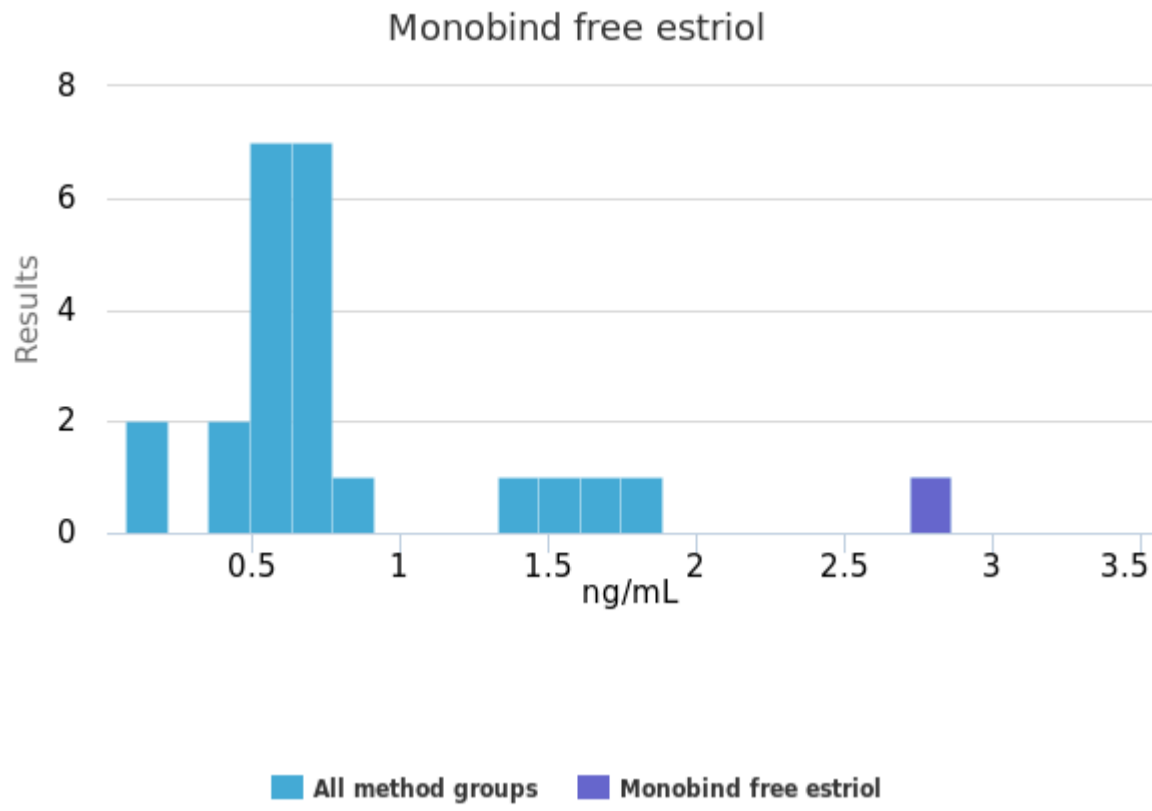


Sample S001 | unconjugated Estriol, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Beckman Coulter unconjugated estriol	0.60	0.60	0.03	5.2	0.02	0.58	0.62	-	2
BRAHMS free estriol KRYPTOR	-	-	-	-	-	0.14	0.14	-	1
Demeditec estriol unconjugated	-	-	-	-	-	1.40	1.40	-	1
DRG Diagnostics Free Estriol	-	-	-	-	-	1.80	1.80	-	1
Monobind free estriol	-	-	-	-	-	2.86	2.86	-	1
Perkin Elmer Autodelphia free estriol	-	-	-	-	-	1.54	1.54	-	1
Shenzen YHLO Unconjugated estriol	-	-	-	-	-	0.08	0.08	-	1
Siemens Immulite 2000 Unconjugated estriol	0.62	0.60	0.11	17.6	0.03	0.47	0.84	1	12
Snibe Diagnostics CLIA free estriol	0.73	0.73	<0.01	1.2	<0.01	0.72	0.73	-	2
XEMA Free estriol	0.58	0.58	0.10	16.4	0.07	0.52	0.65	-	2
All	0.75	0.65	0.43	58.0	0.09	0.08	1.80	1	24

Sample S001 | unconjugated Estriol, ng/mL | histogram summaries in LabScala

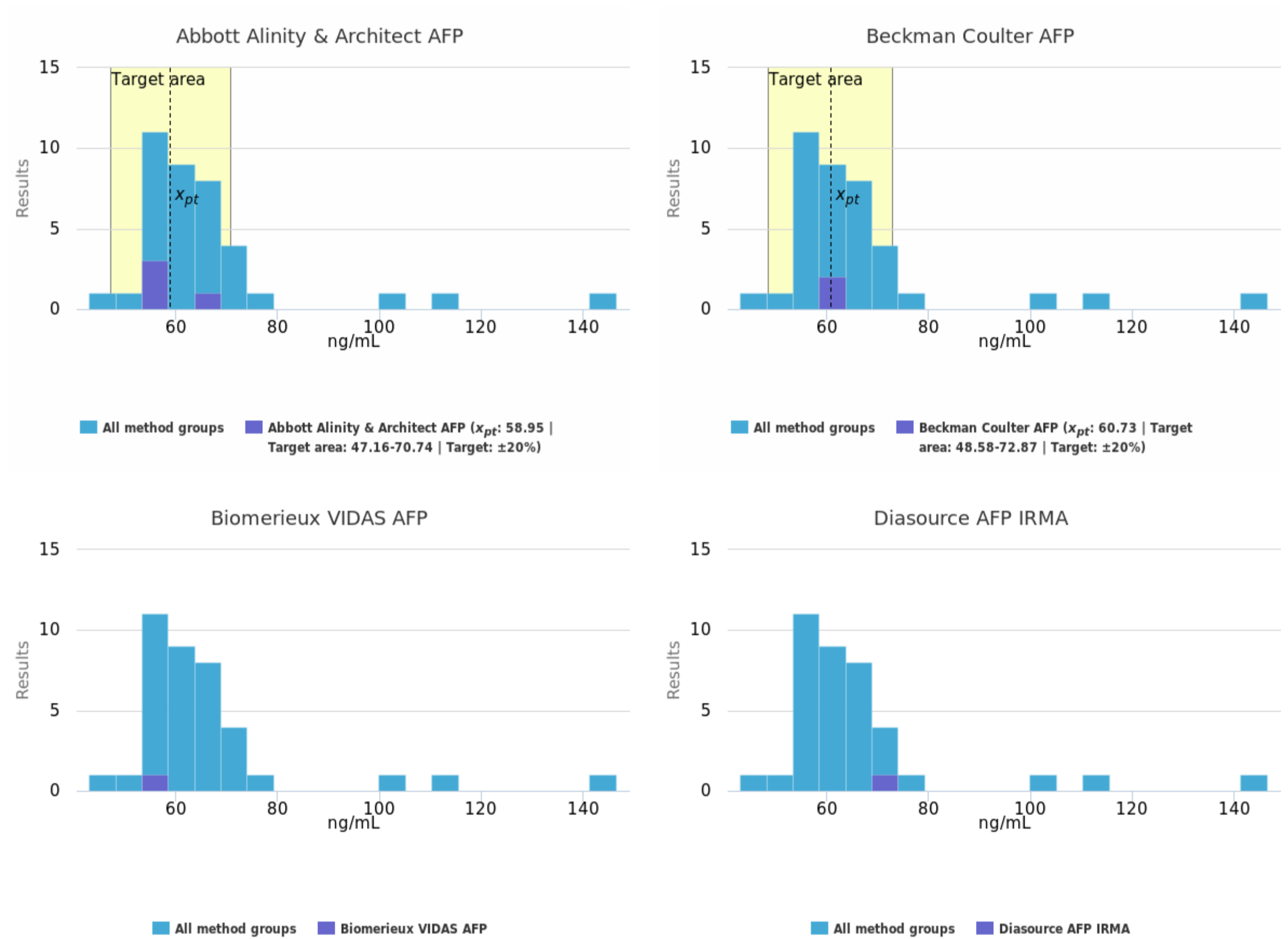


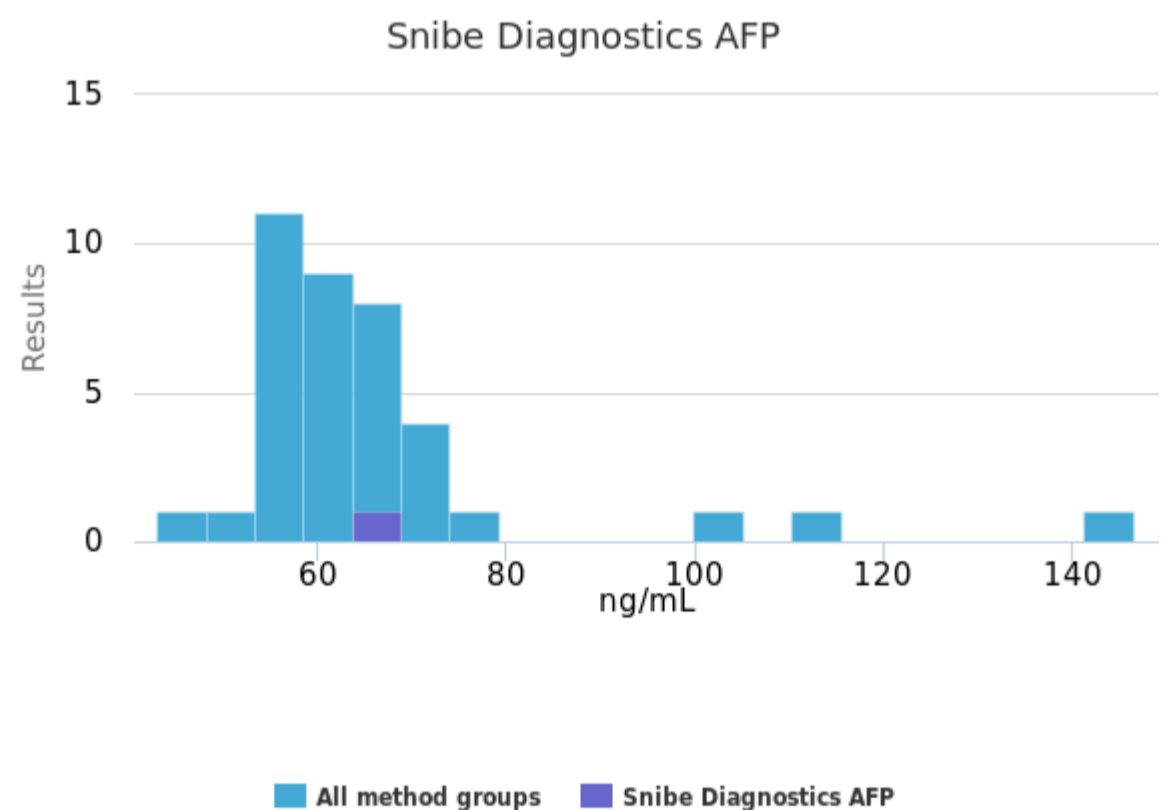
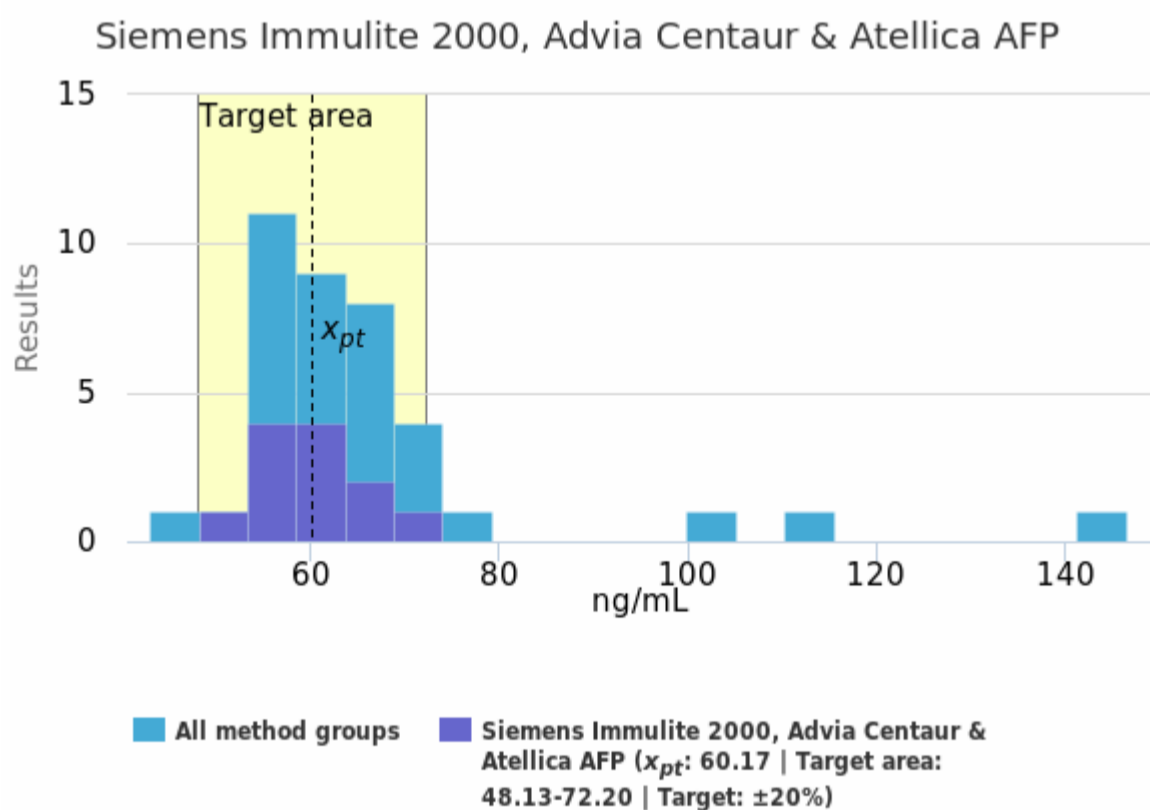
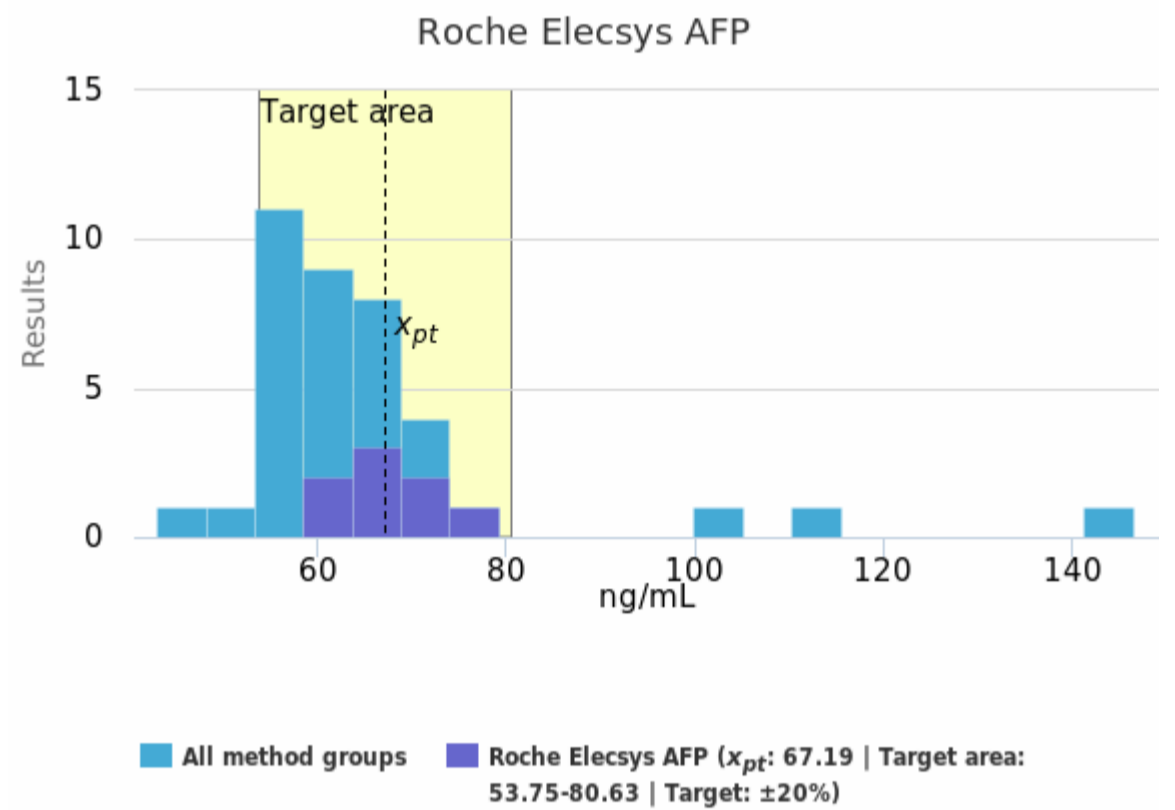
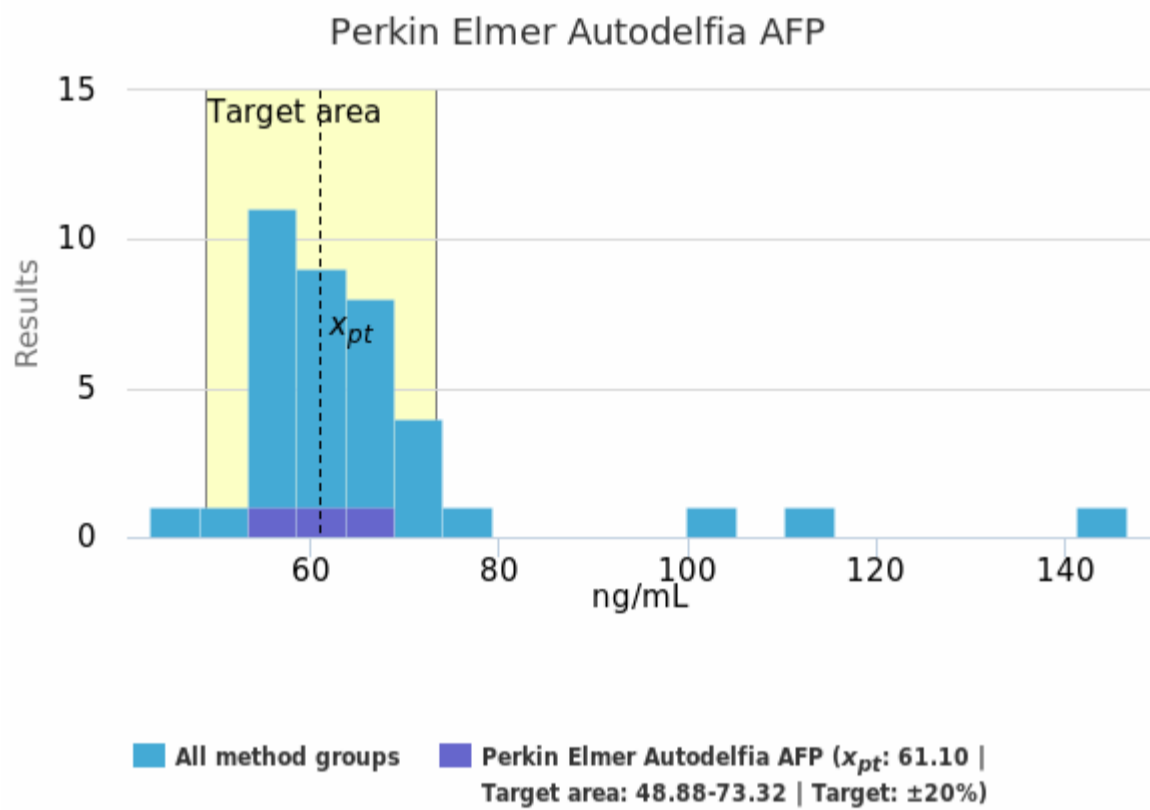
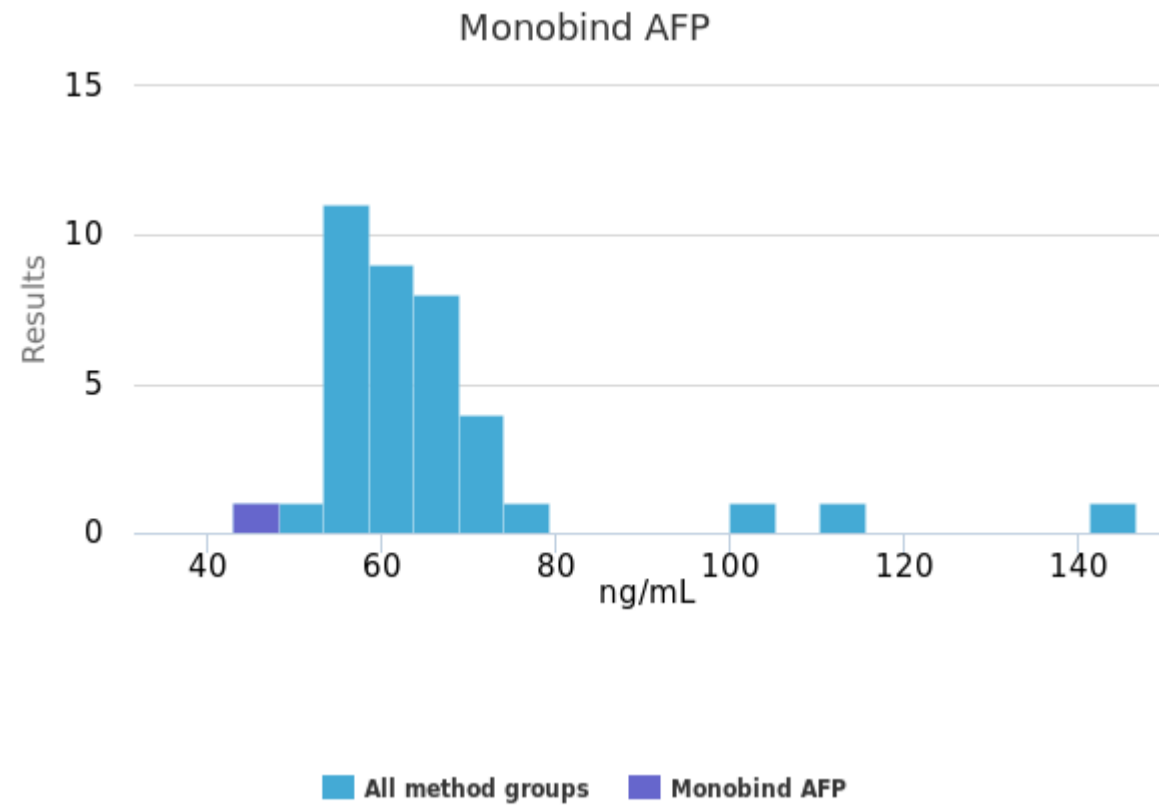
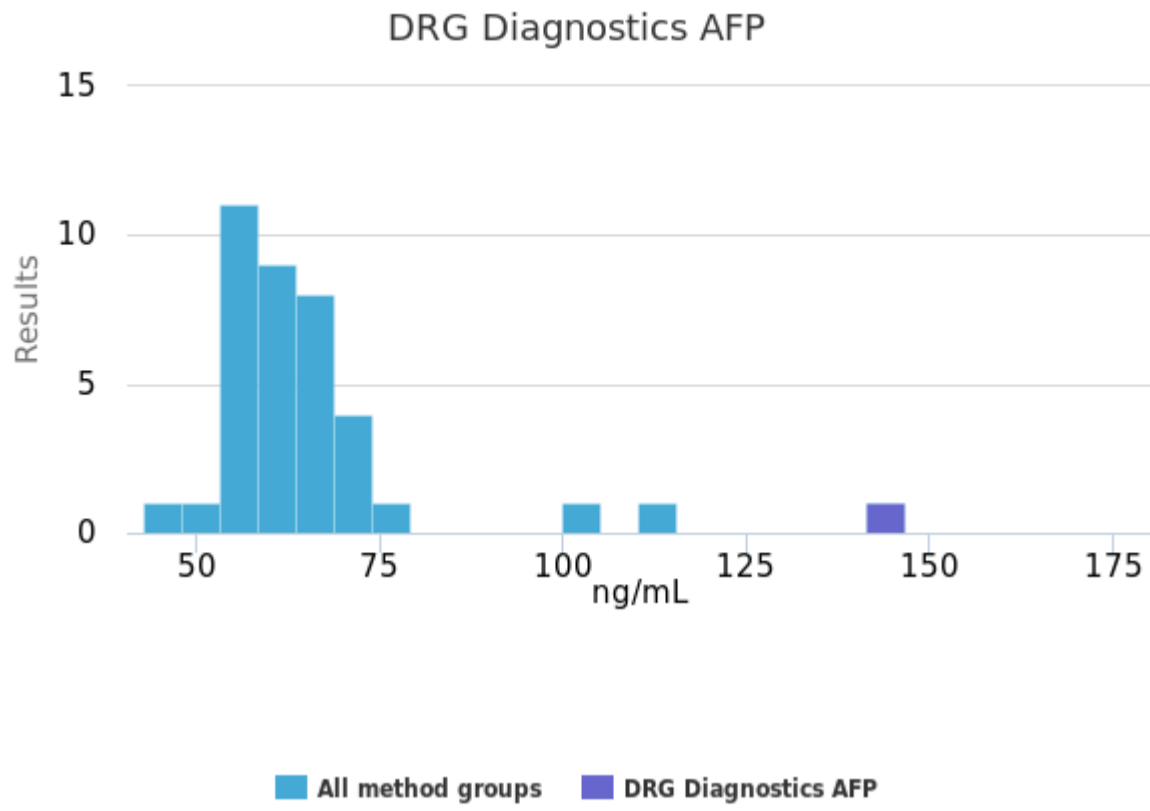


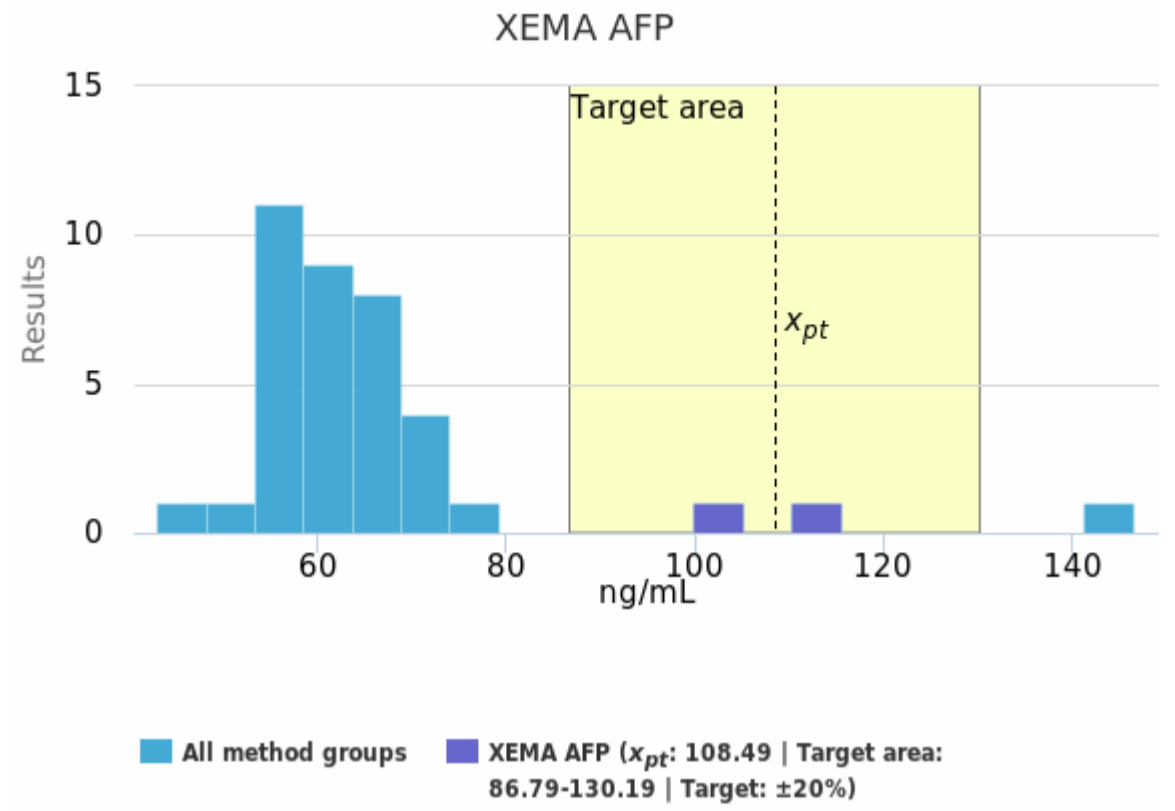
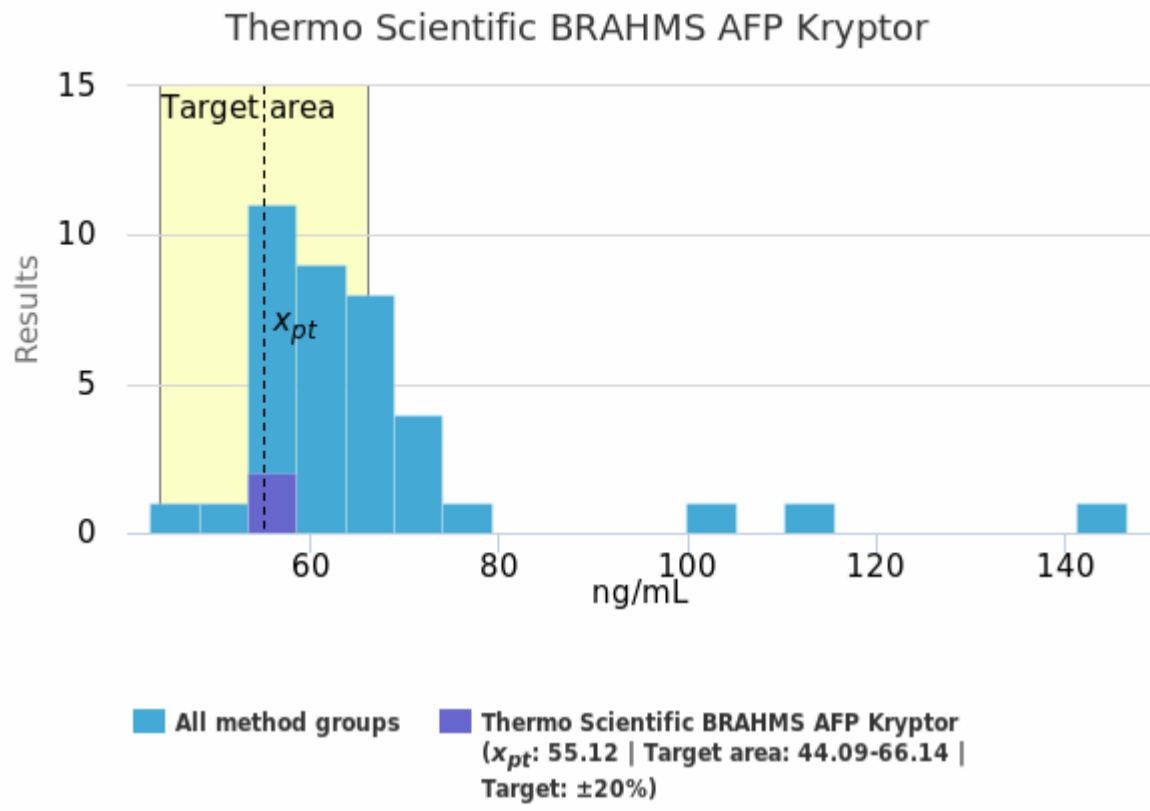
Sample S002 | AFP, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Alinity & Architect AFP	58.95	58.06	3.67	6.2	1.83	55.54	64.12	-	4
Beckman Coulter AFP	60.73	60.73	0.88	1.5	0.63	60.10	61.35	-	2
Biomerieux VIDAS AFP	-	-	-	-	-	55.23	55.23	-	1
Diasource AFP IRMA	-	-	-	-	-	73.57	73.57	-	1
DRG Diagnostics AFP	-	-	-	-	-	146.53	146.53	-	1
Monobind AFP	-	-	-	-	-	43.00	43.00	-	1
Perkin Elmer Autodelphia AFP	61.10	63.50	4.61	7.5	2.66	55.78	64.01	-	3
Roche Elecsys AFP	67.19	65.92	4.78	7.1	1.69	61.24	74.49	-	8
Siemens Immulite 2000, Advia Centaur & Atellica AFP	60.17	60.07	5.10	8.5	1.47	52.76	69.10	-	12
Snibe Diagnostics AFP	-	-	-	-	-	66.80	66.80	-	1
Thermo Scientific BRAHMS AFP Kryptor	55.12	55.12	1.11	2.0	0.79	54.33	55.90	-	2
XEMA AFP	108.49	108.49	9.51	8.8	6.73	101.76	115.22	-	2
All	63.94	61.35	12.65	19.8	2.08	43.00	115.22	1	38

Sample S002 | AFP, ng/mL | histogram summaries in LabScala



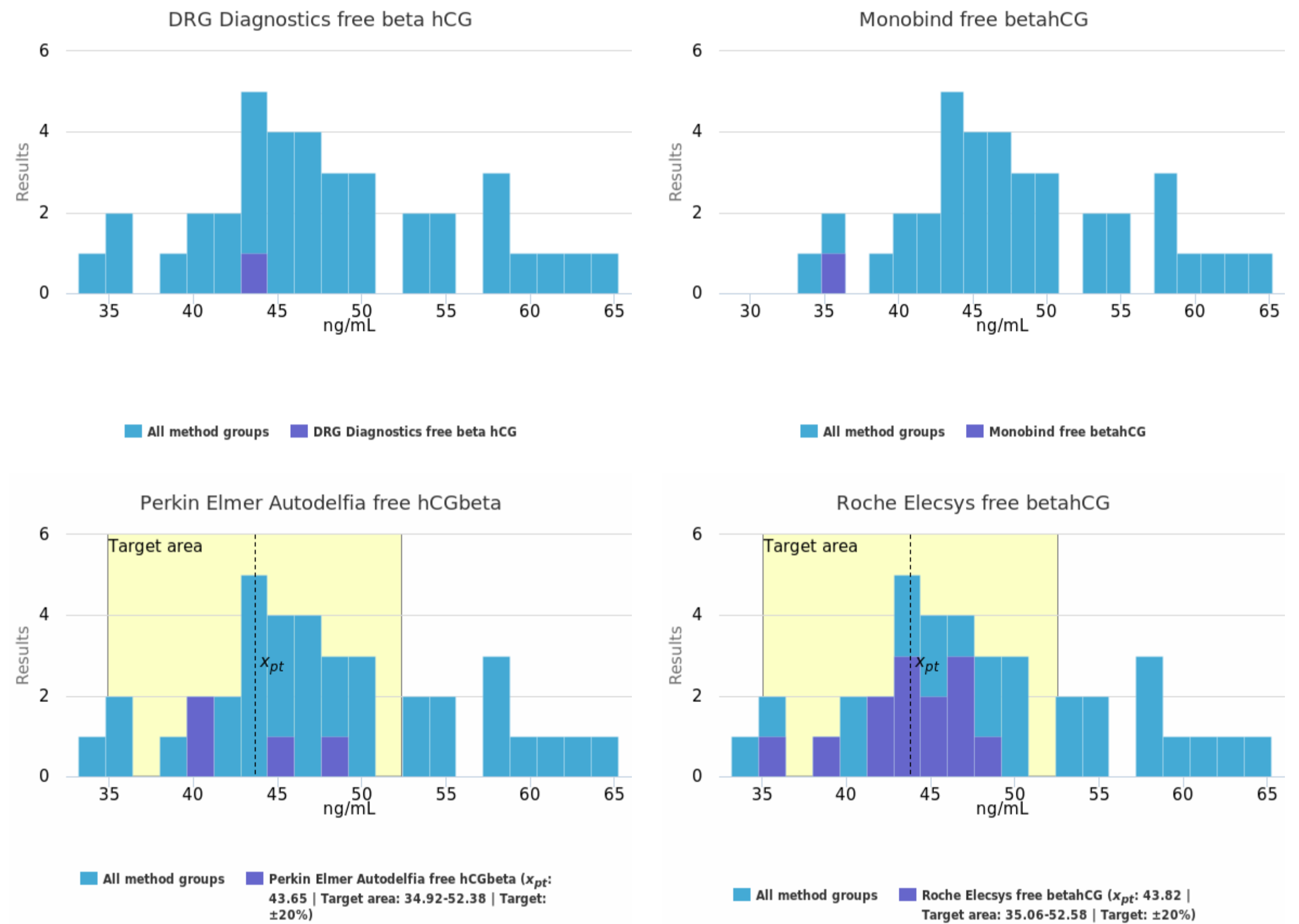




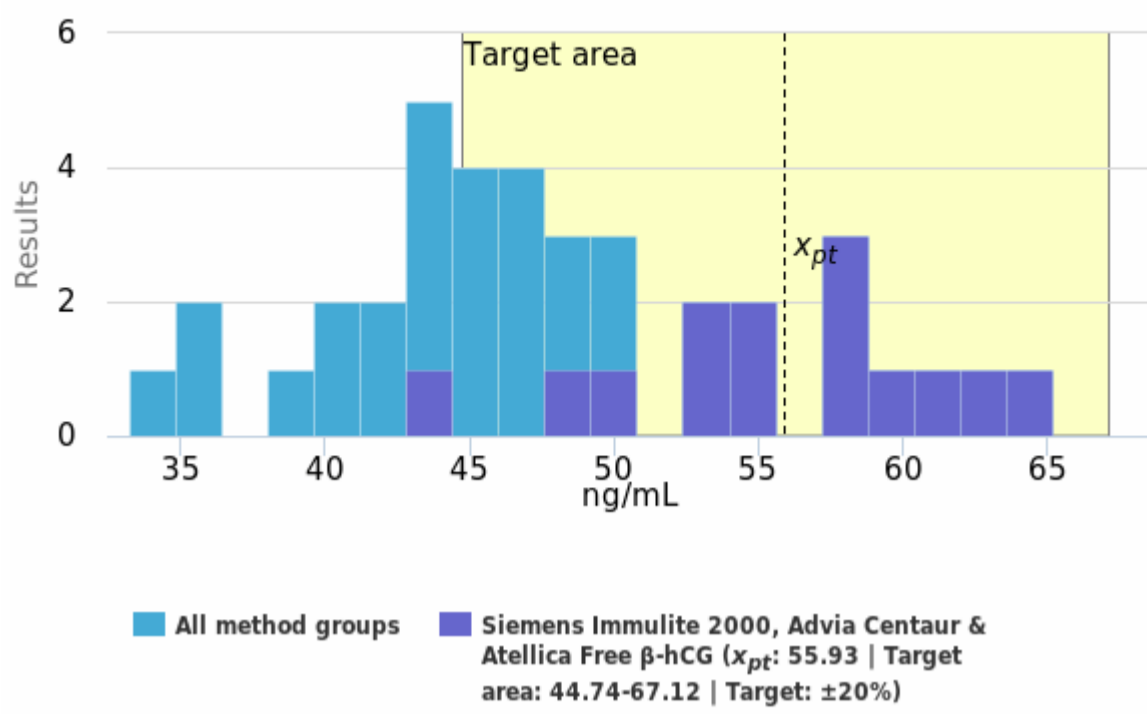
Sample S002 | free b-hCG, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics free beta hCG	-	-	-	-	-	43.10	43.10	-	1
Monobind free betahCG	-	-	-	-	-	36.20	36.20	-	1
Perkin Elmer Autodelfia free hCGbeta	43.65	43.00	3.91	9.0	1.95	40.10	48.50	-	4
Roche Elecsys free betahCG	43.82	43.85	3.43	7.8	0.95	36.27	48.50	-	13
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	55.93	56.75	5.92	10.6	1.58	44.28	65.20	-	14
Thermo Scientific BRAHMS Free betahCG Kryptor	47.89	48.18	1.98	4.1	0.99	45.58	49.60	-	4
XEMA Free beta hCG	-	-	-	-	-	33.22	33.22	-	1
All	48.19	46.74	7.74	16.1	1.26	33.22	65.20	-	38

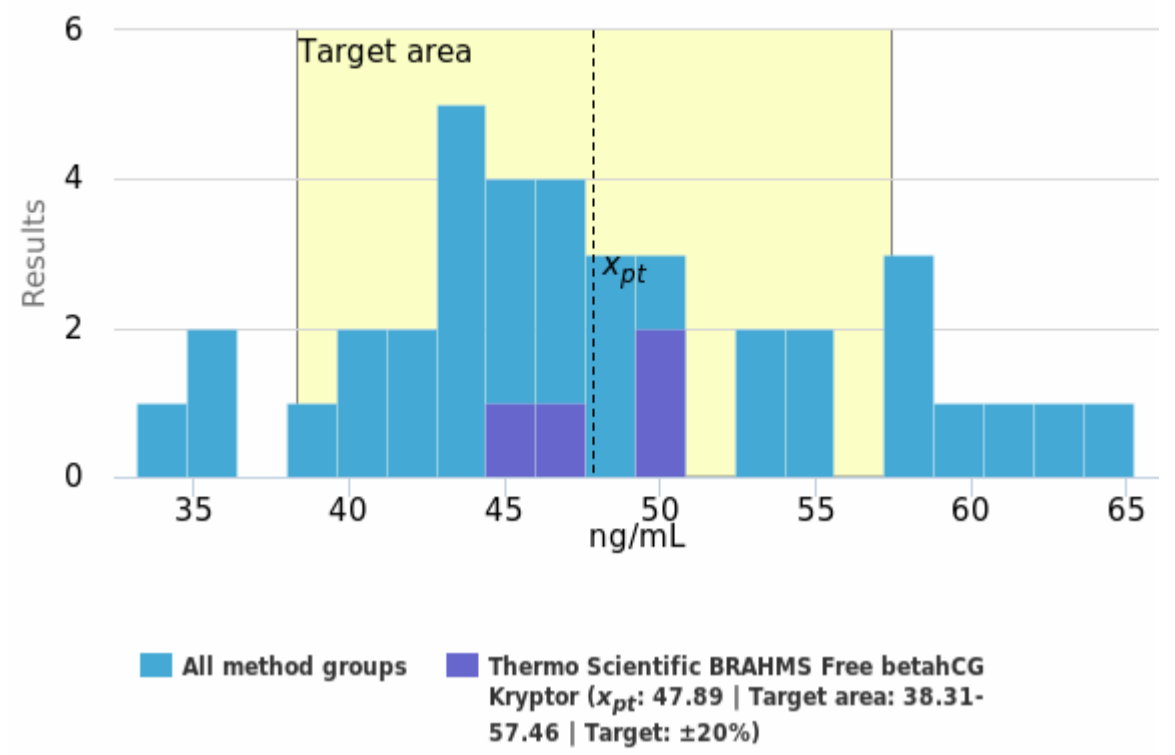
Sample S002 | free b-hCG, ng/mL | histogram summaries in LabScala



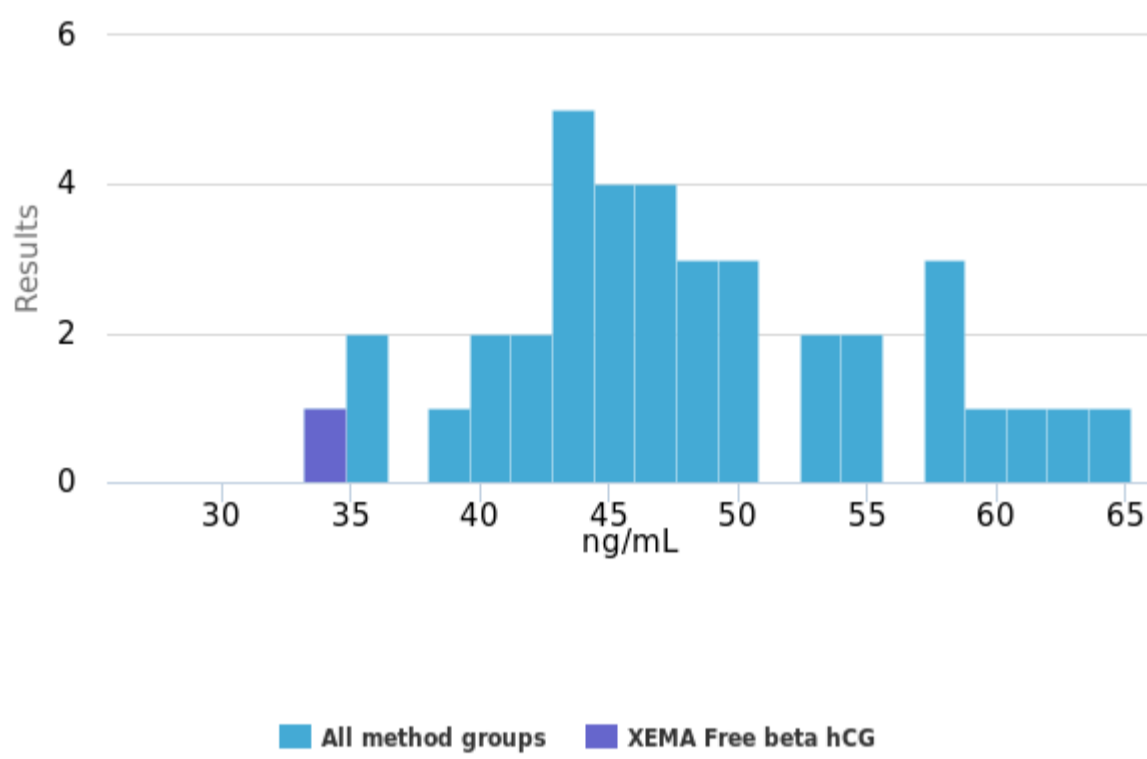
Siemens Immulite 2000, Advia Centaur & Atellica Free β -hCG



Thermo Scientific BRAHMS Free betahCG Kryptor



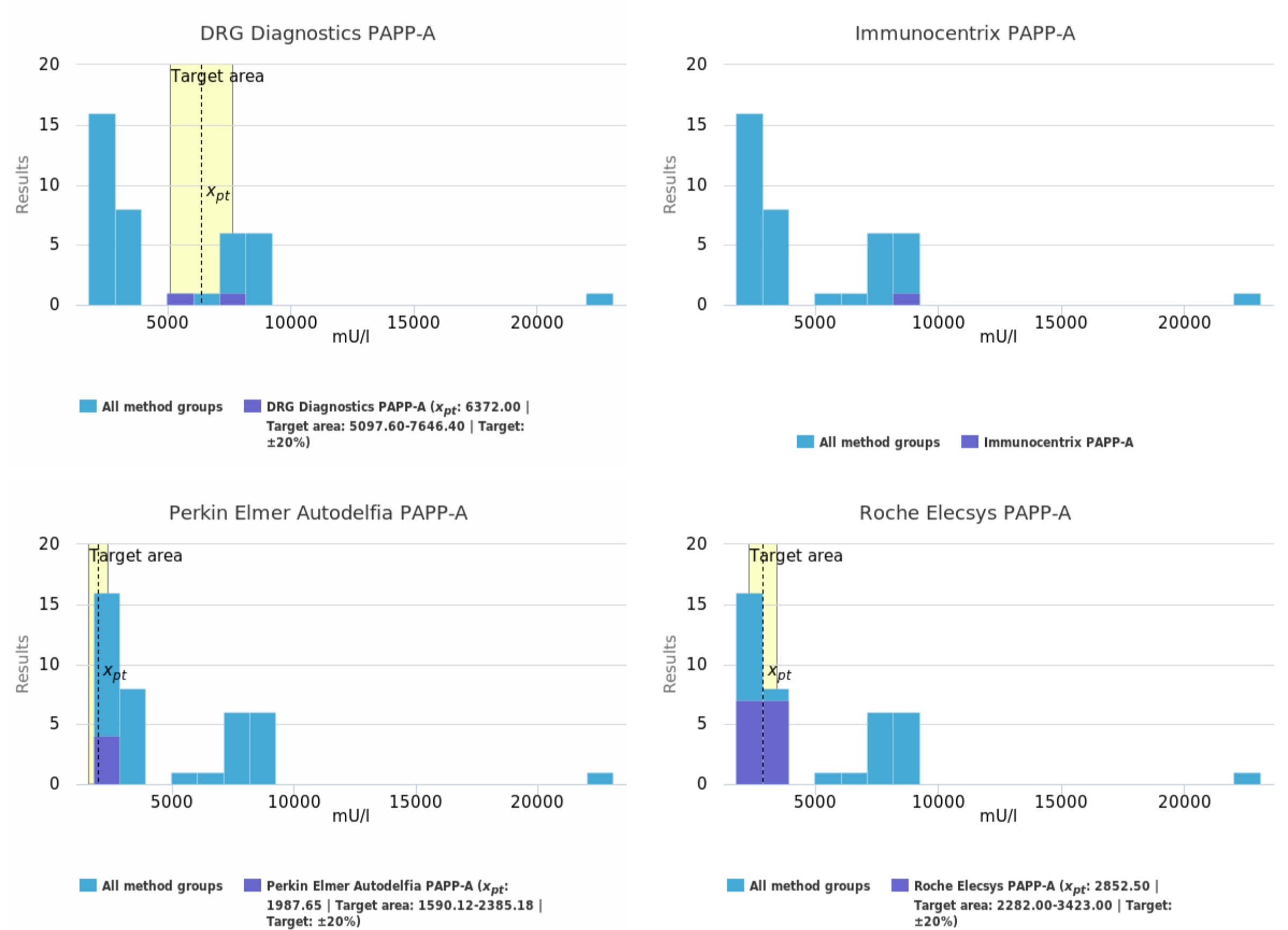
XEMA Free beta hCG

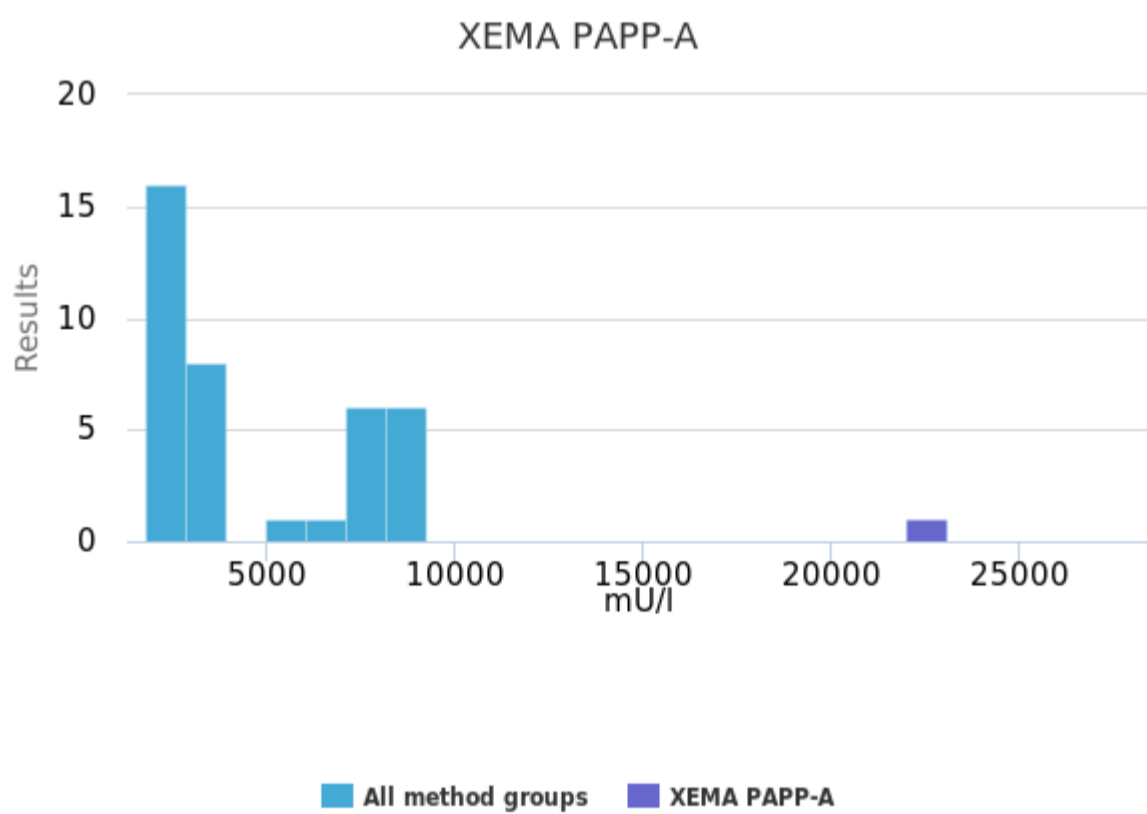
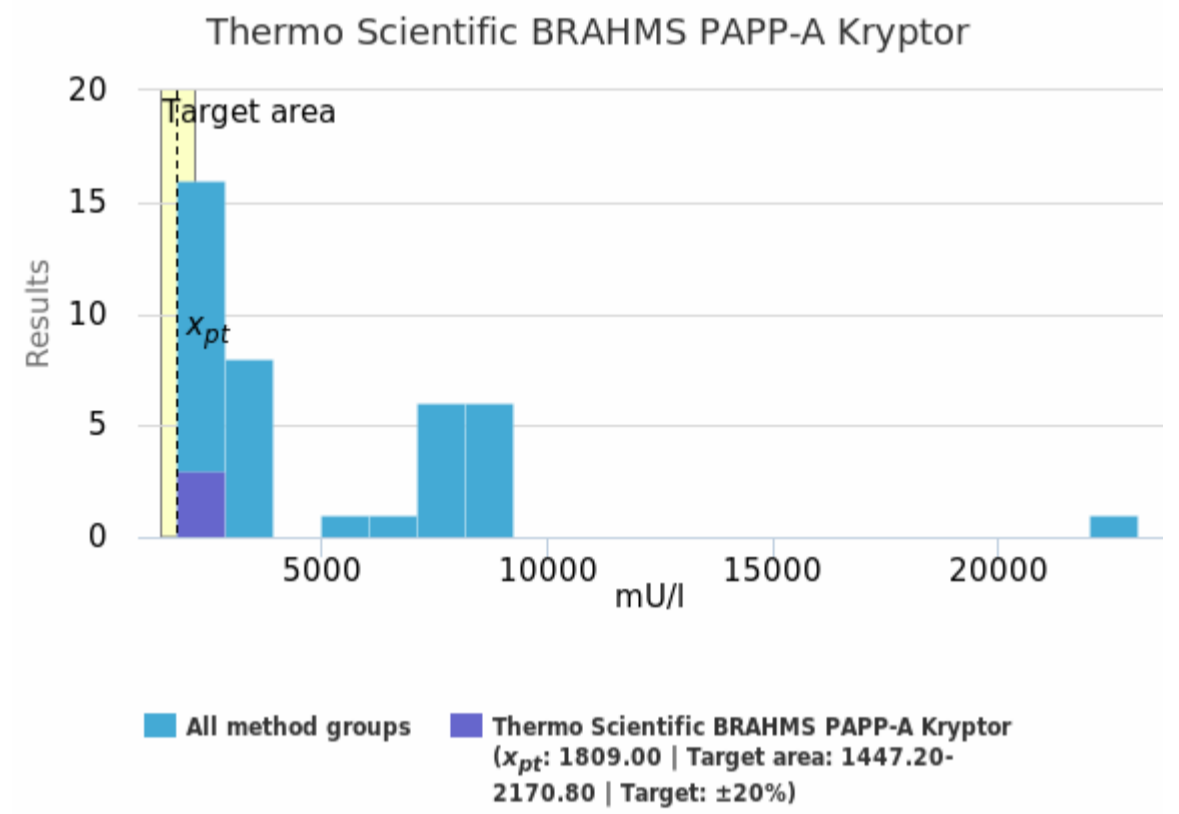
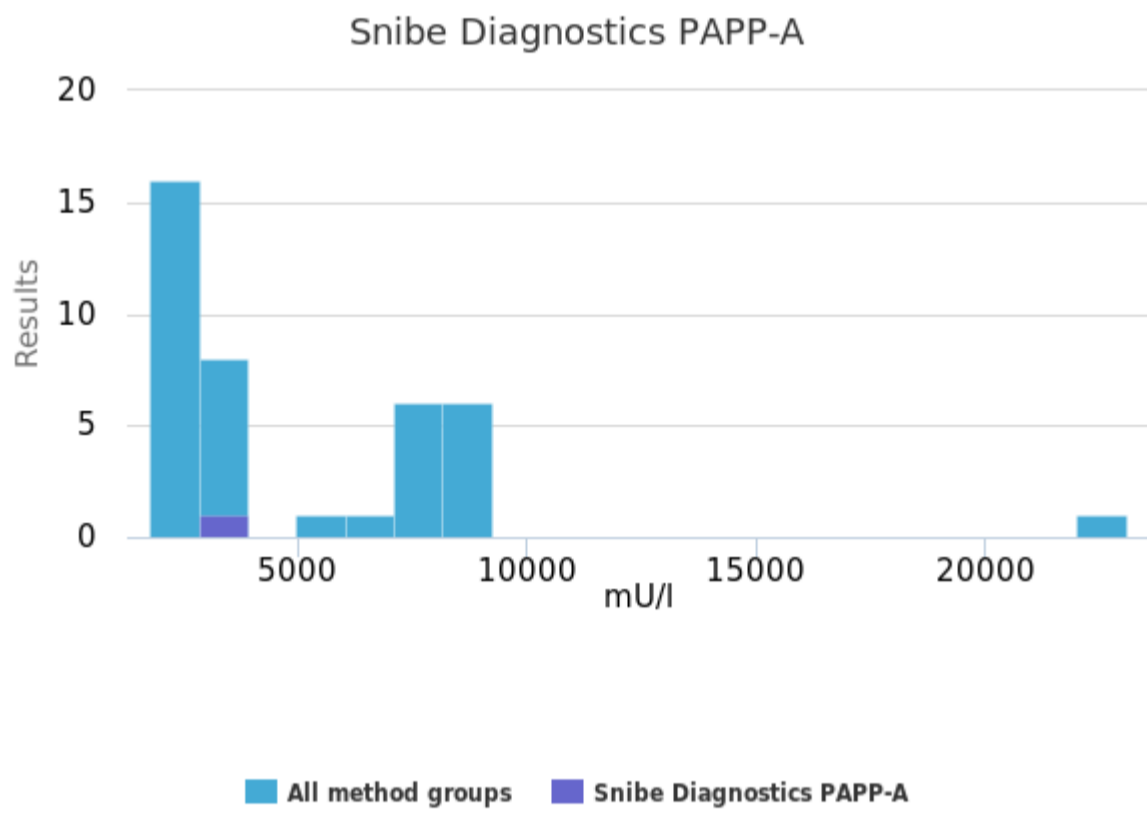
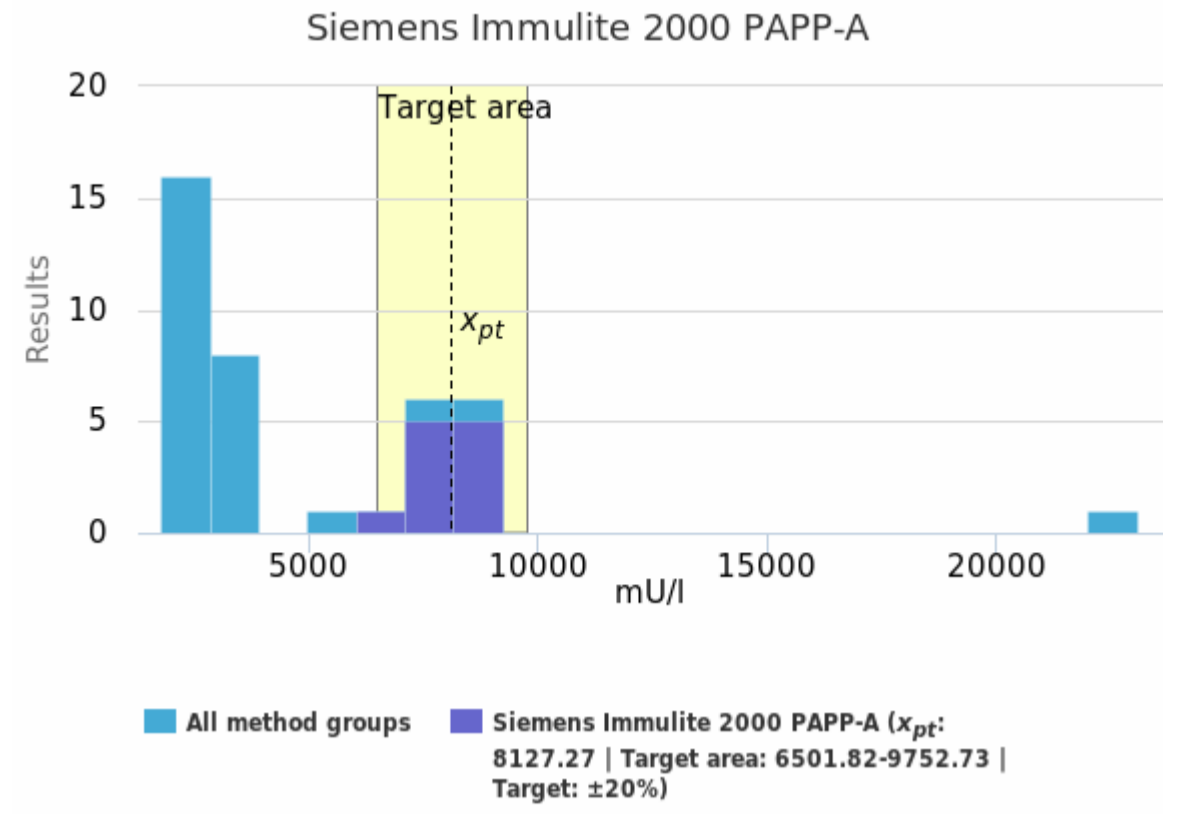
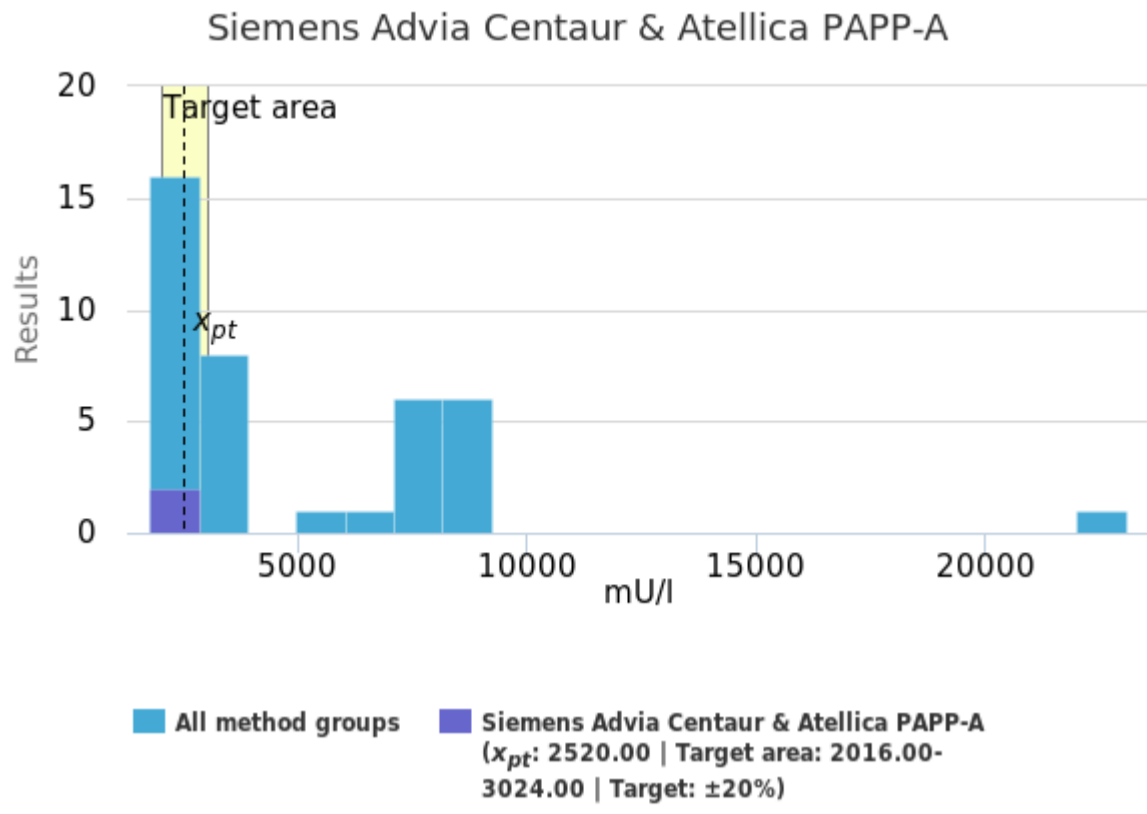


Sample S002 | PAPP-A, mU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics PAPP-A	6372.00	6372.00	1489.17	23.4	1053.00	5319.00	7425.00	-	2
Immunocentrix PAPP-A	-	-	-	-	-	8730.00	8730.00	-	1
Perkin Elmer Autodelfia PAPP-A	1987.65	1988.25	98.42	5.0	49.21	1894.10	2080.00	-	4
Roche Elecsys PAPP-A	2852.50	2839.50	219.23	7.7	58.59	2540.00	3223.00	-	14
Siemens Advia Centaur & Atellica PAPP-A	2520.00	2520.00	28.28	1.1	20.00	2500.00	2540.00	-	2
Siemens Immulite 2000 PAPP-A	8127.27	8110.00	758.38	9.3	228.66	6660.00	9120.00	-	11
Snibe Diagnostics PAPP-A	-	-	-	-	-	3771.00	3771.00	-	1
Thermo Scientific BRAHMS PAPP-A Kryptor	1809.00	1803.00	33.41	1.8	19.29	1779.00	1845.00	-	3
XEMA PAPP-A	-	-	-	-	-	23085.00	23085.00	-	1
All	4552.57	3006.00	2708.82	59.5	439.43	1779.00	9120.00	1	39

Sample S002 | PAPP-A, mU/l histogram summaries in LabScala

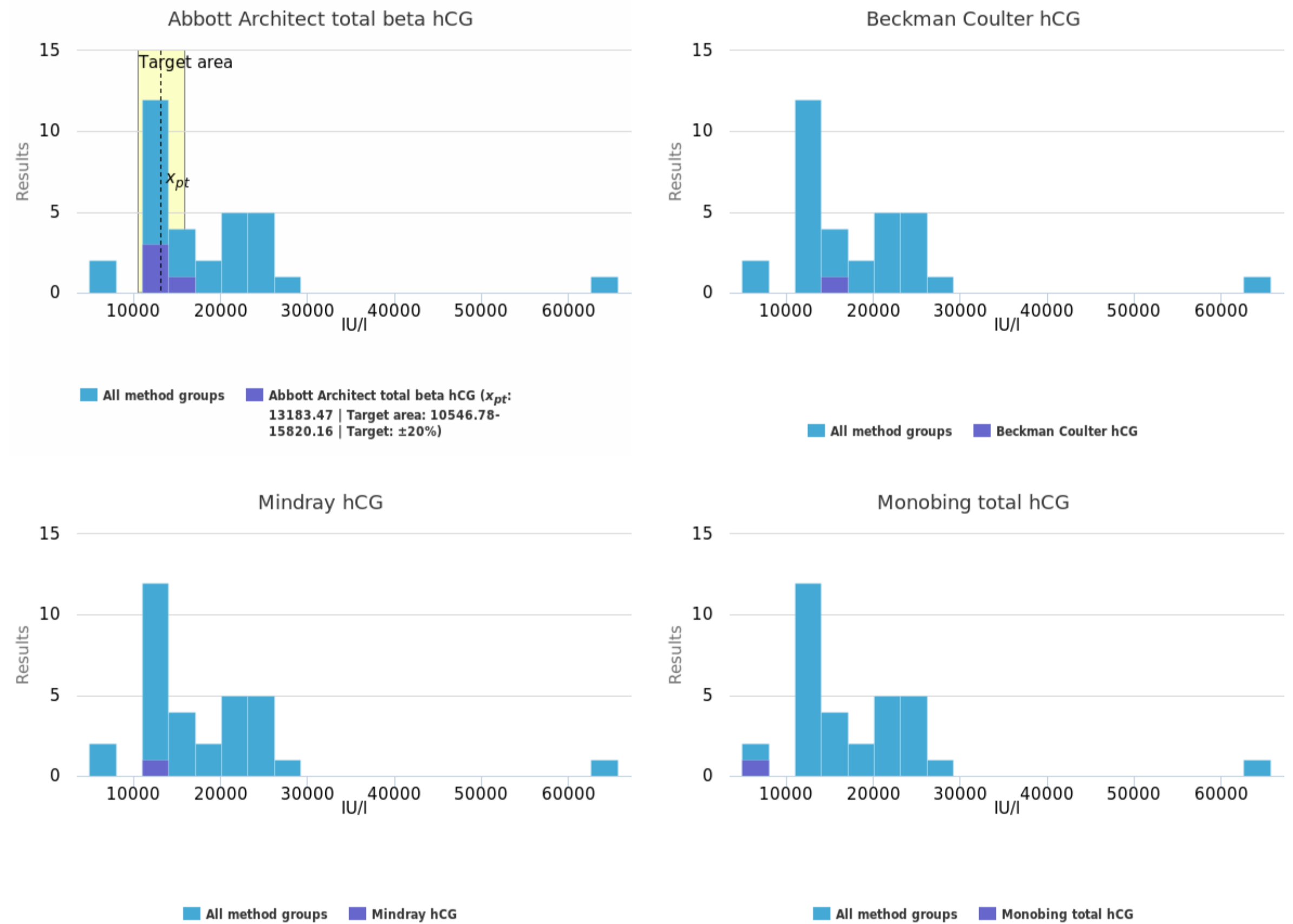


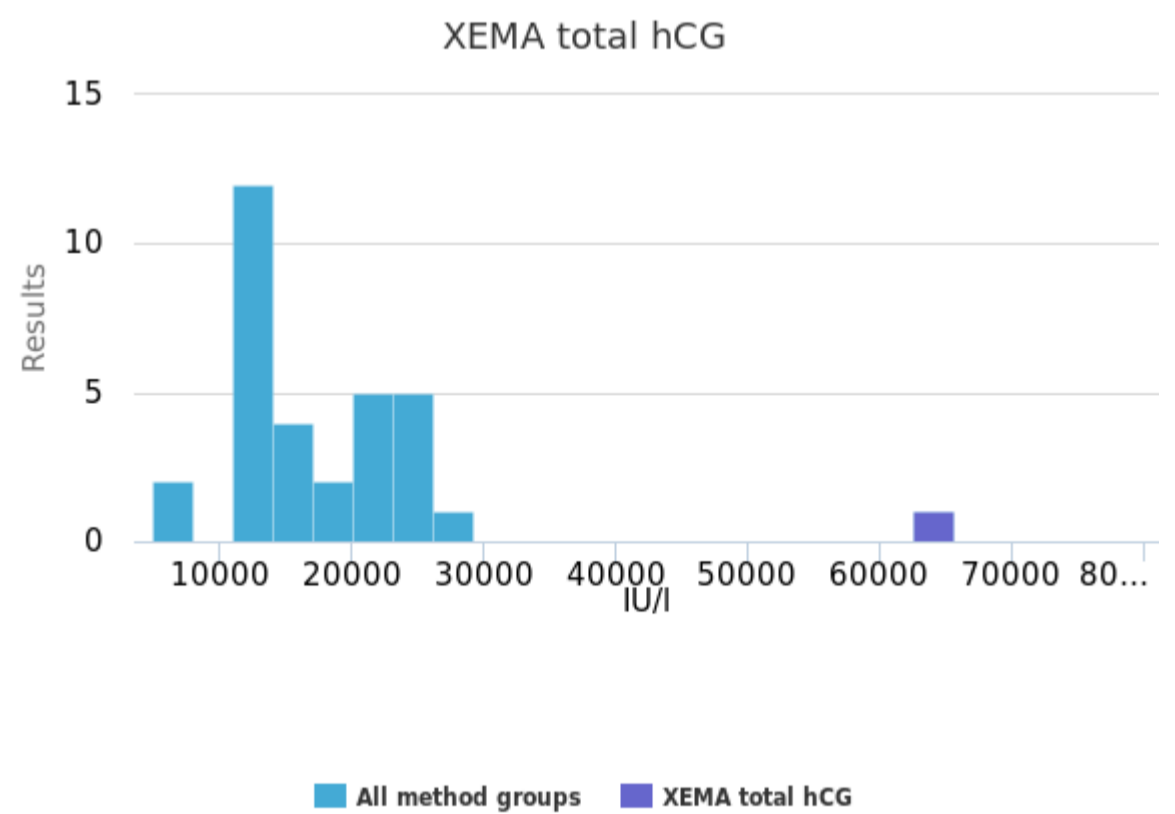
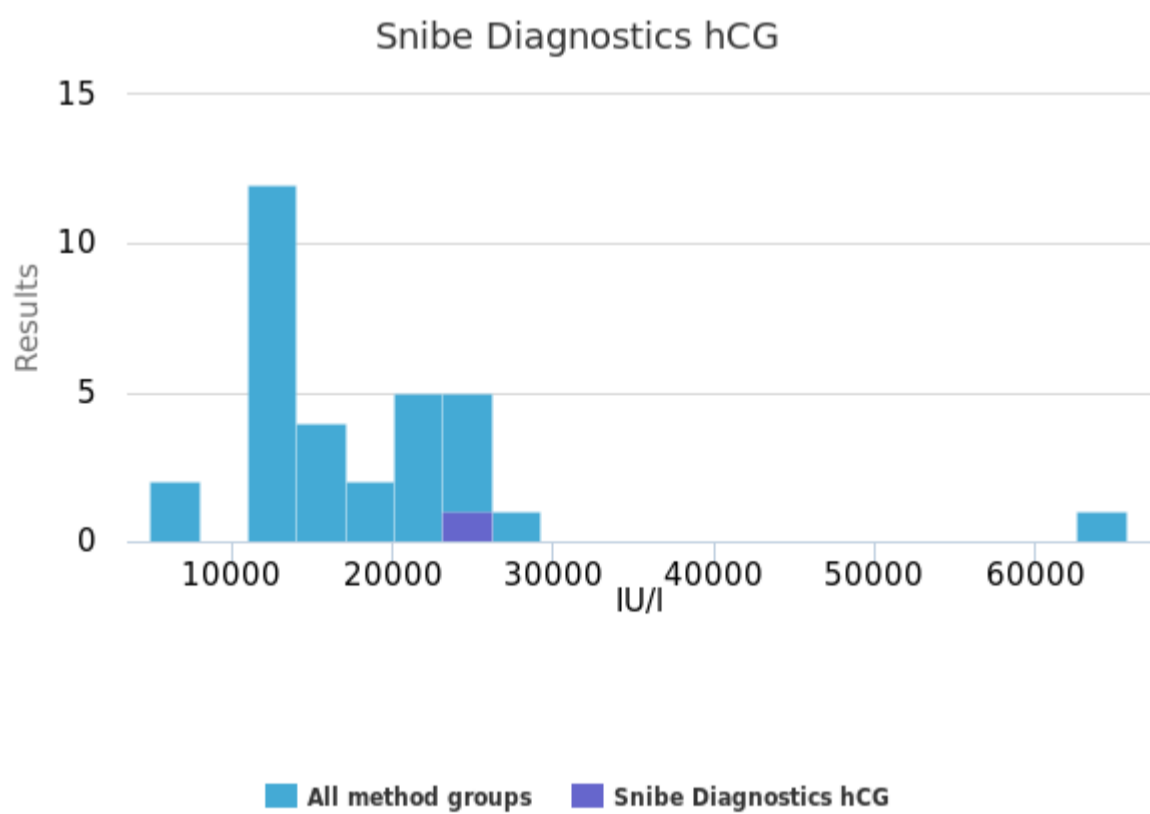
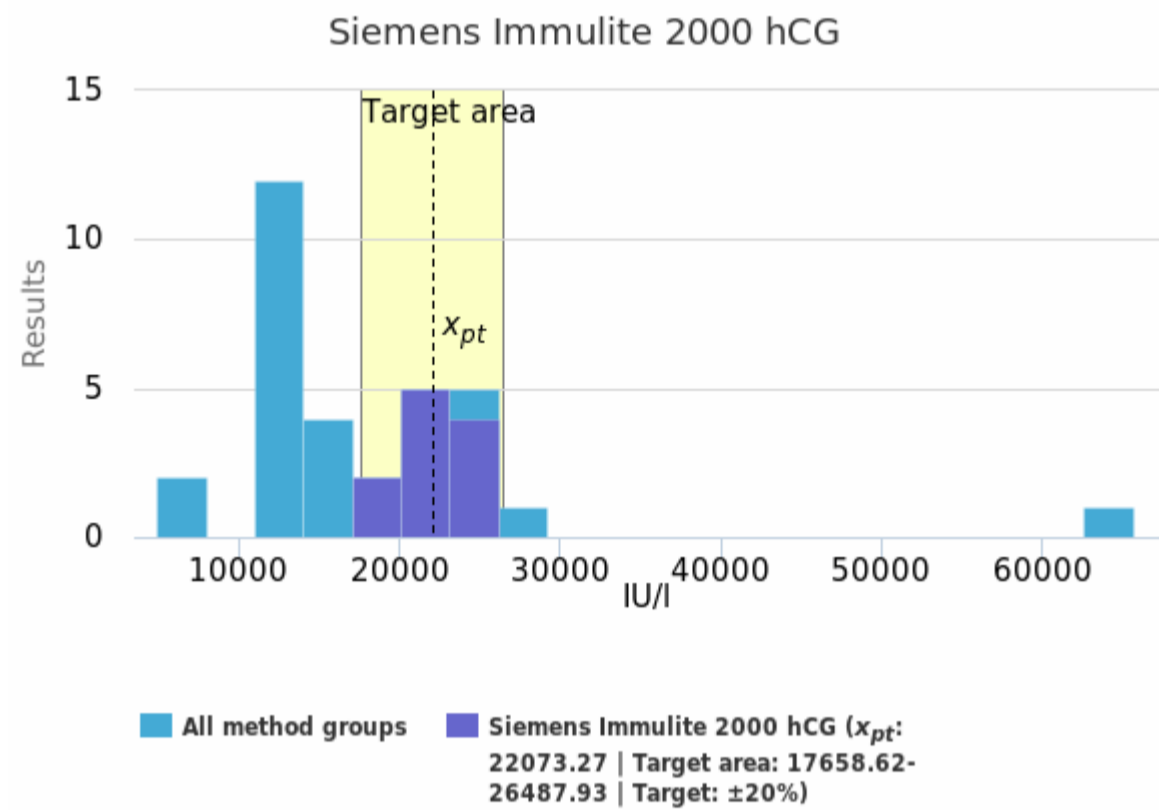
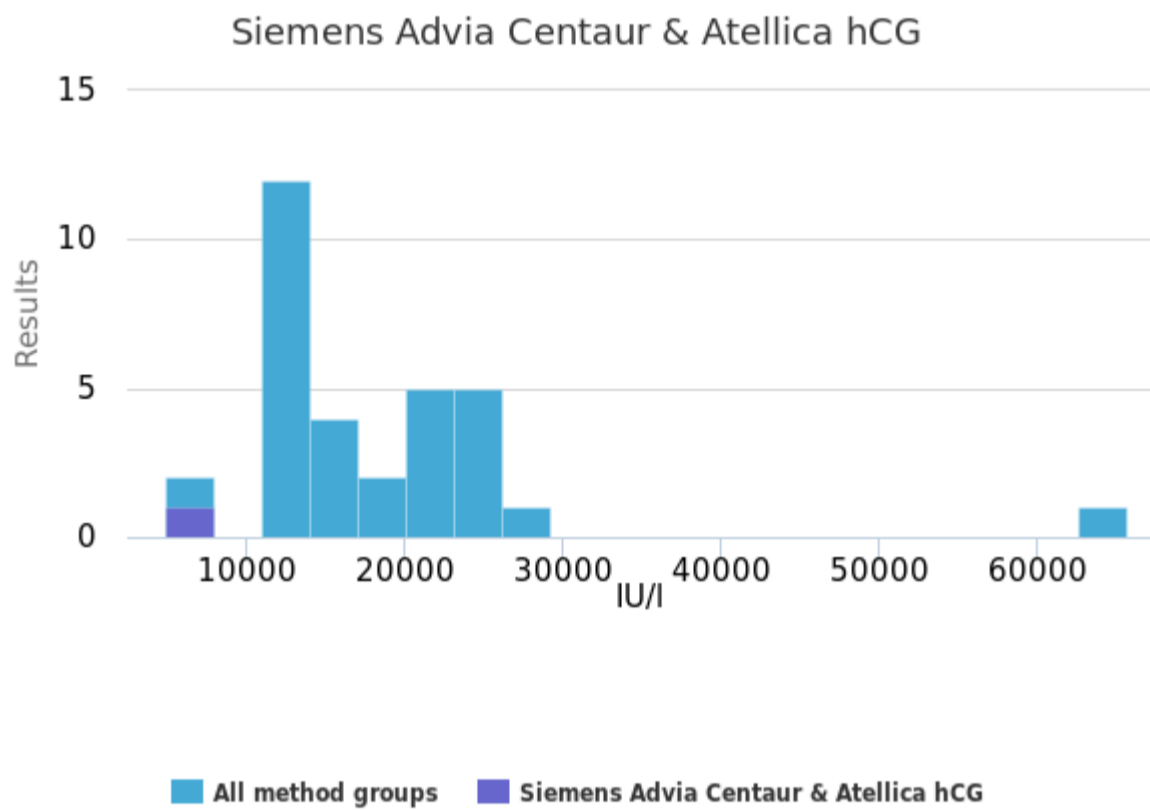
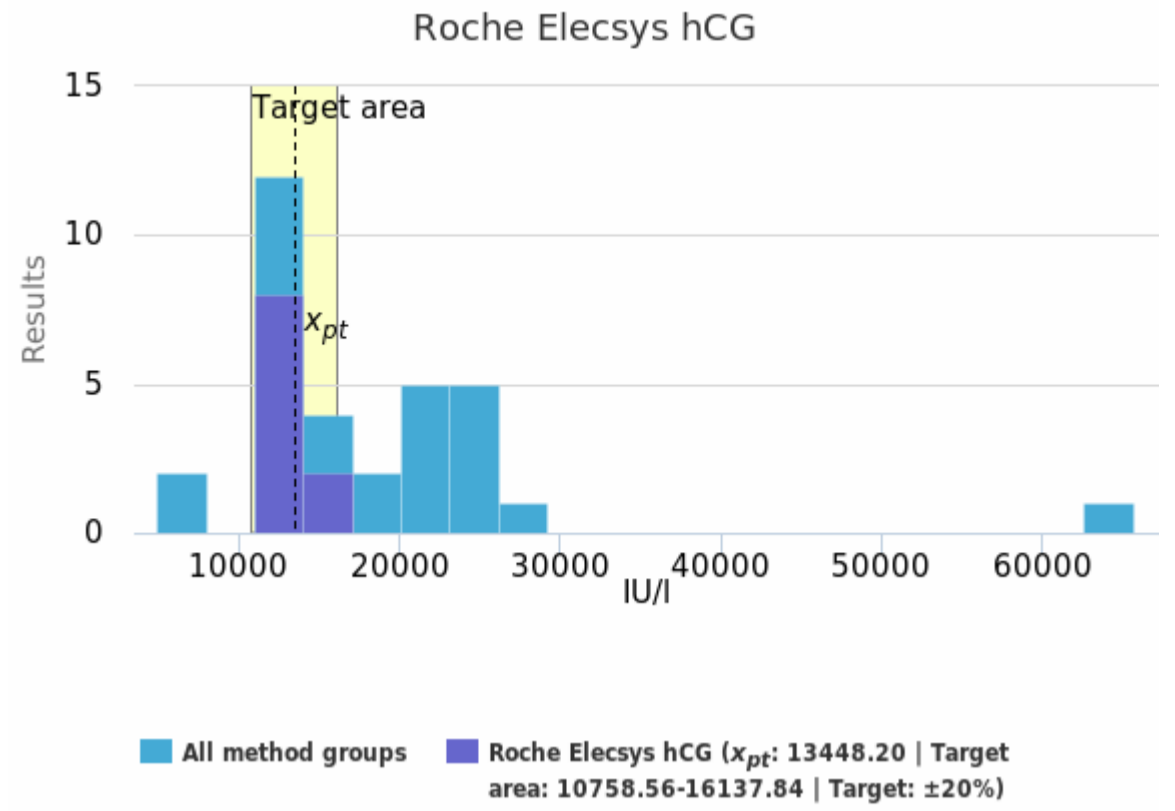
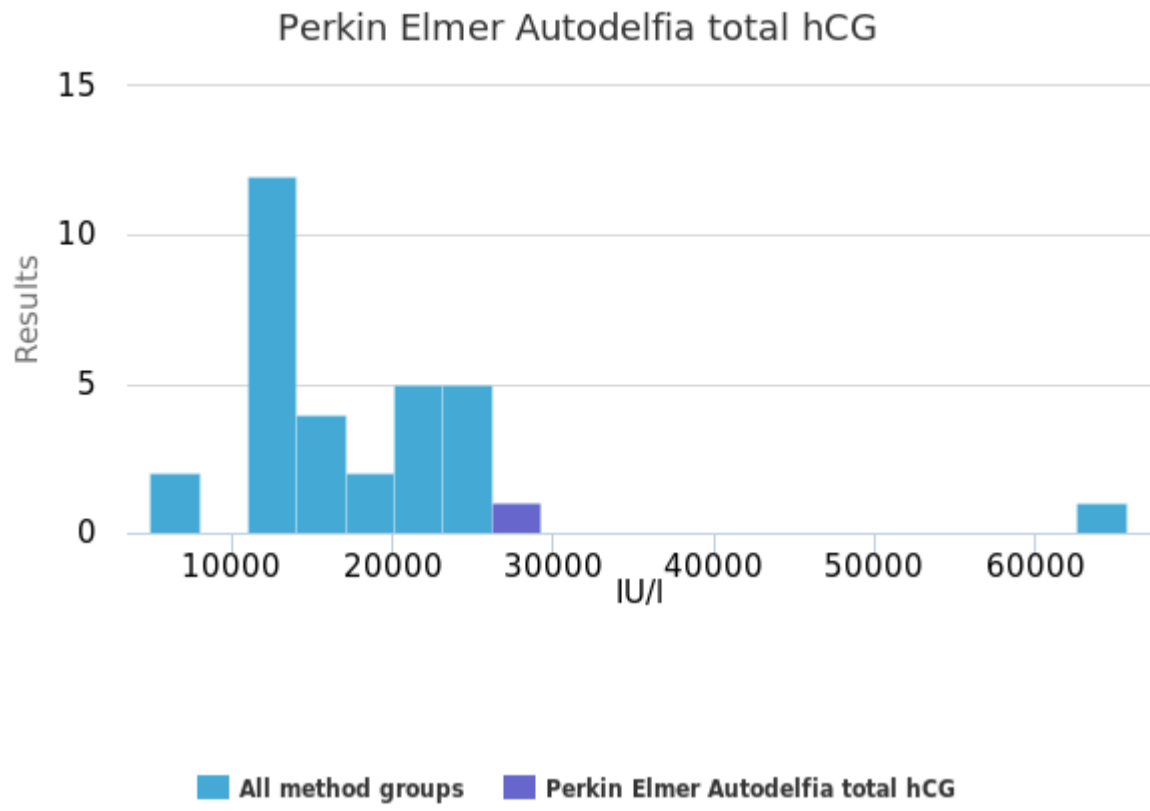


Sample S002 | total-hCG, IU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Architect total beta hCG	13183.47	12944.08	594.43	4.5	297.21	12778.38	14067.34	-	4
Beckman Coulter hCG	-	-	-	-	-	15281.00	15281.00	-	1
Mindray hCG	-	-	-	-	-	13400.00	13400.00	-	1
Monobing total hCG	-	-	-	-	-	6330.00	6330.00	-	1
Perkin Elmer Autodelphia total hCG	-	-	-	-	-	28560.00	28560.00	-	1
Roche Elecsys hCG	13448.20	13462.50	1206.29	9.0	381.46	11830.00	15635.00	-	10
Siemens Advia Centaur & Atellica hCG	-	-	-	-	-	4937.00	4937.00	-	1
Siemens Immulite 2000 hCG	22073.27	22438.00	1919.66	8.7	578.80	18318.00	24127.00	-	11
Snibe Diagnostics hCG	-	-	-	-	-	25109.00	25109.00	-	1
XEMA total hCG	-	-	-	-	-	65686.00	65686.00	-	1
All	16891.58	14740.00	5752.82	34.1	1033.24	4937.00	28560.00	1	32

Sample S002 | total-hCG, IU/l histogram summaries in LabScala

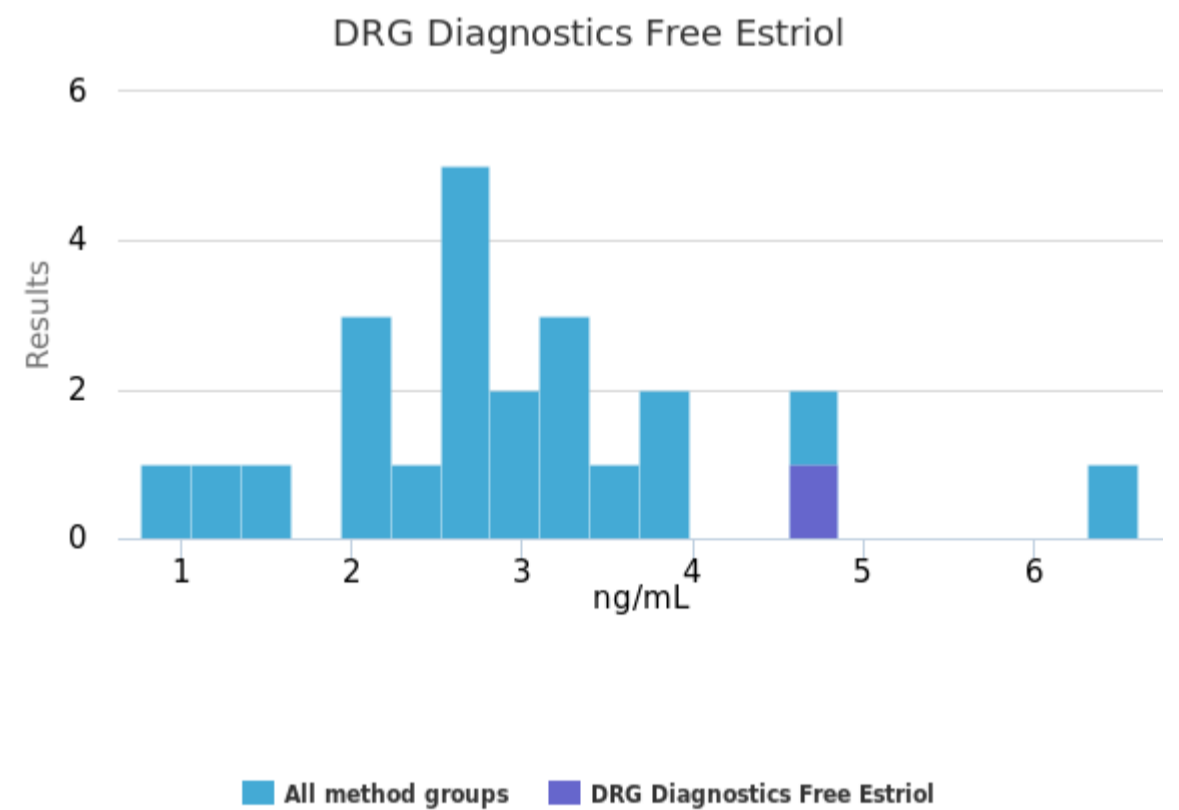
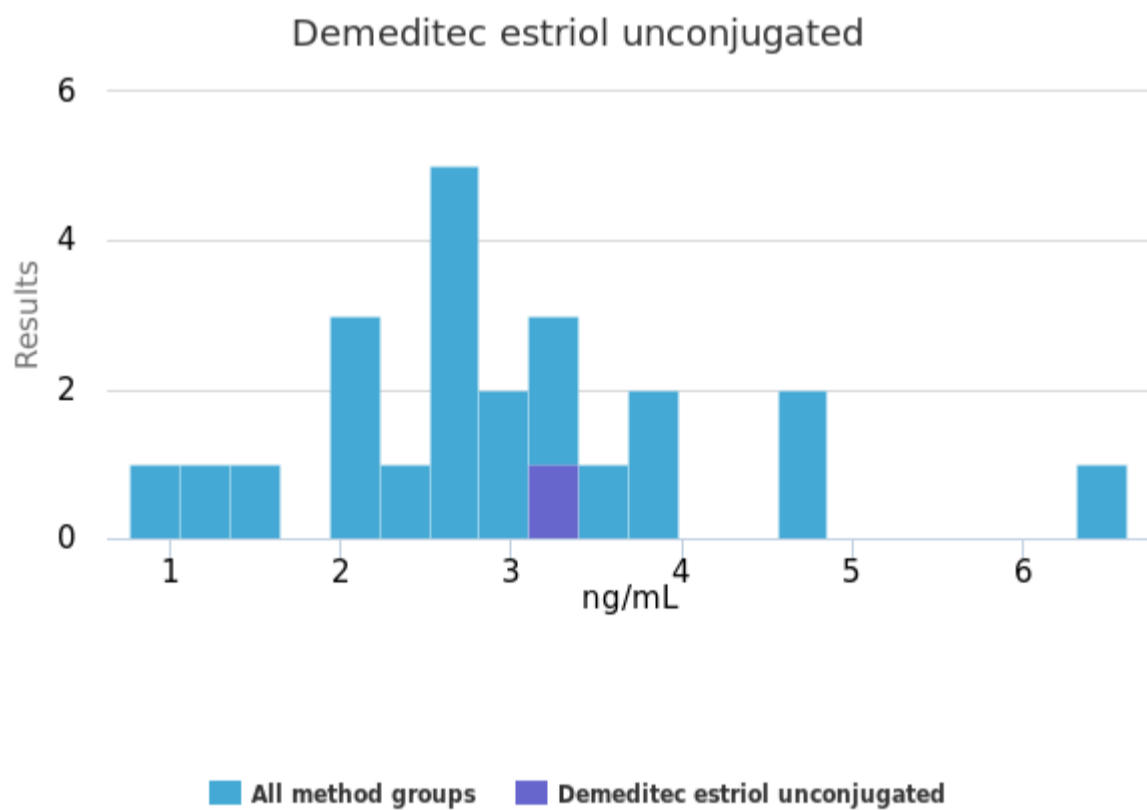
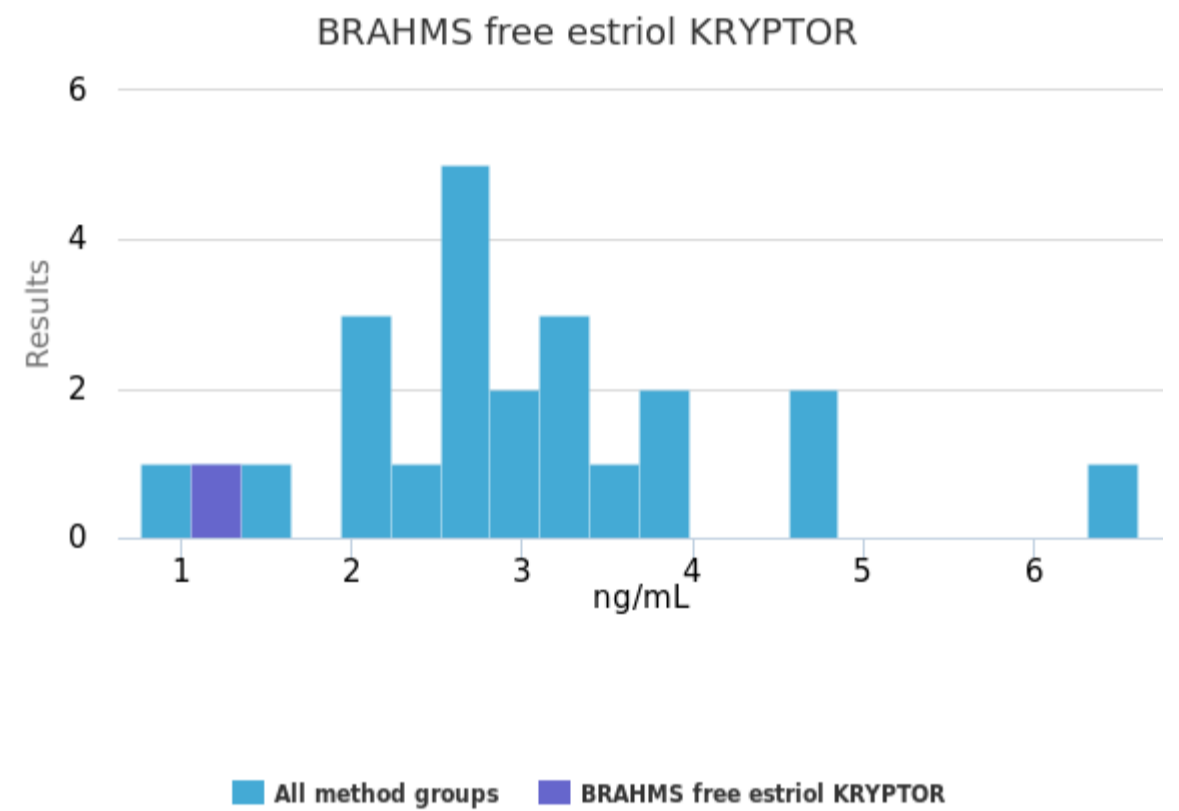
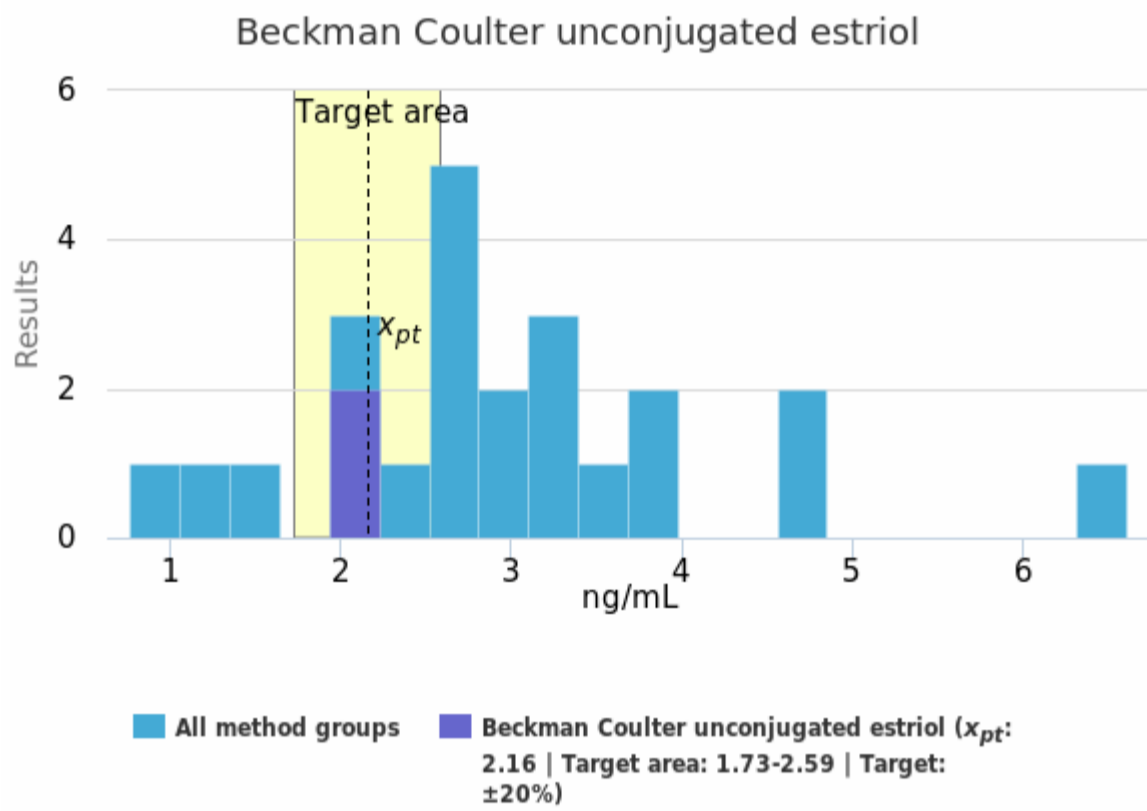


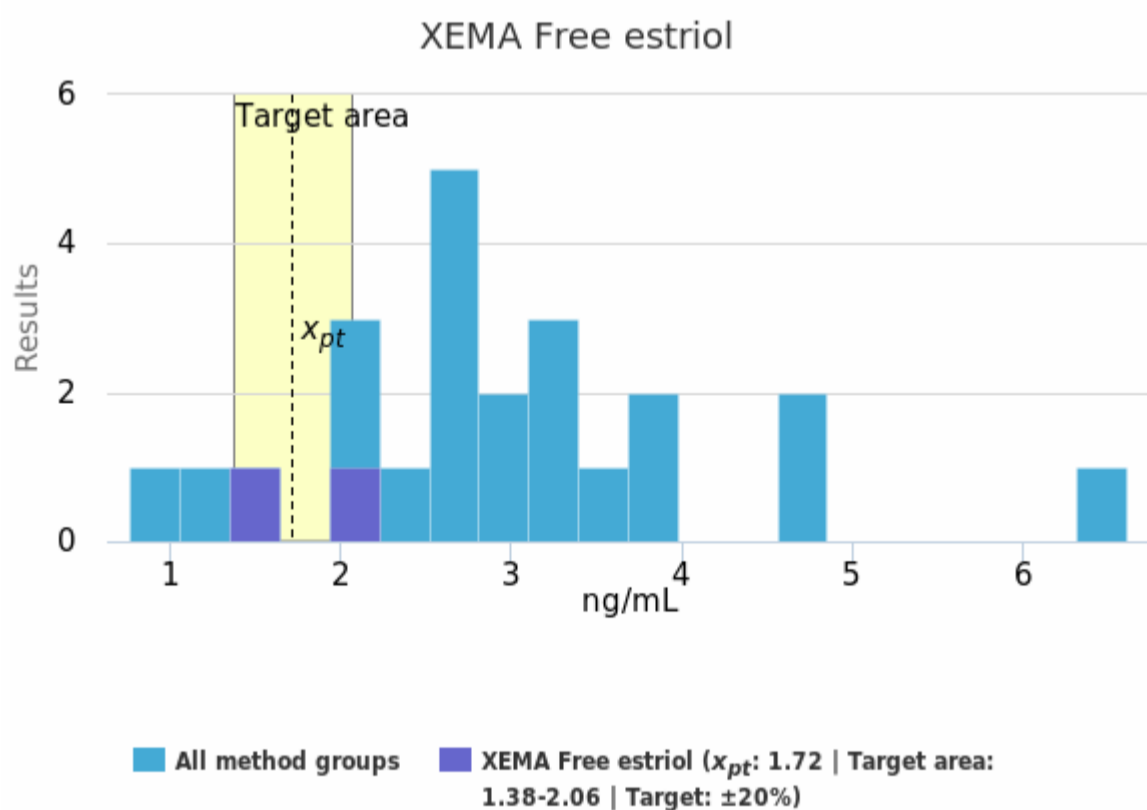
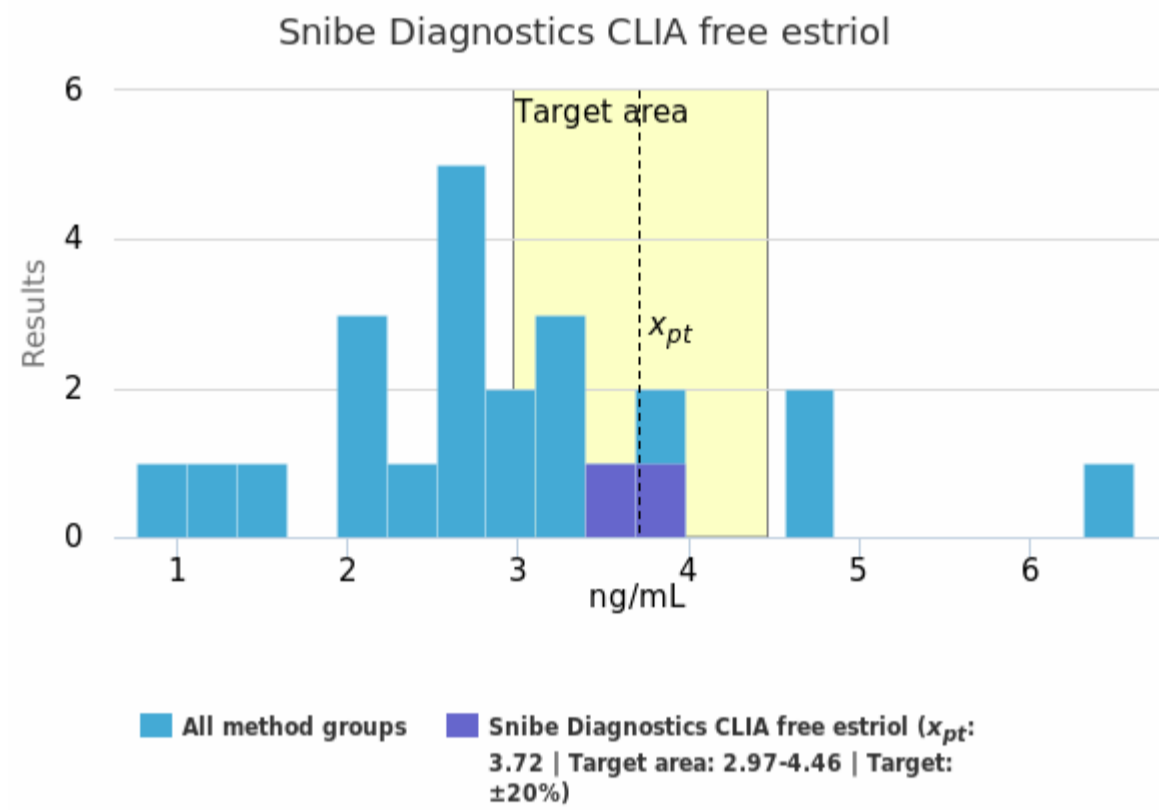
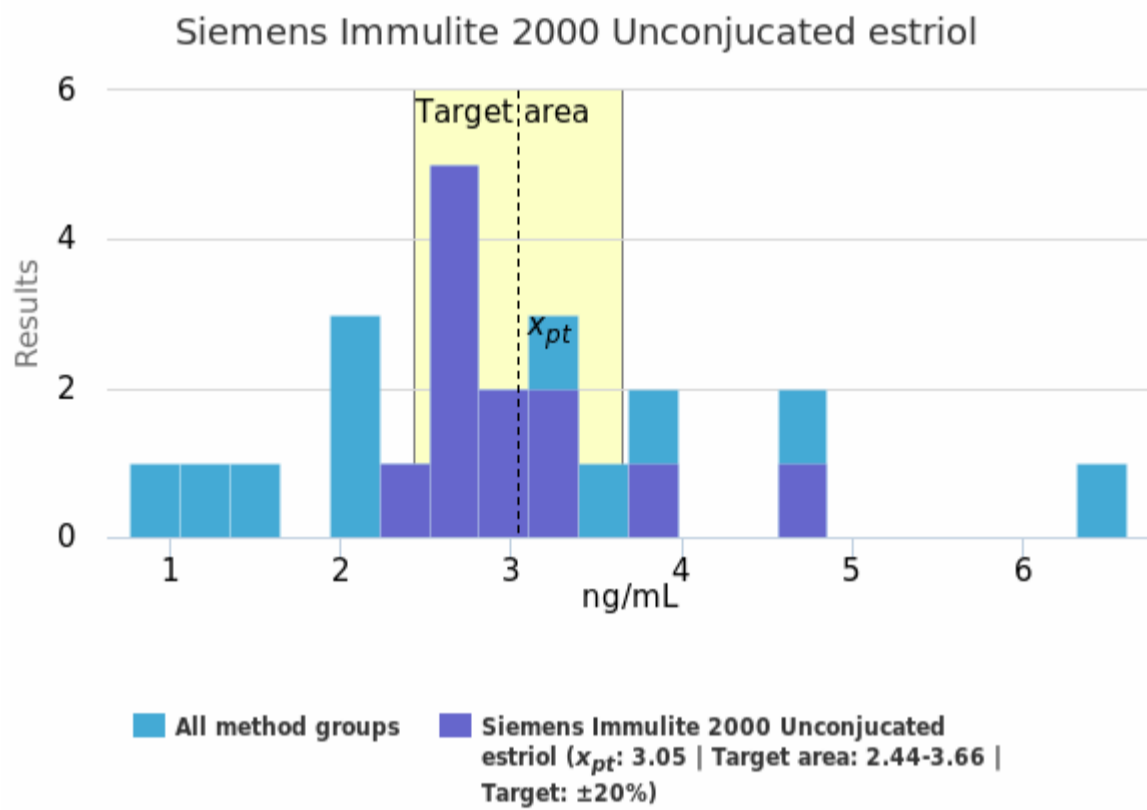
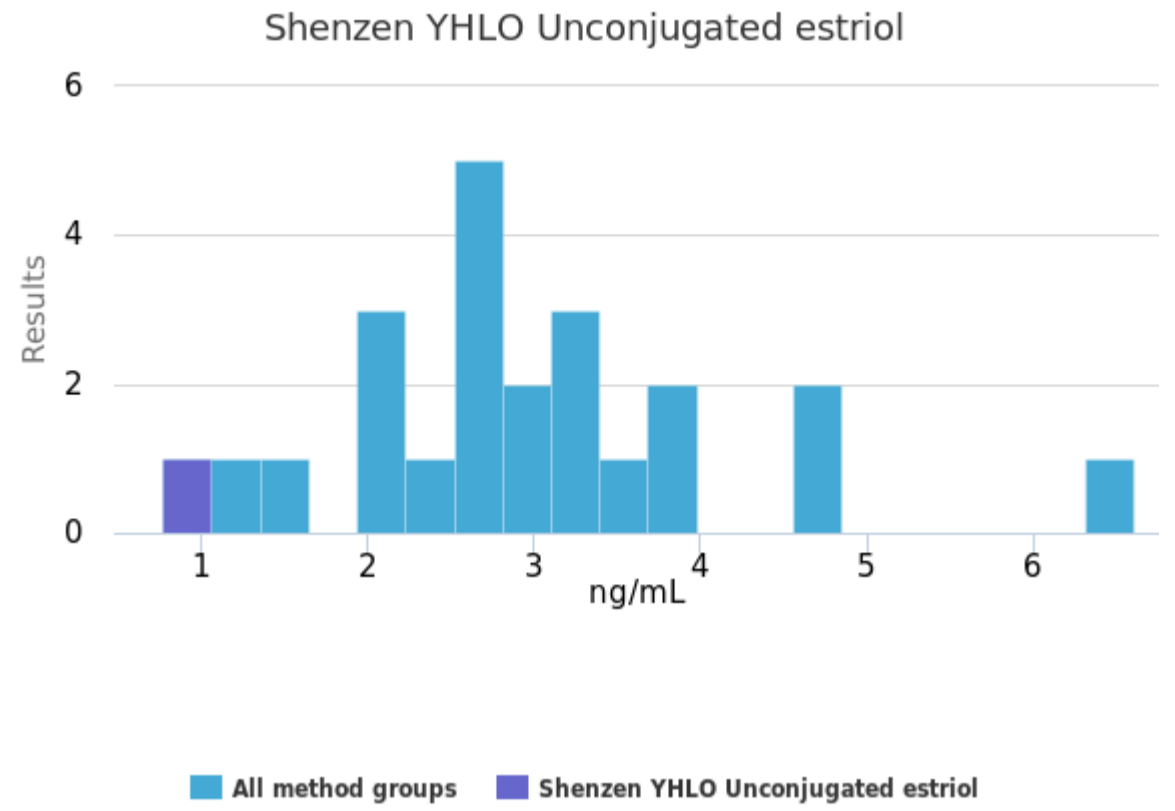
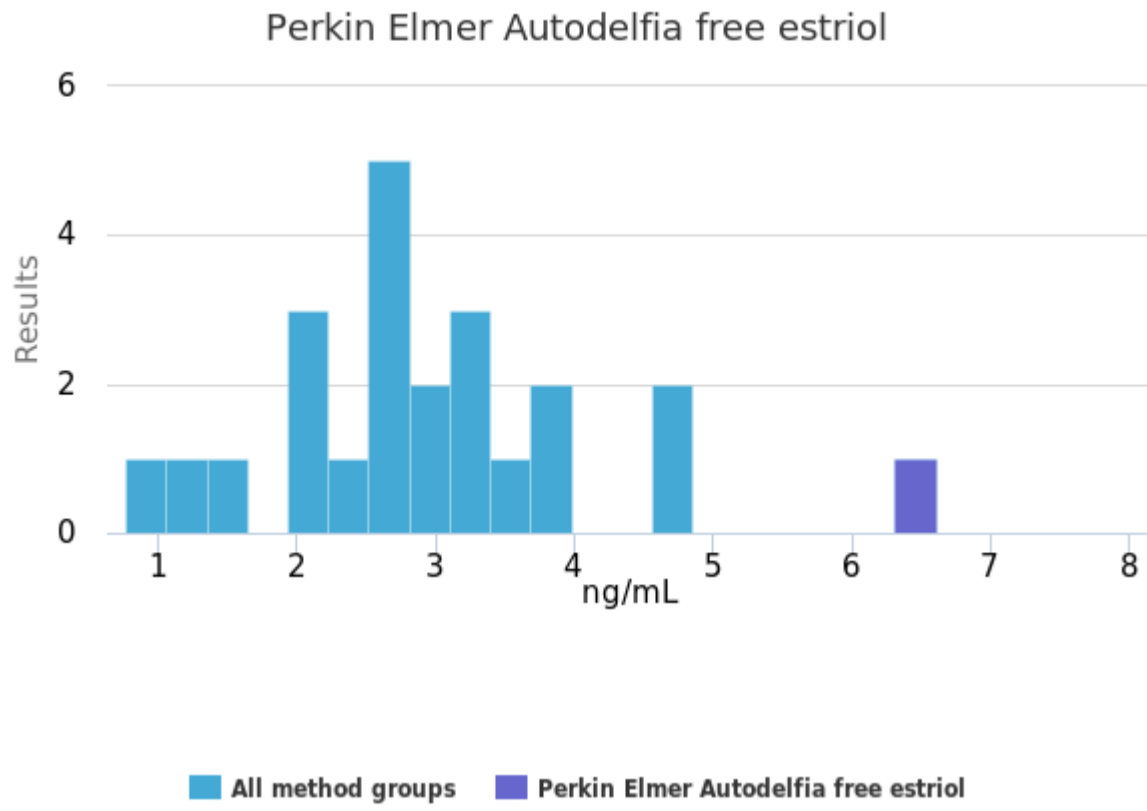


Sample S002 | unconjugated Estriol, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Beckman Coulter unconjugated estriol	2.16	2.16	0.01	0.5	<0.01	2.15	2.17	-	2
BRAHMS free estriol KRYPTOR	-	-	-	-	-	1.18	1.18	-	1
Demeditec estriol unconjugated	-	-	-	-	-	3.20	3.20	-	1
DRG Diagnostics Free Estriol	-	-	-	-	-	4.57	4.57	-	1
Perkin Elmer Autodelphia free estriol	-	-	-	-	-	6.60	6.60	-	1
Shenzen YHLO Unconjugated estriol	-	-	-	-	-	0.77	0.77	-	1
Siemens Immulite 2000 Unconjugated estriol	3.05	2.83	0.62	20.3	0.18	2.34	4.58	-	12
Snibe Diagnostics CLIA free estriol	3.72	3.72	0.36	9.7	0.25	3.46	3.97	-	2
XEMA Free estriol	1.72	1.72	0.48	27.6	0.34	1.38	2.06	-	2
All	2.79	2.78	0.98	35.1	0.21	0.77	4.58	1	23

Sample S002 | unconjugated Estriol, ng/mL | histogram summaries in LabScala

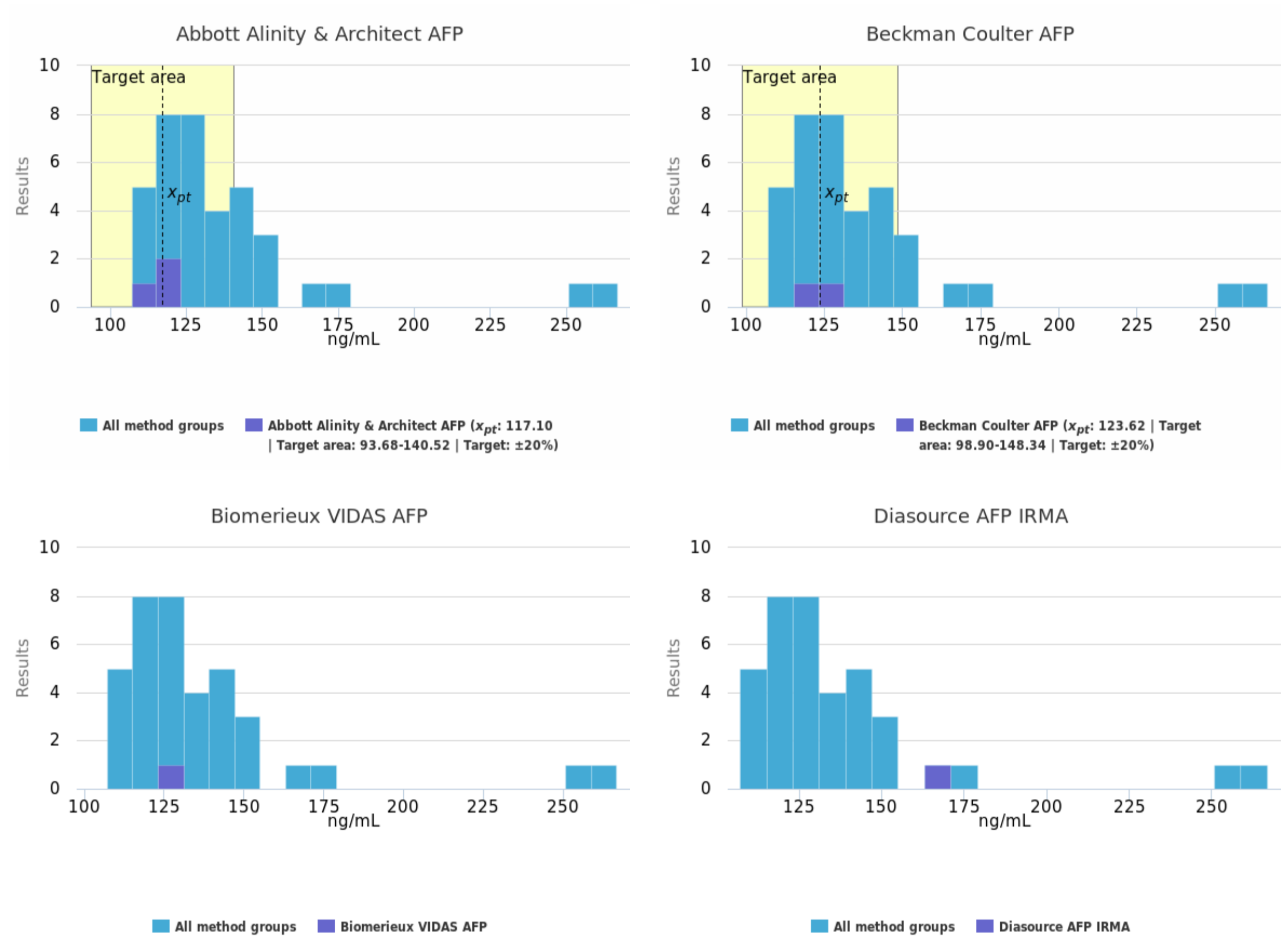


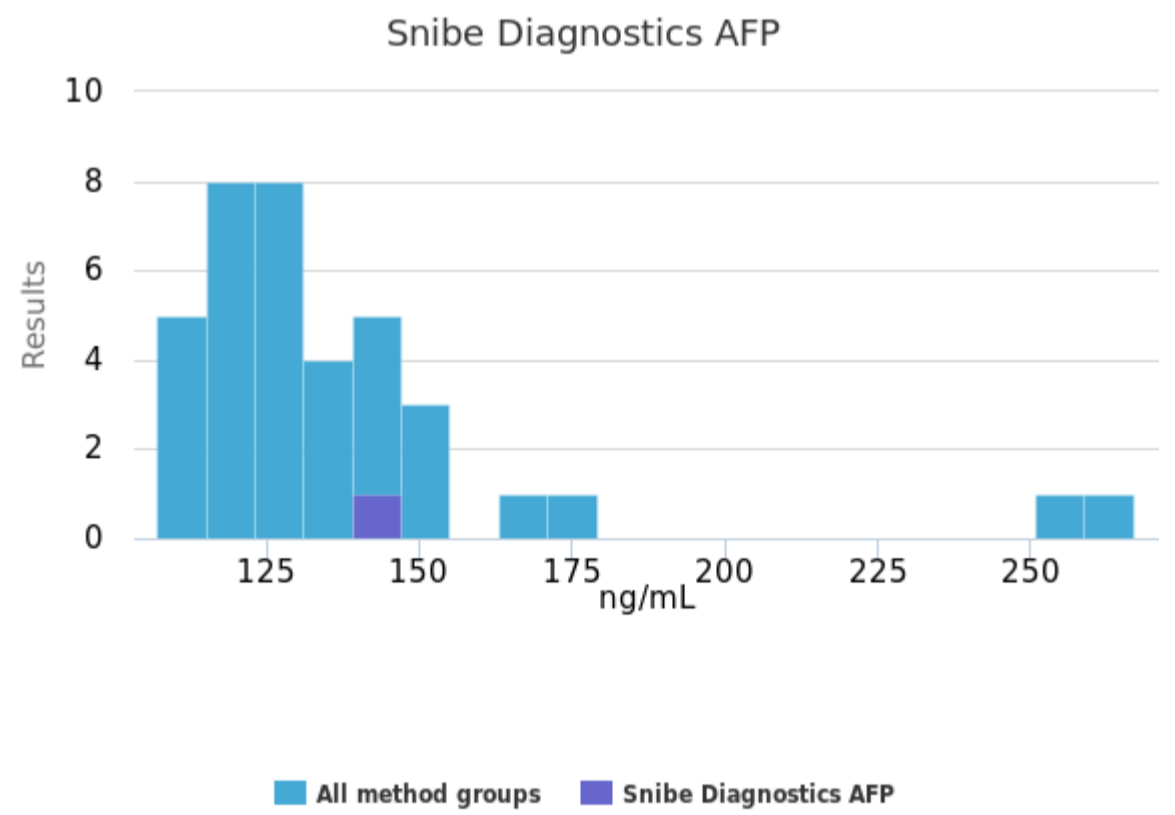
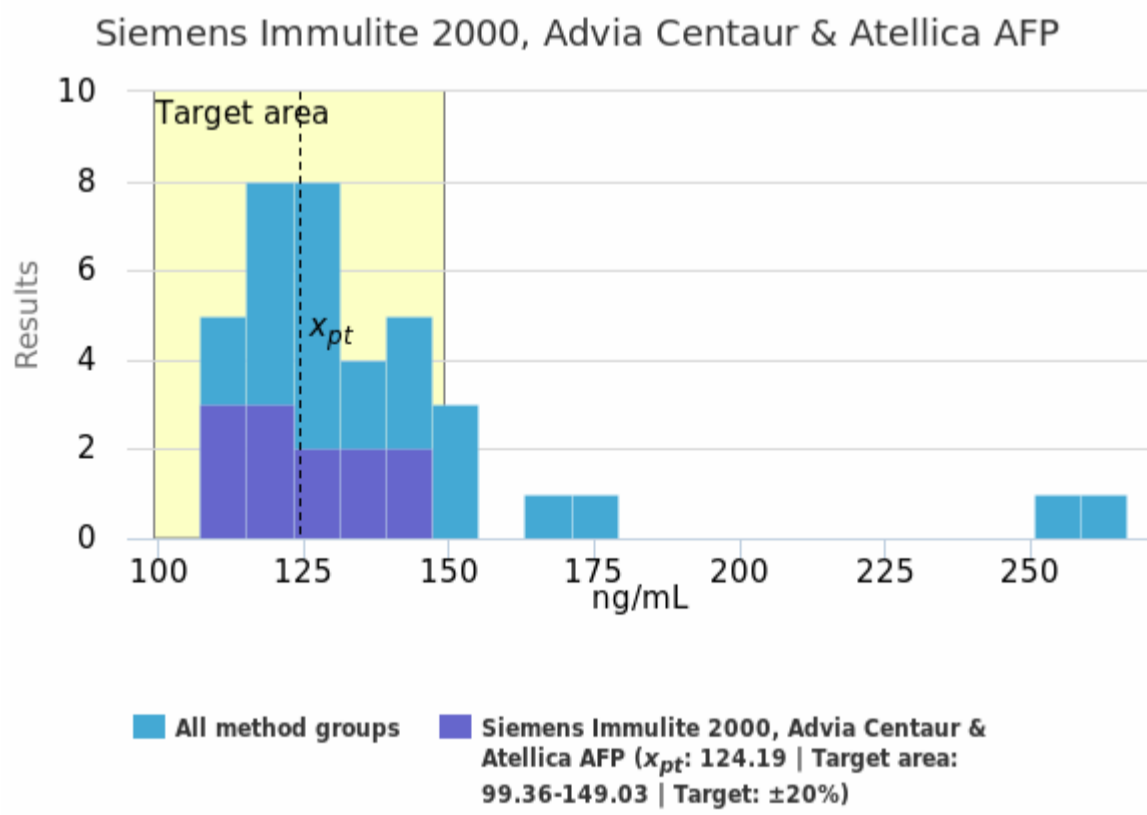
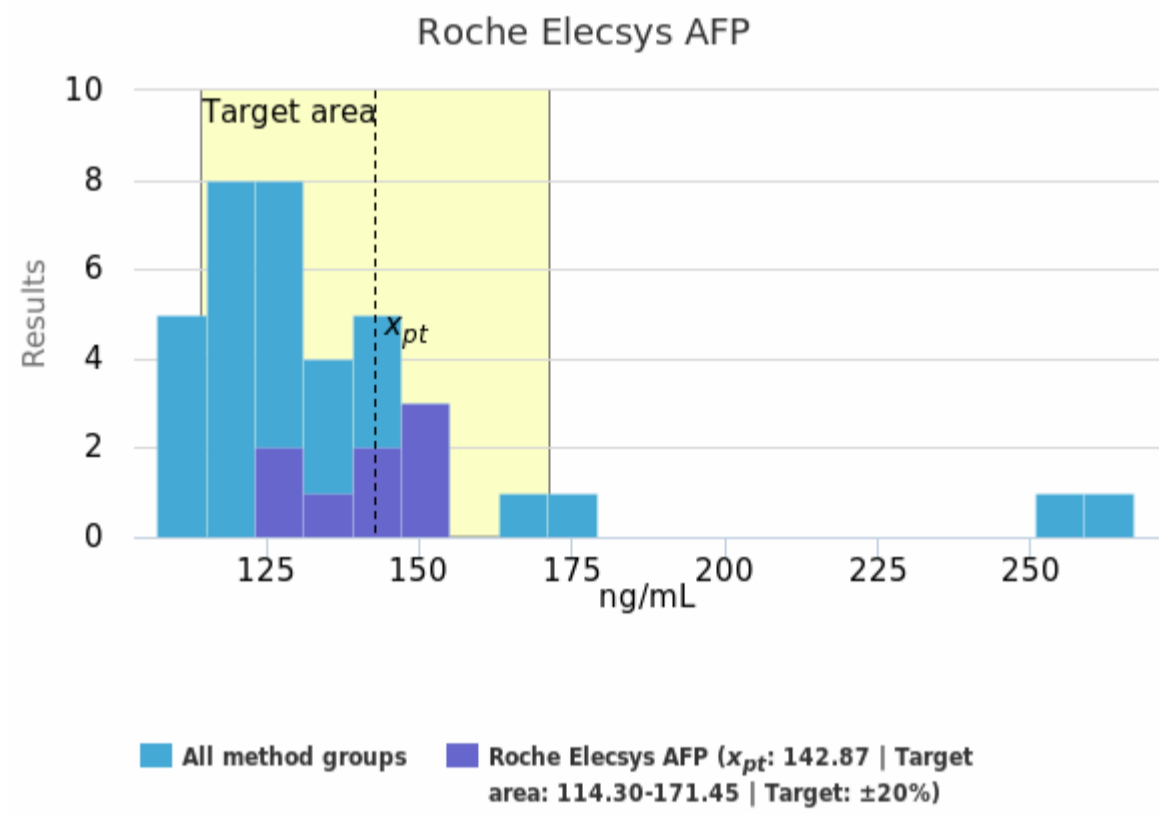
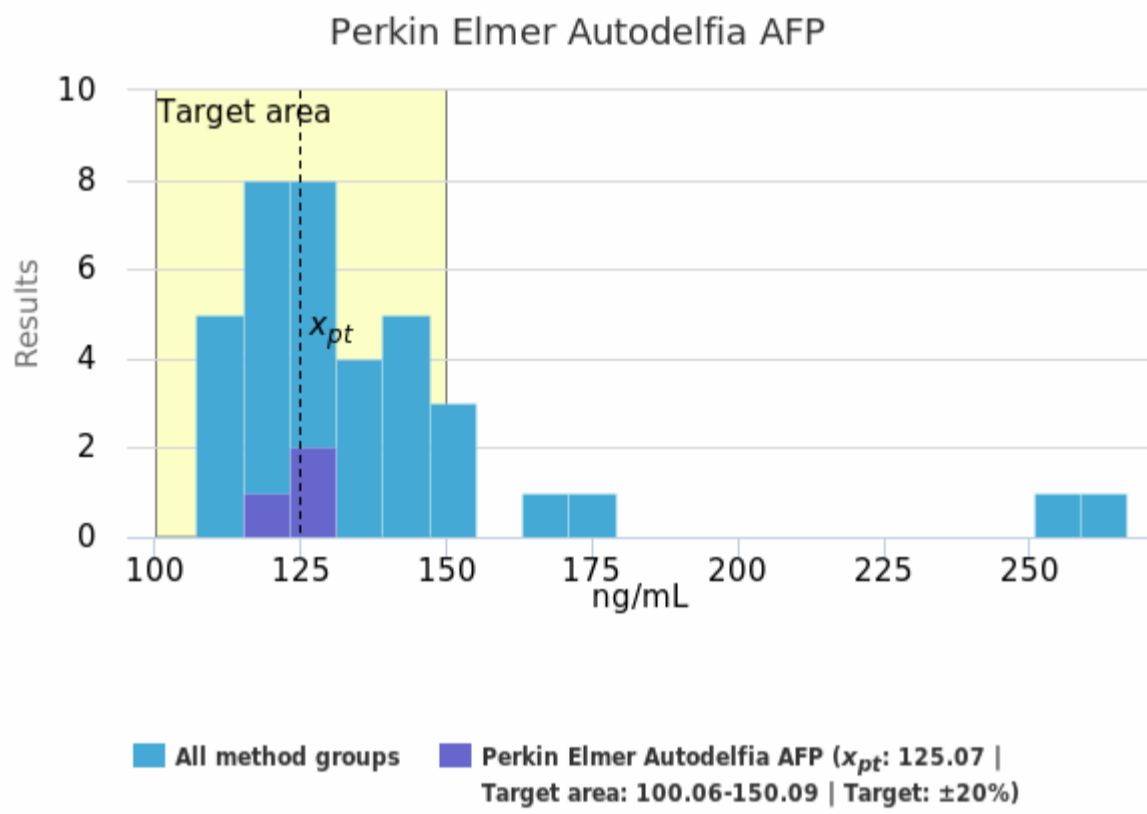
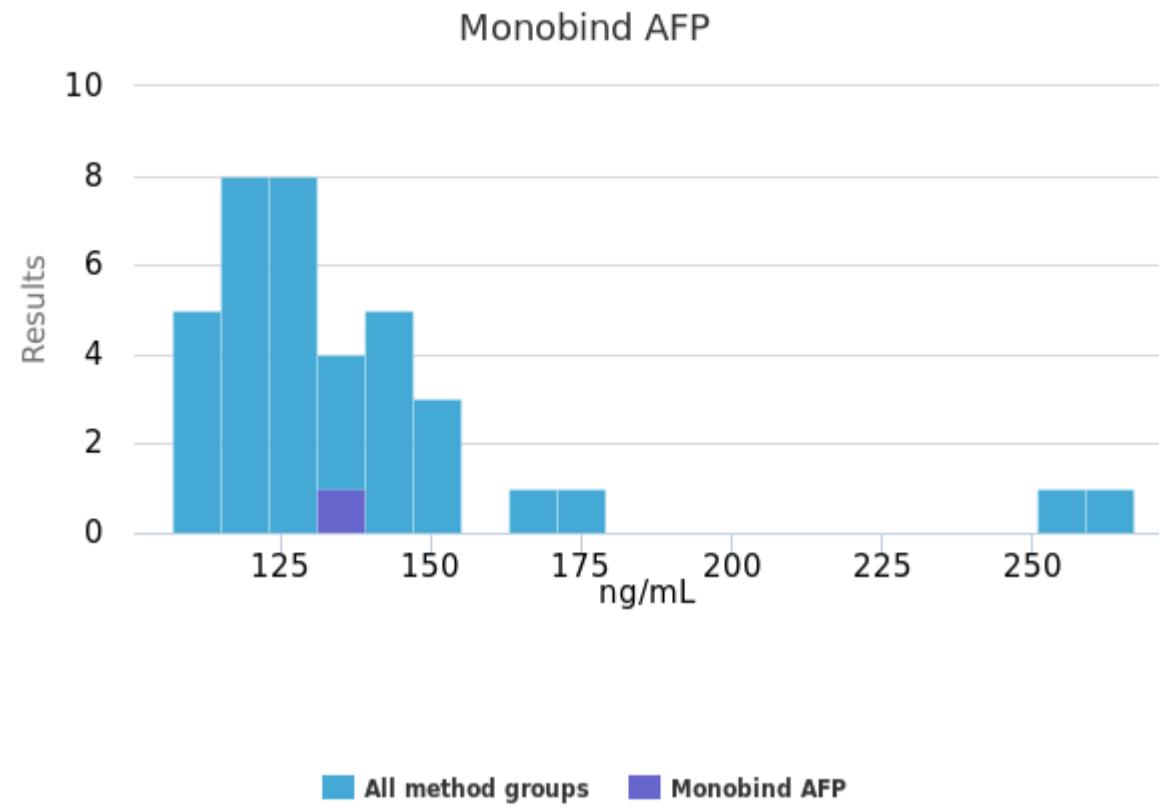
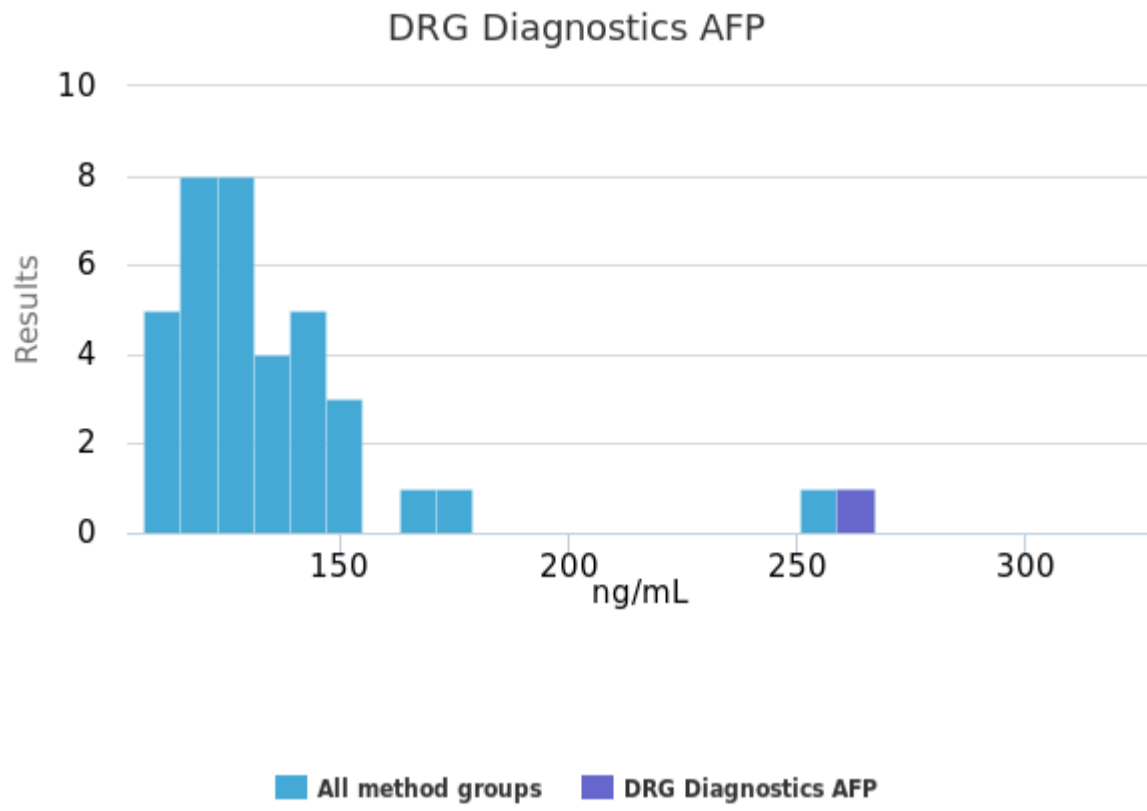


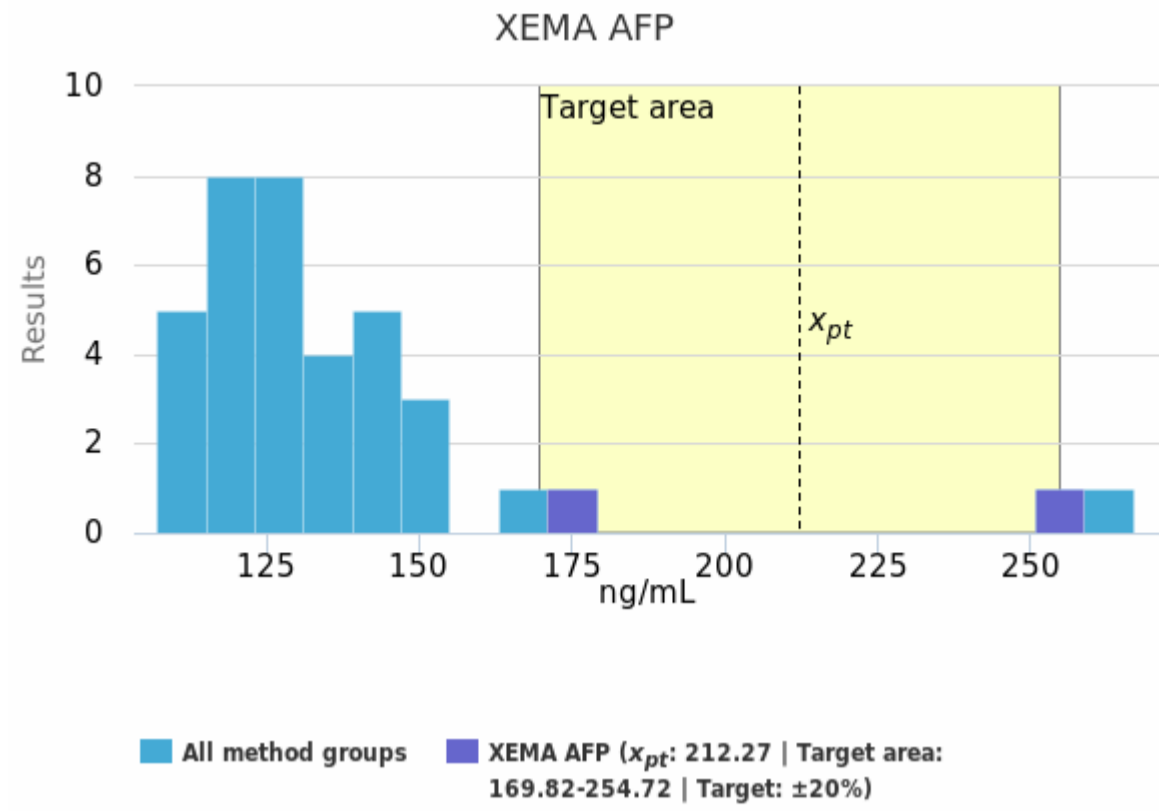
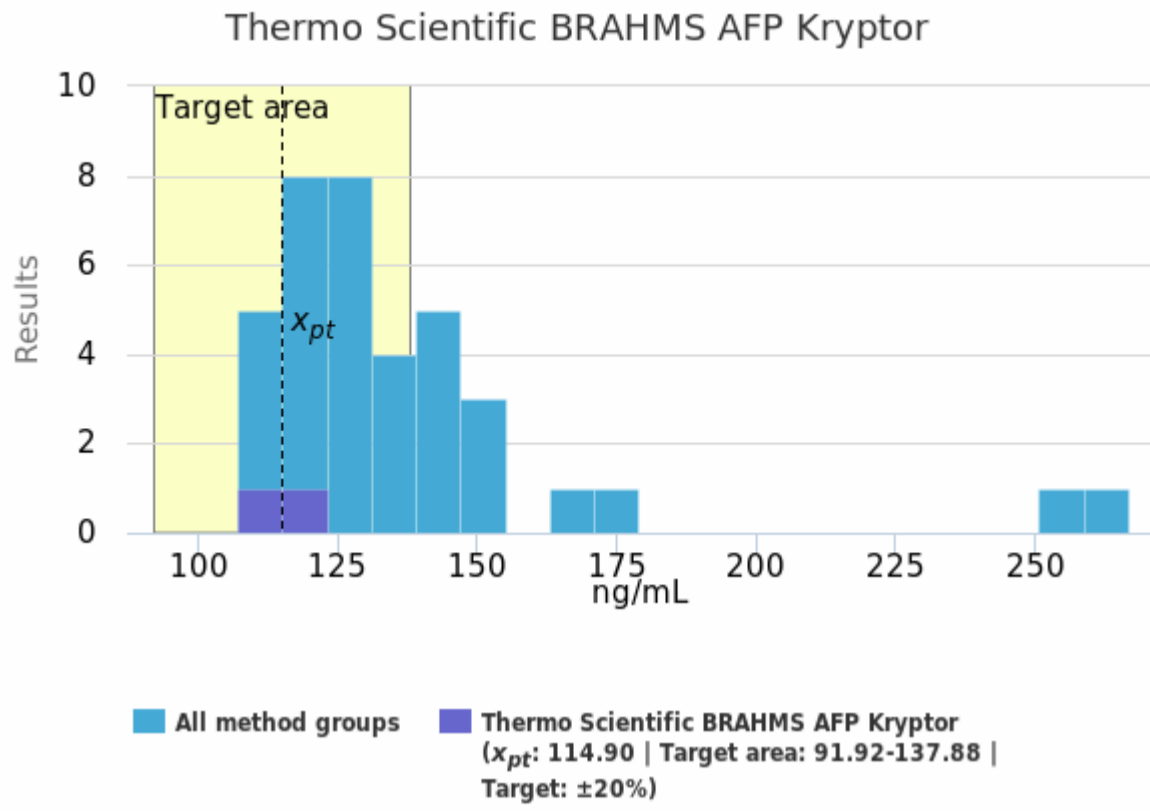
Sample S003 | AFP, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Alinity & Architect AFP	117.10	119.48	5.48	4.7	3.17	110.83	121.00	-	3
Beckman Coulter AFP	123.62	123.62	4.54	3.7	3.21	120.41	126.83	-	2
Biomerieux VIDAS AFP	-	-	-	-	-	128.05	128.05	-	1
Diasource AFP IRMA	-	-	-	-	-	163.35	163.35	-	1
DRG Diagnostics AFP	-	-	-	-	-	266.81	266.81	-	1
Monobind AFP	-	-	-	-	-	132.00	132.00	-	1
Perkin Elmer Autodelphia AFP	125.07	126.20	3.41	2.7	1.97	121.24	127.78	-	3
Roche Elecsys AFP	142.87	145.32	9.92	6.9	3.51	129.60	154.88	-	8
Siemens Immulite 2000, Advia Centaur & Atellica AFP	124.19	123.61	11.80	9.5	3.41	107.21	141.45	-	12
Snibe Diagnostics AFP	-	-	-	-	-	146.29	146.29	-	1
Thermo Scientific BRAHMS AFP Kryptor	114.90	114.90	1.56	1.4	1.10	113.80	116.00	-	2
XEMA AFP	212.27	212.27	56.01	26.4	39.60	172.67	251.87	-	2
All	130.84	128.05	15.67	12.0	2.65	107.21	172.67	2	37

Sample S003 | AFP, ng/mL | histogram summaries in LabScala



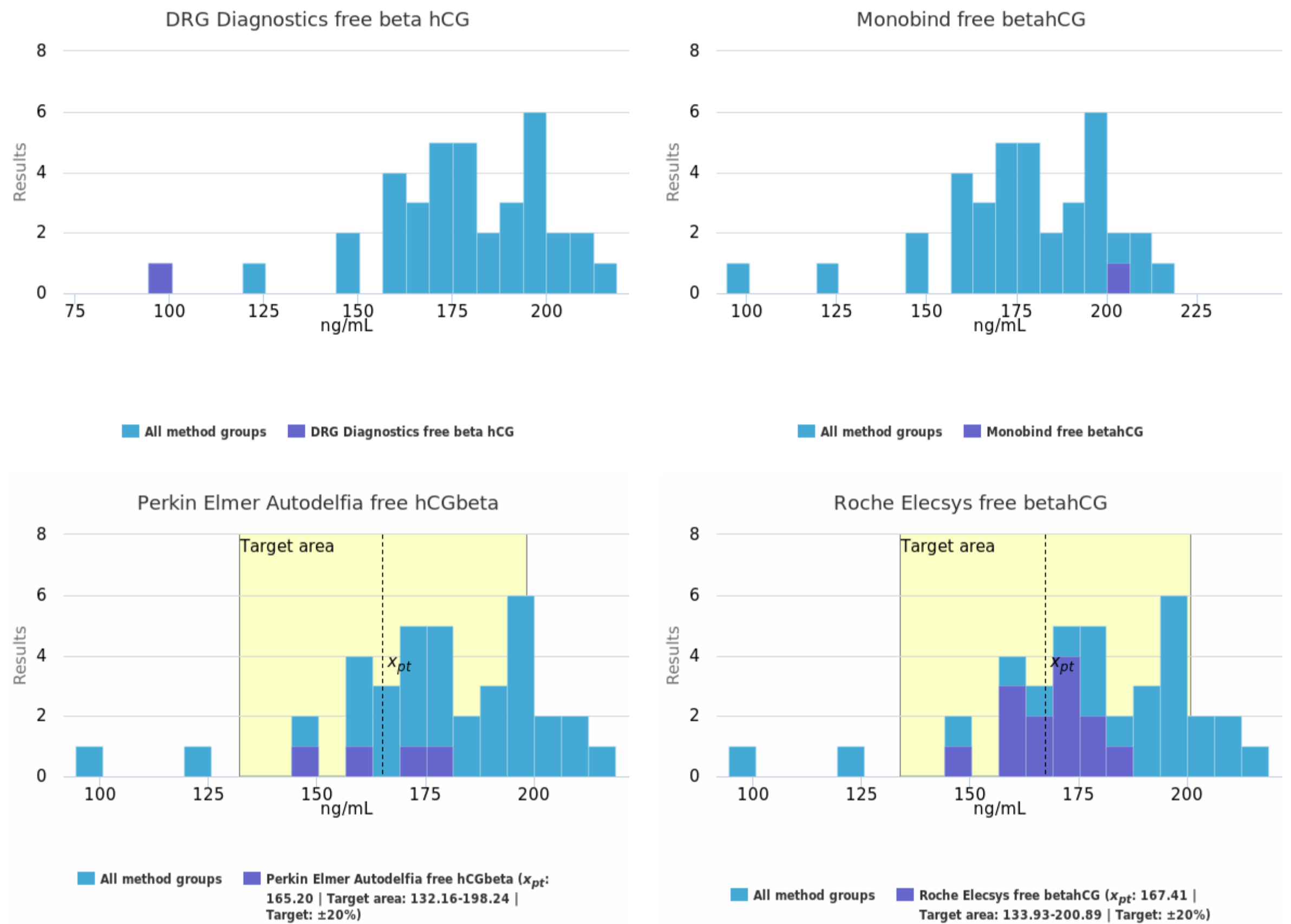




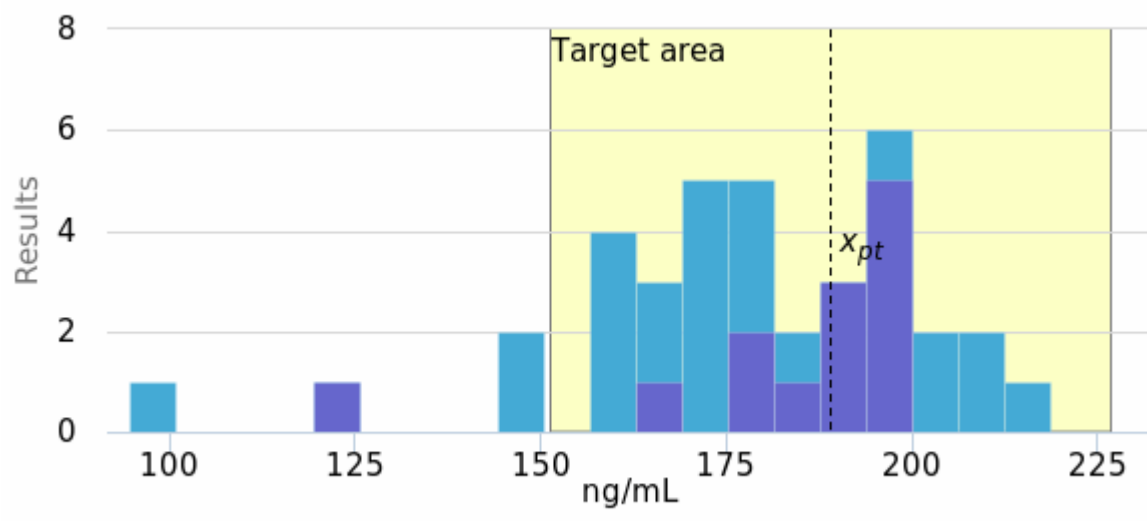
Sample S003 | free b-hCG, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics free beta hCG	-	-	-	-	-	94.60	94.60	-	1
Monobind free betahCG	-	-	-	-	-	202.50	202.50	-	1
Perkin Elmer Autodelfia free hCGbeta	165.20	166.40	13.16	8.0	6.58	149.30	178.70	-	4
Roche Elecsys free betahCG	167.41	169.10	9.87	5.9	2.74	145.35	183.76	-	13
Siemens Immulite 2000, Advia Centaur & Atellica Free -hCG	189.02	191.25	10.32	5.5	2.98	164.00	199.00	1	13
Thermo Scientific BRAHMS Free betahCG Kryptor	207.55	205.80	8.36	4.0	4.18	199.90	218.70	-	4
XEMA Free beta hCG	-	-	-	-	-	211.34	211.34	-	1
All	179.82	179.85	20.45	11.4	3.41	124.00	218.70	1	37

Sample S003 | free b-hCG, ng/mL | histogram summaries in LabScala

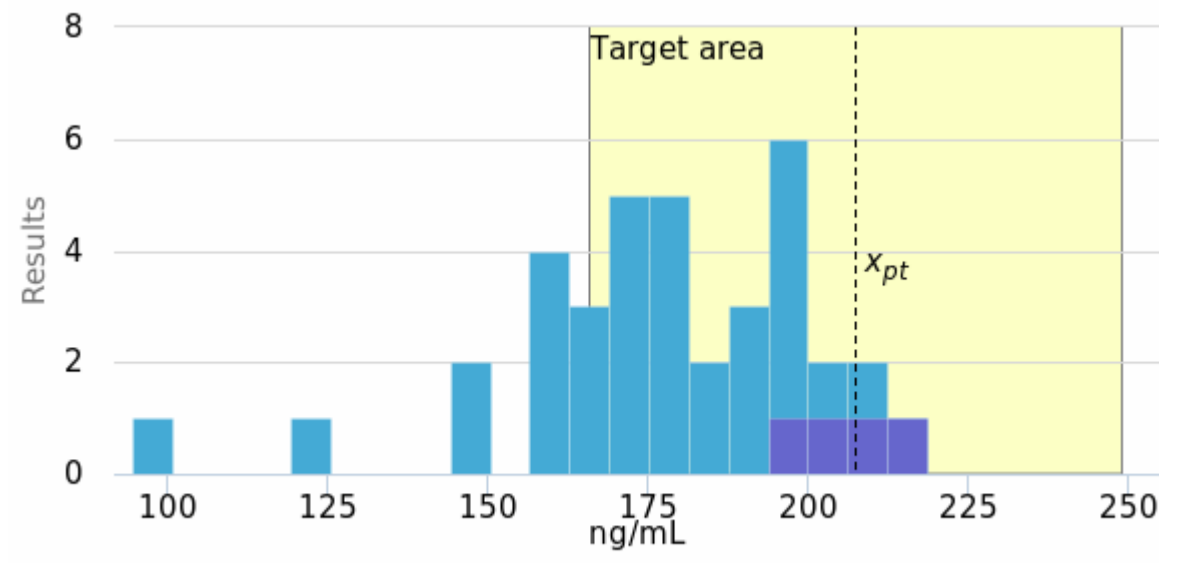


Siemens Immulite 2000, Advia Centaur & Atellica Free β -hCG



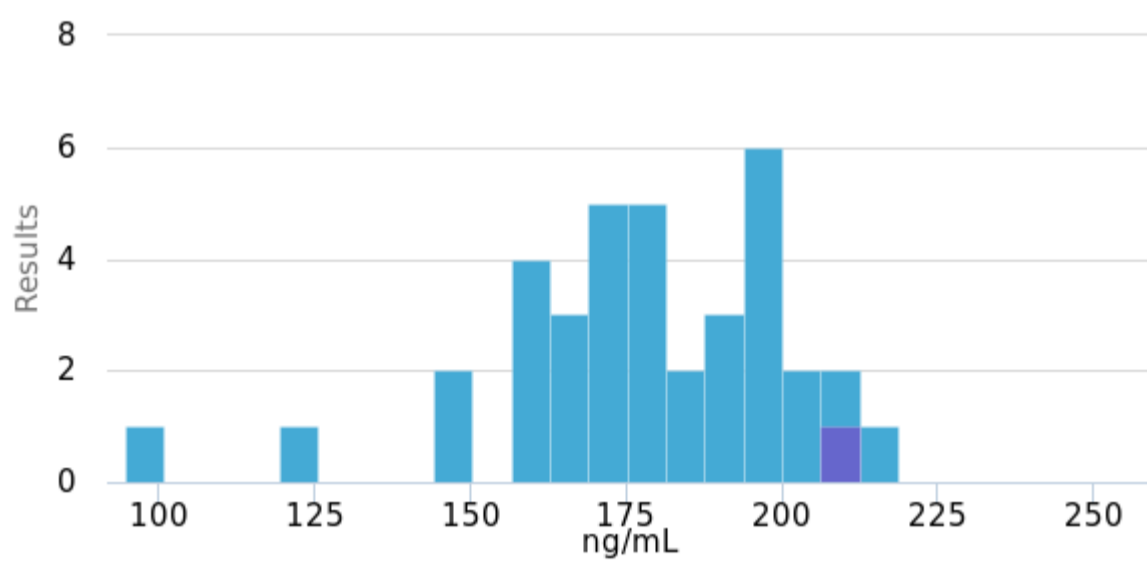
■ All method groups
 ■ Siemens Immulite 2000, Advia Centaur & Atellica Free β -hCG (x_{pt} : 189.02 | Target area: 151.22-226.83 | Target: $\pm 20\%$)

Thermo Scientific BRAHMS Free betahCG Kryptor



■ All method groups
 ■ Thermo Scientific BRAHMS Free betahCG Kryptor (x_{pt} : 207.55 | Target area: 166.04-249.06 | Target: $\pm 20\%$)

XEMA Free beta hCG

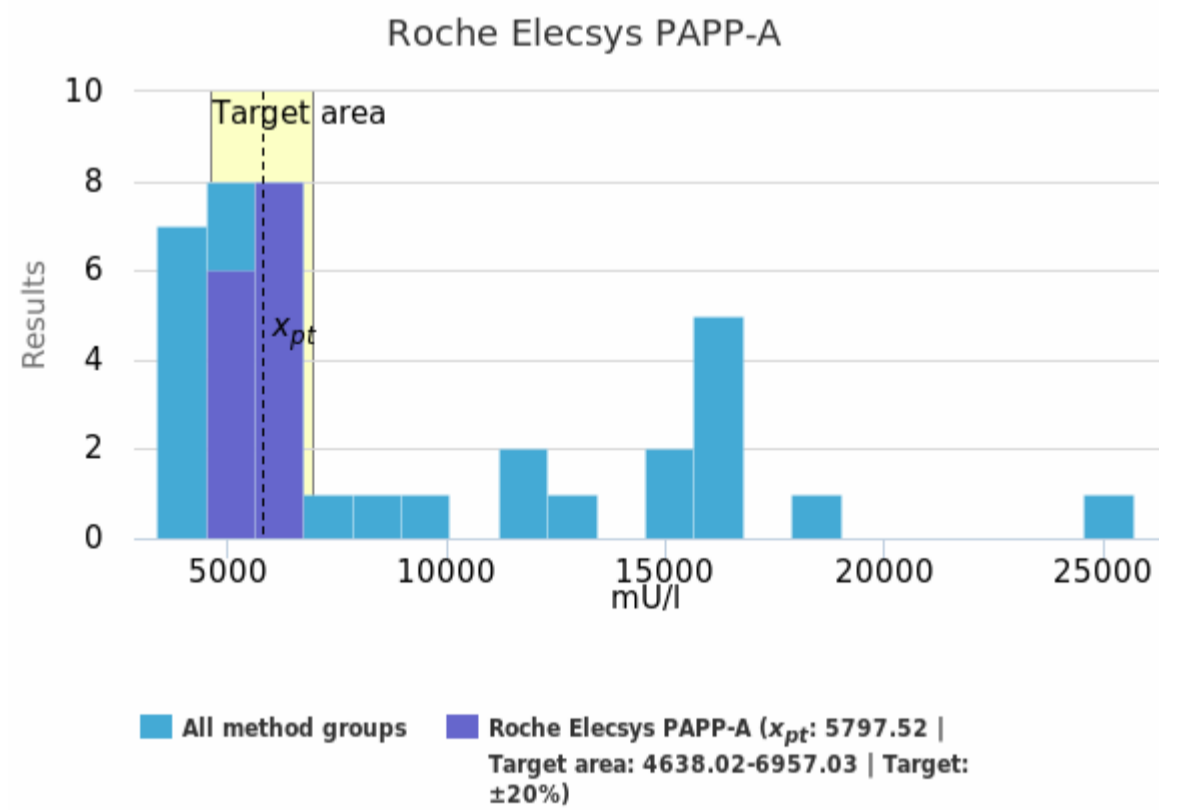
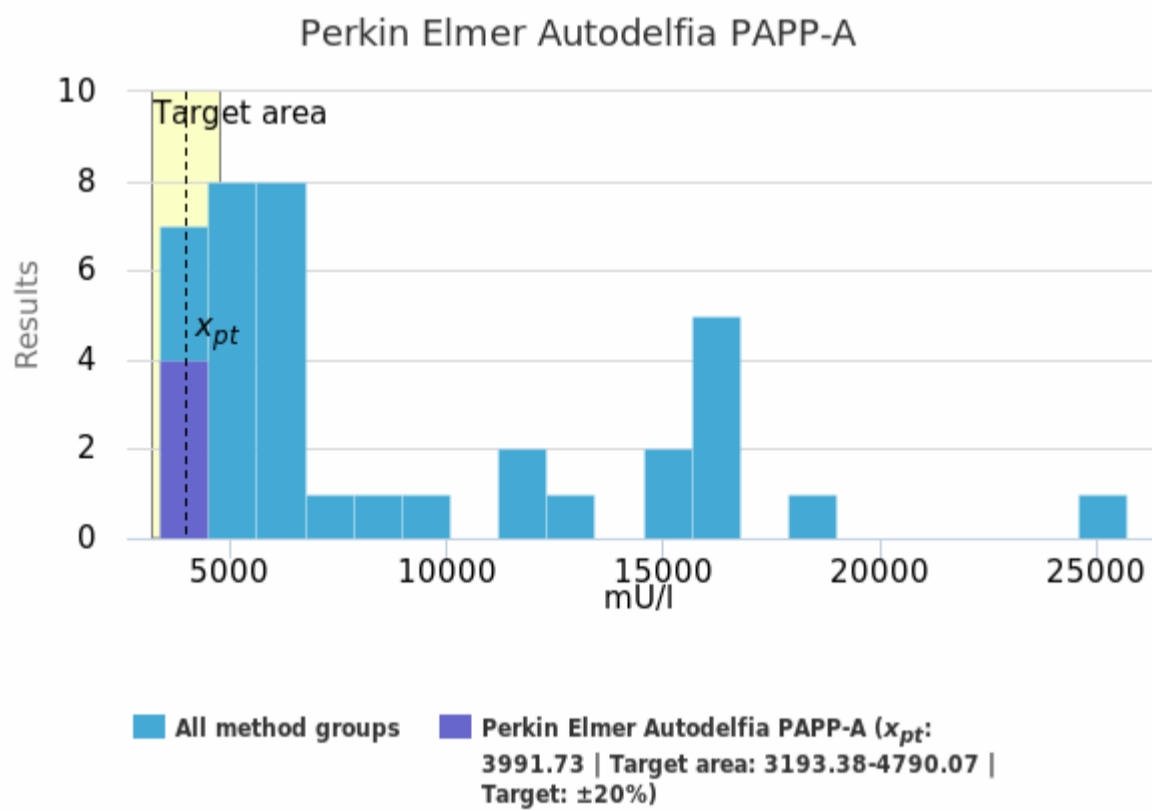
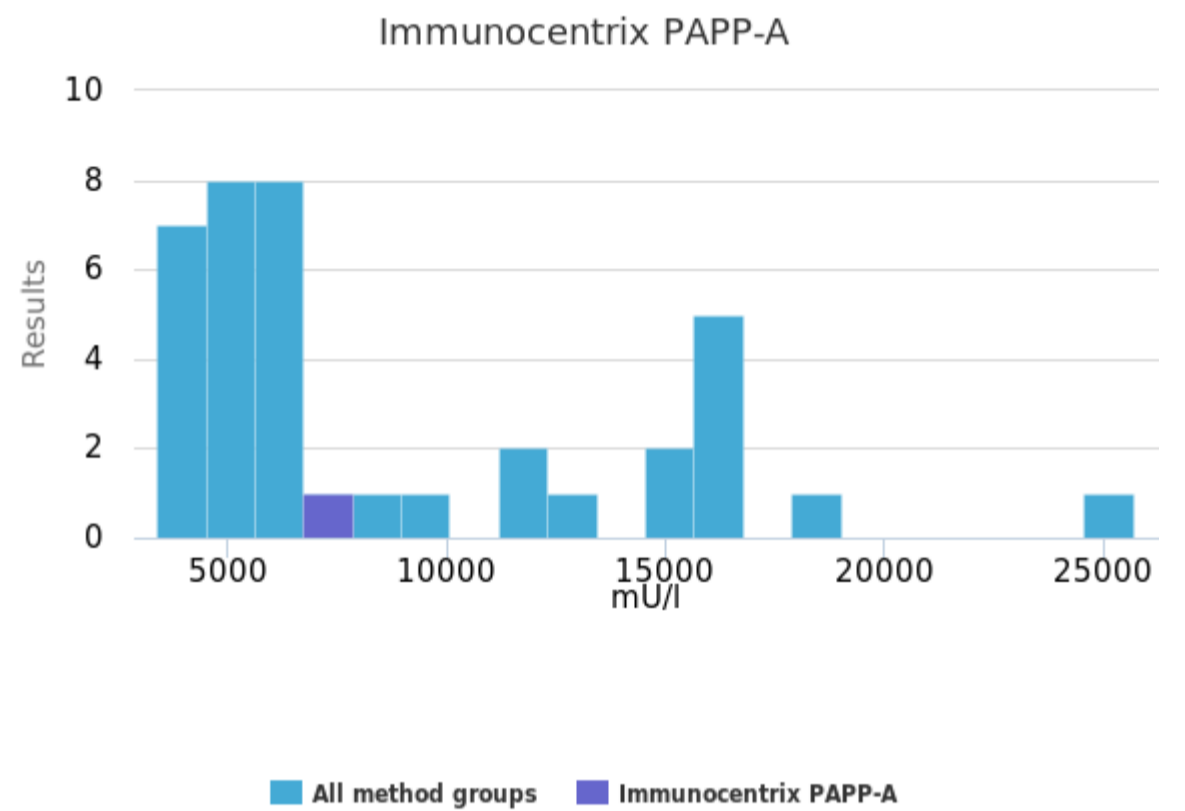
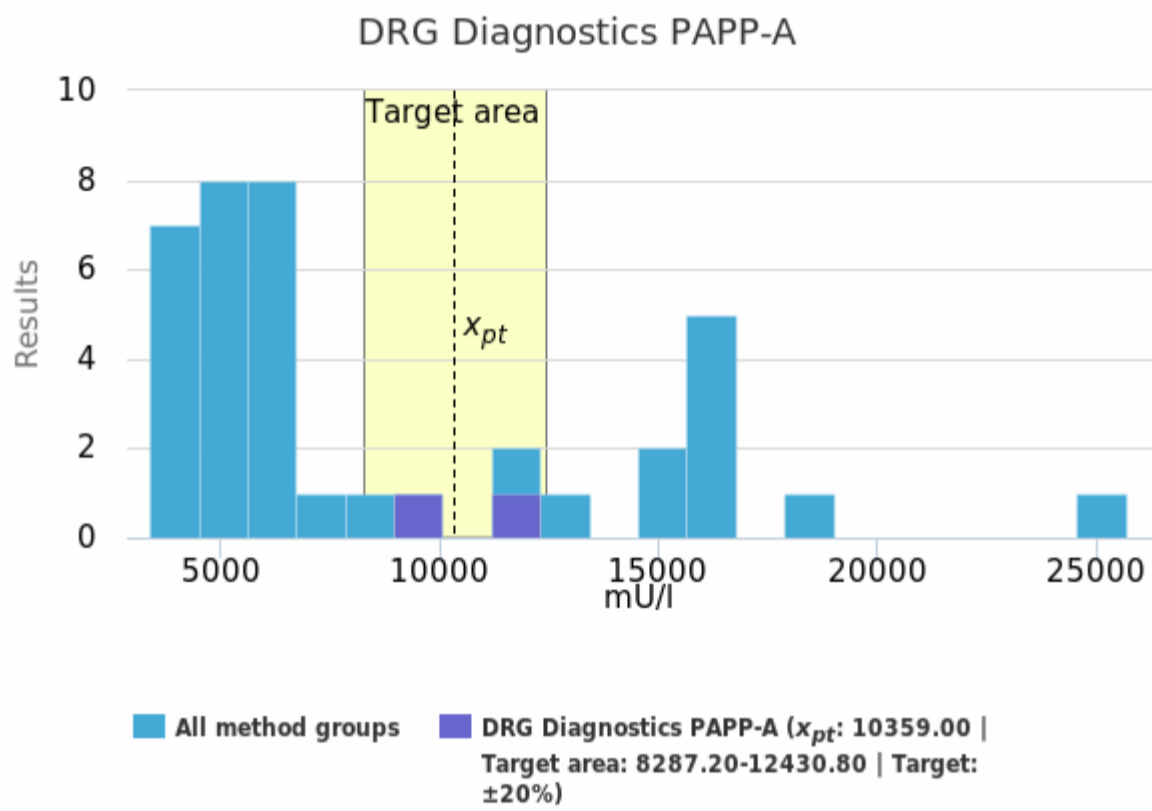


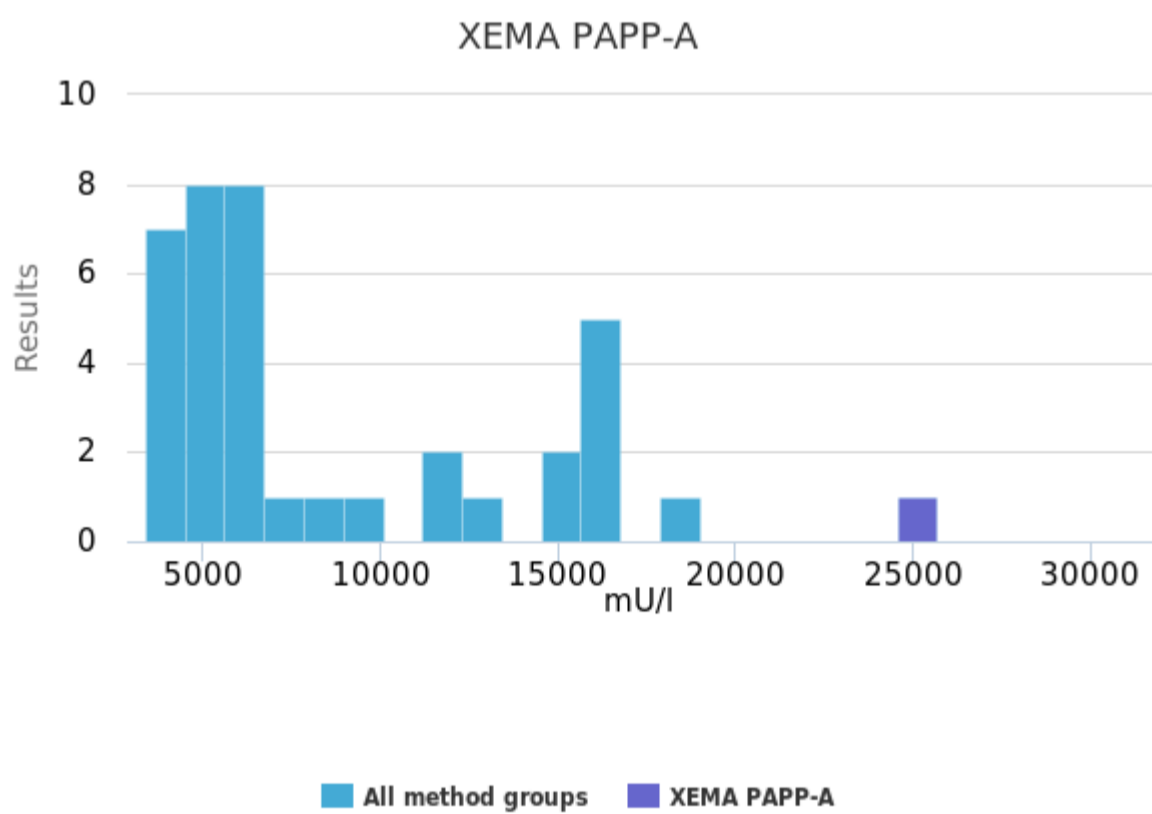
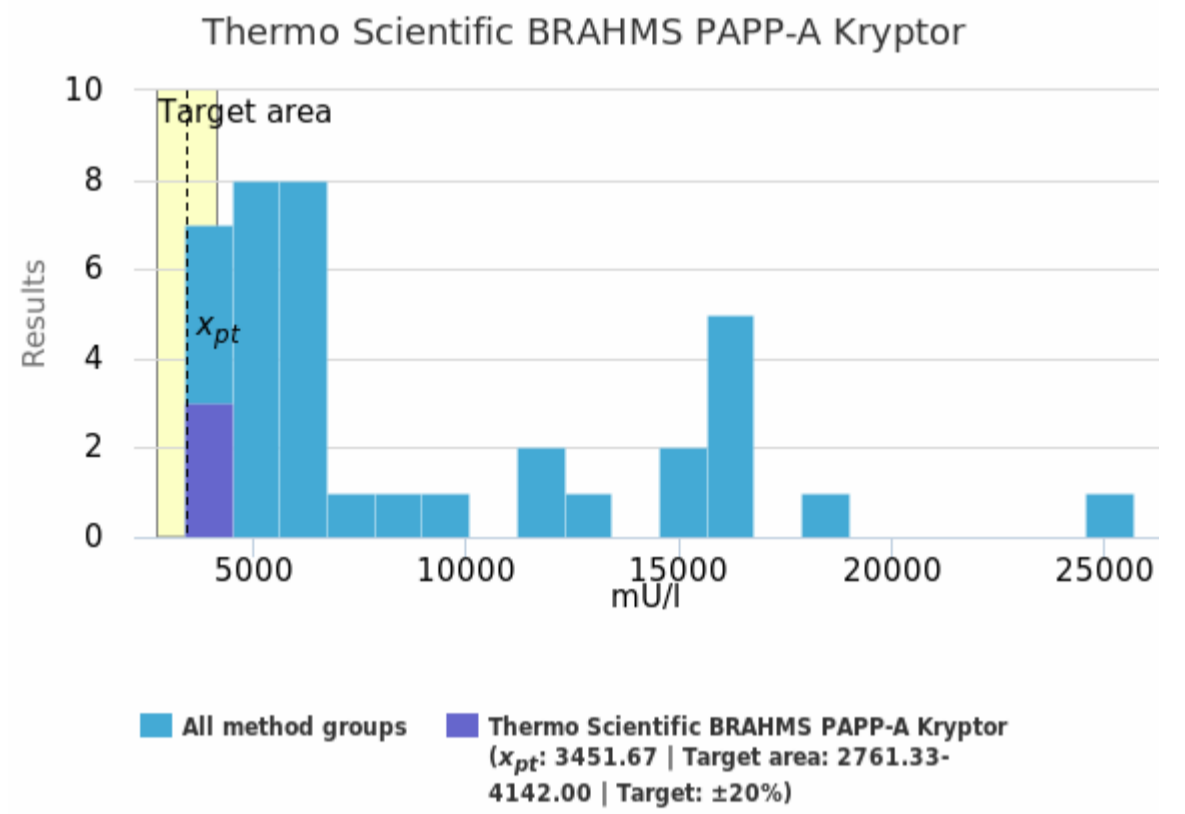
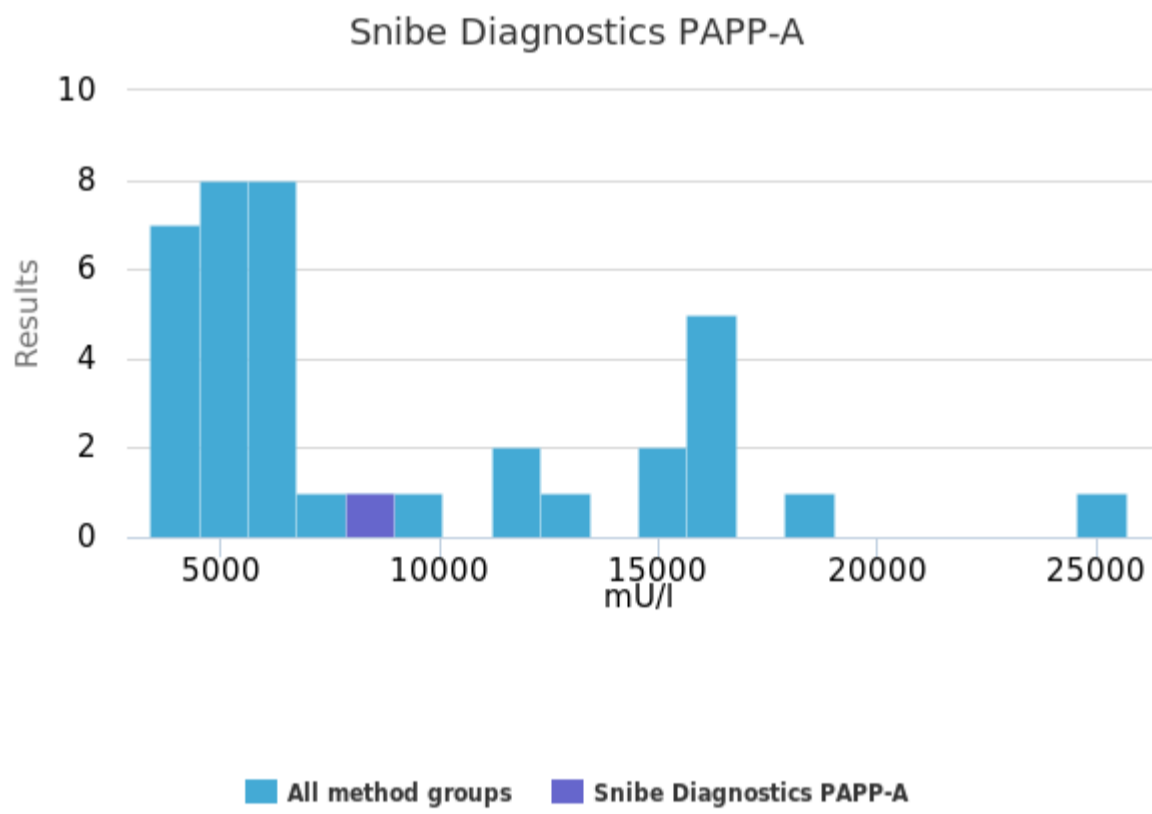
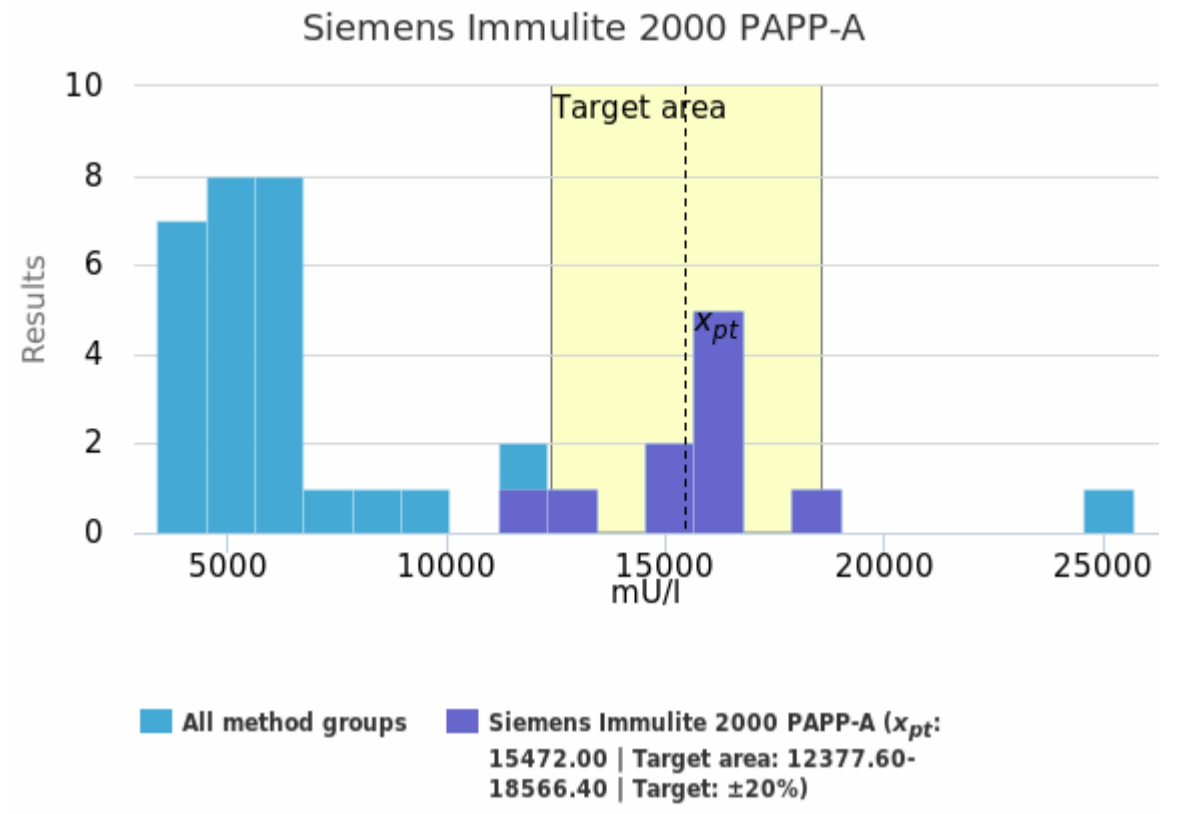
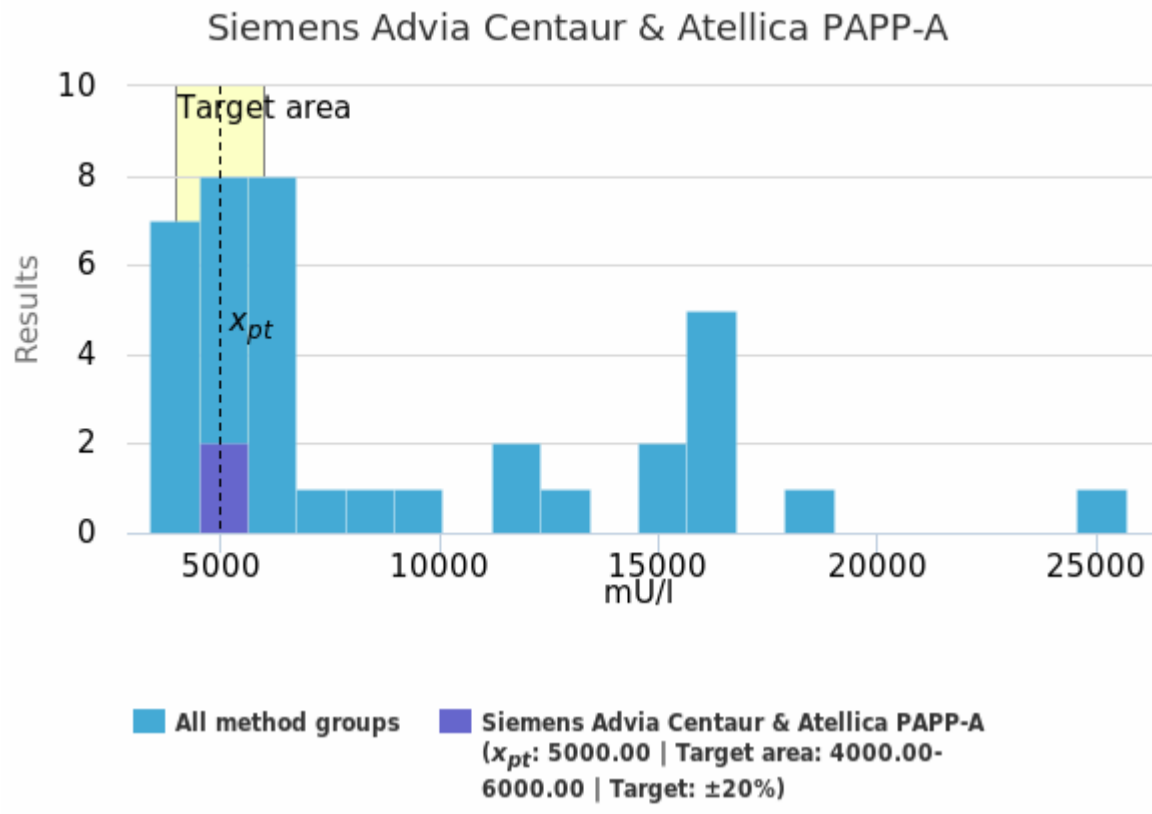
■ All method groups
 ■ XEMA Free beta hCG

Sample S003 | PAPP-A, mU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
DRG Diagnostics PAPP-A	10359.00	10359.00	1387.34	13.4	981.00	9378.00	11340.00	-	2
Immunocentrix PAPP-A	-	-	-	-	-	6750.00	6750.00	-	1
Perkin Elmer Autodelfia PAPP-A	3991.73	3987.10	190.07	4.8	95.04	3812.70	4180.00	-	4
Roche Elecsys PAPP-A	5797.52	5740.00	506.50	8.7	135.37	5040.00	6641.00	-	14
Siemens Advia Centaur & Atellica PAPP-A	5000.00	5000.00	98.99	2.0	70.00	4930.00	5070.00	-	2
Siemens Immulite 2000 PAPP-A	15472.00	16090.00	1845.72	11.9	583.67	12000.00	17900.00	-	10
Snibe Diagnostics PAPP-A	-	-	-	-	-	7965.00	7965.00	-	1
Thermo Scientific BRAHMS PAPP-A Kryptor	3451.67	3474.00	51.29	1.5	29.61	3393.00	3488.00	-	3
XEMA PAPP-A	-	-	-	-	-	25695.00	25695.00	-	1
All	8314.60	6026.00	4759.85	57.2	782.51	3393.00	17900.00	1	38

Sample S003 | PAPP-A, mU/l histogram summaries in LabScala

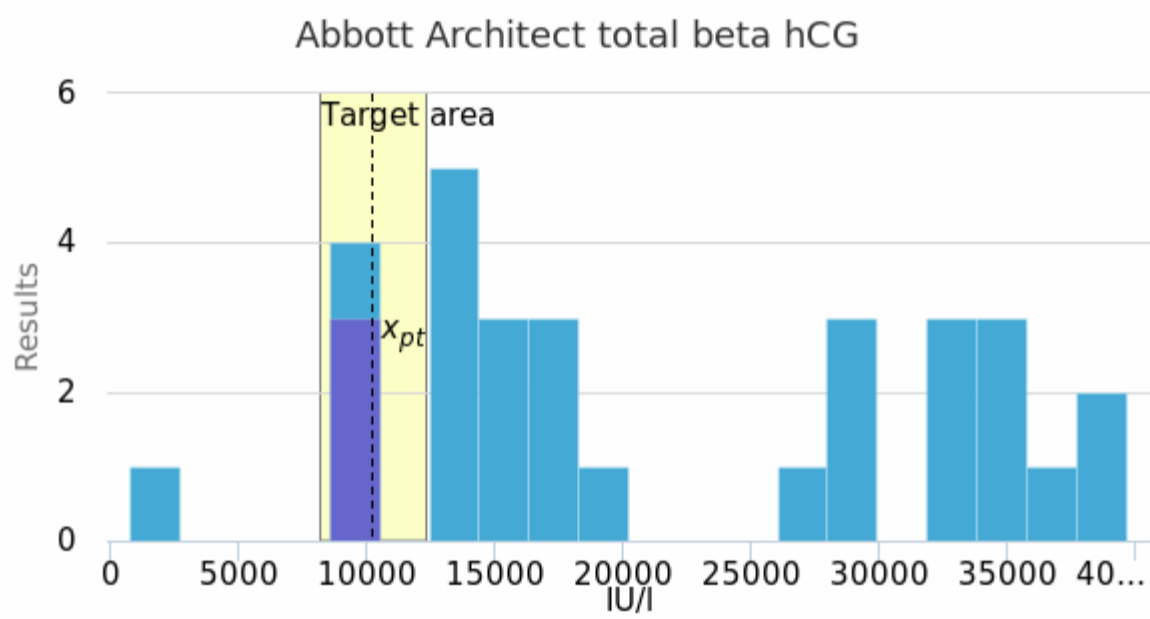




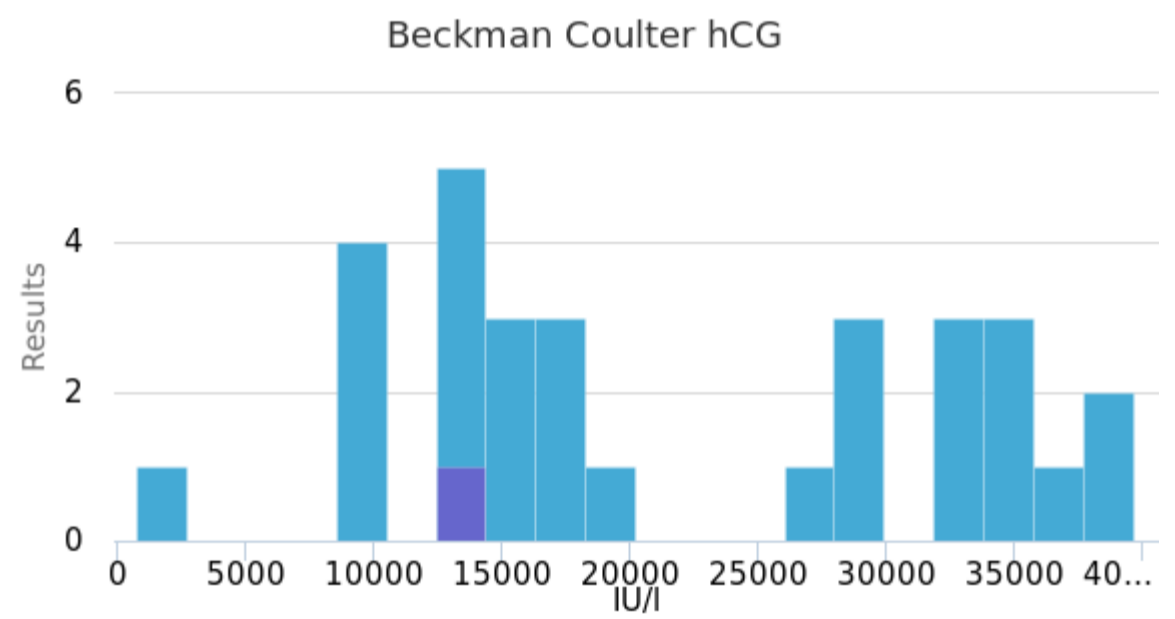
Sample S003 | total-hCG, IU/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Abbott Architect total beta hCG	10253.26	10291.50	87.31	0.9	50.41	10153.35	10314.92	-	3
Beckman Coulter hCG	-	-	-	-	-	14180.00	14180.00	-	1
Mindray hCG	-	-	-	-	-	10480.00	10480.00	-	1
Monobing total hCG	-	-	-	-	-	14300.00	14300.00	-	1
Perkin Elmer Autodelphia total hCG	-	-	-	-	-	37560.00	37560.00	-	1
Roche Elecsys hCG	15512.50	14785.50	1780.48	11.5	563.04	13428.00	18590.00	-	10
Siemens Advia Centaur & Atellica hCG	-	-	-	-	-	812.50	812.50	-	1
Siemens Immulite 2000 hCG	32818.73	32128.00	3954.74	12.1	1192.40	27478.00	39629.00	-	11
Snibe Diagnostics hCG	-	-	-	-	-	35684.00	35684.00	-	1
All	21996.91	17236.50	10889.26	49.5	1988.10	812.50	39629.00	-	30

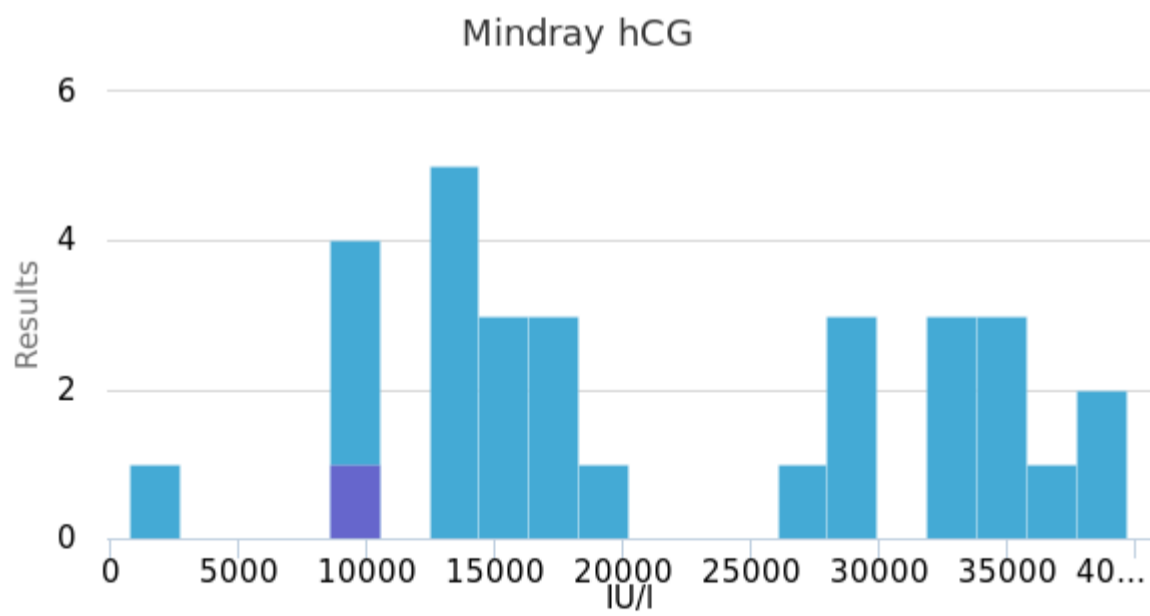
Sample S003 | total-hCG, IU/l | histogram summaries in LabScala



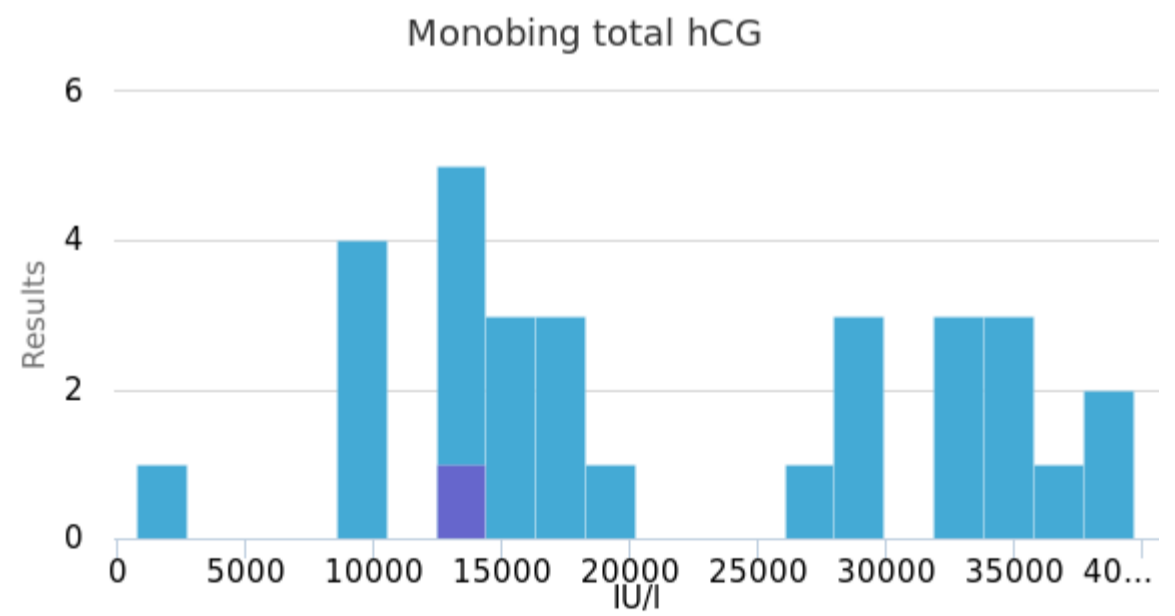
■ All method groups
 ■ Abbott Architect total beta hCG (x_{pt} : 10253.26 | Target area: 8202.61-12303.91 | Target: $\pm 20\%$)



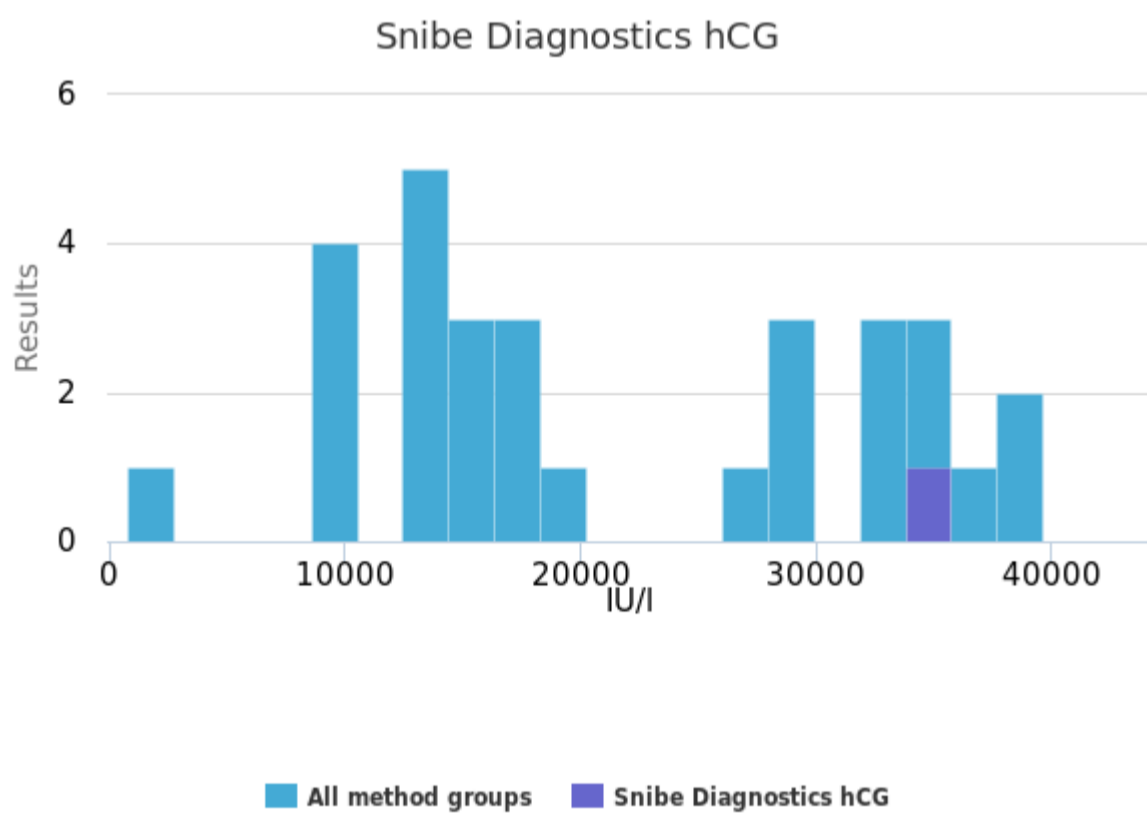
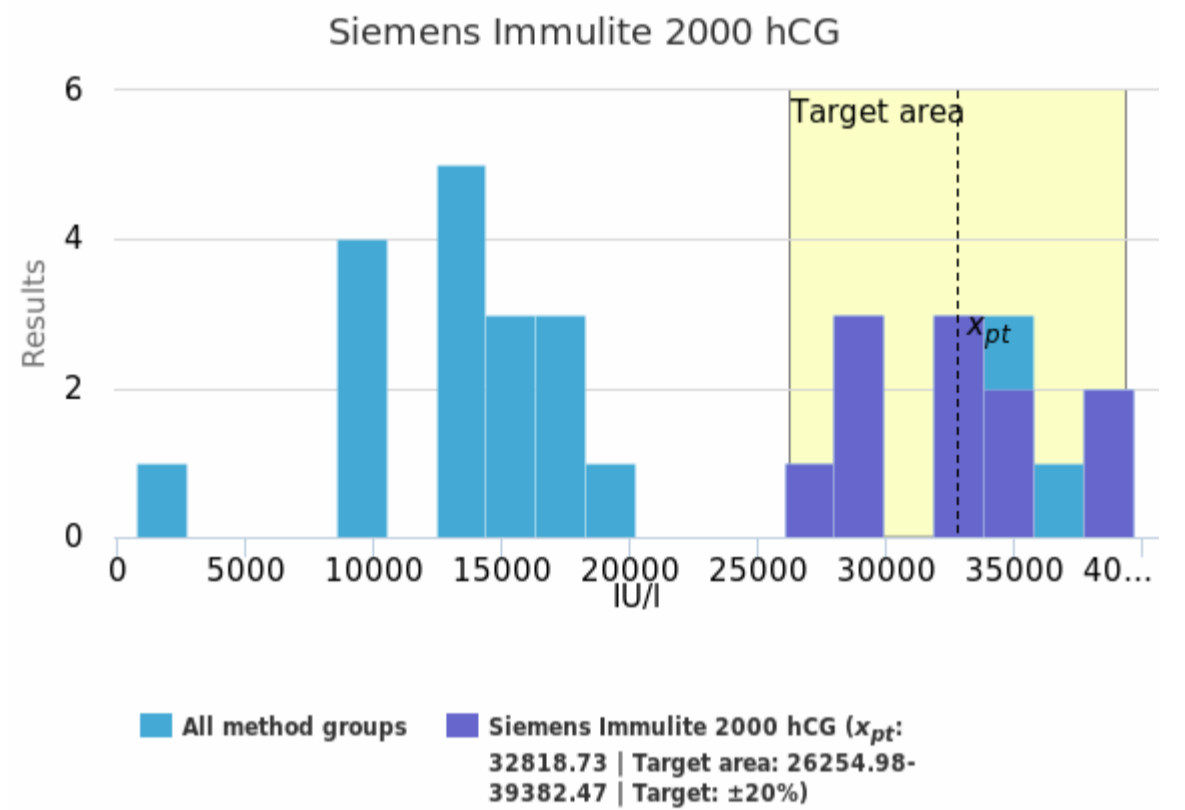
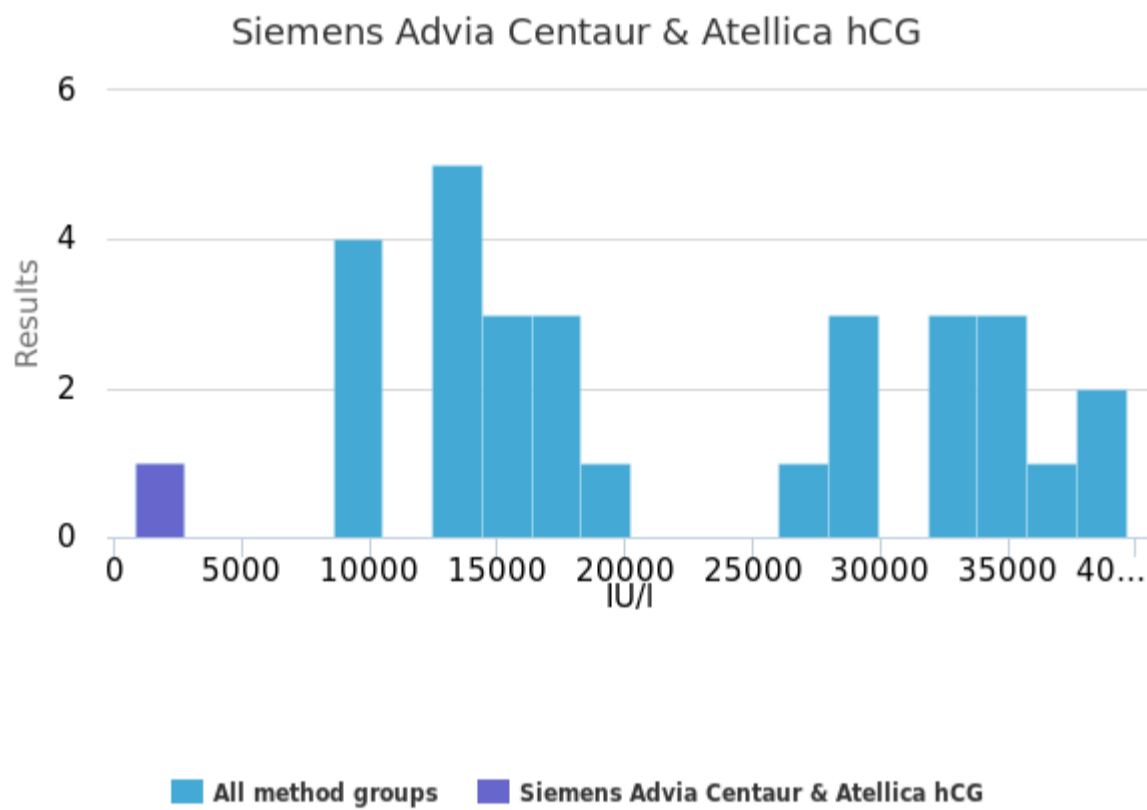
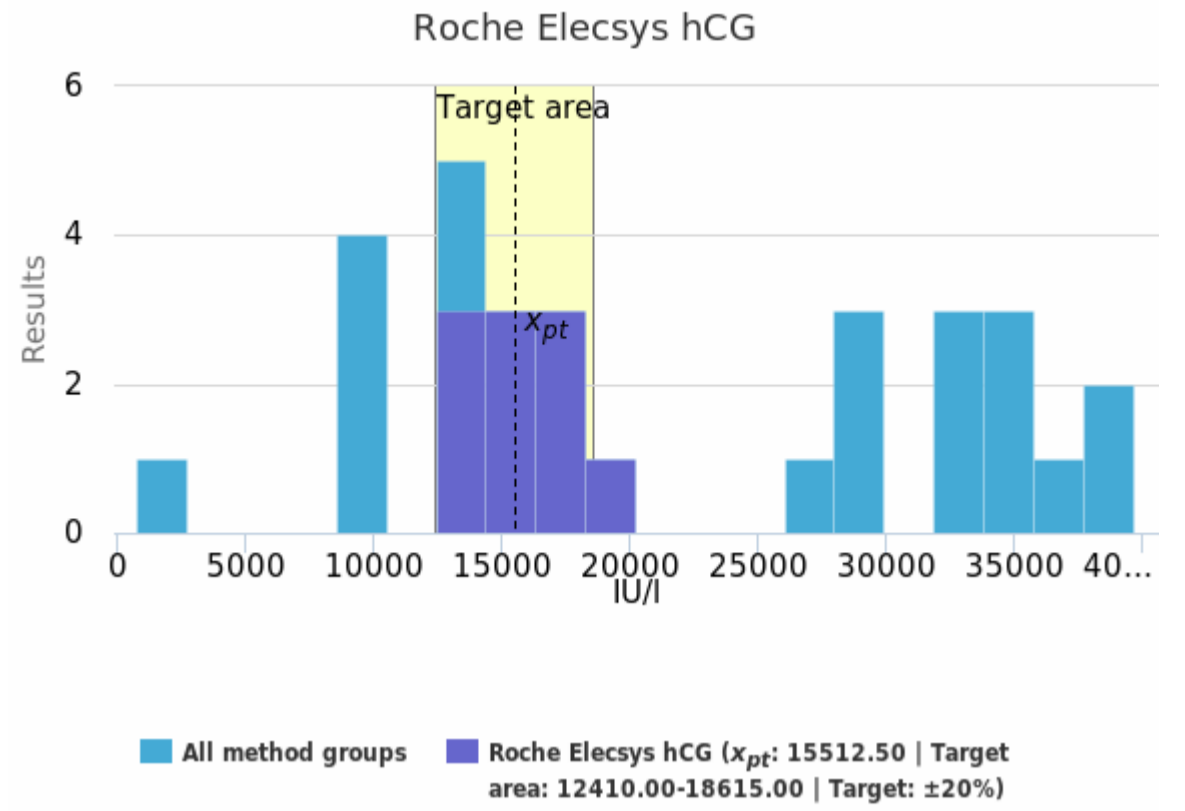
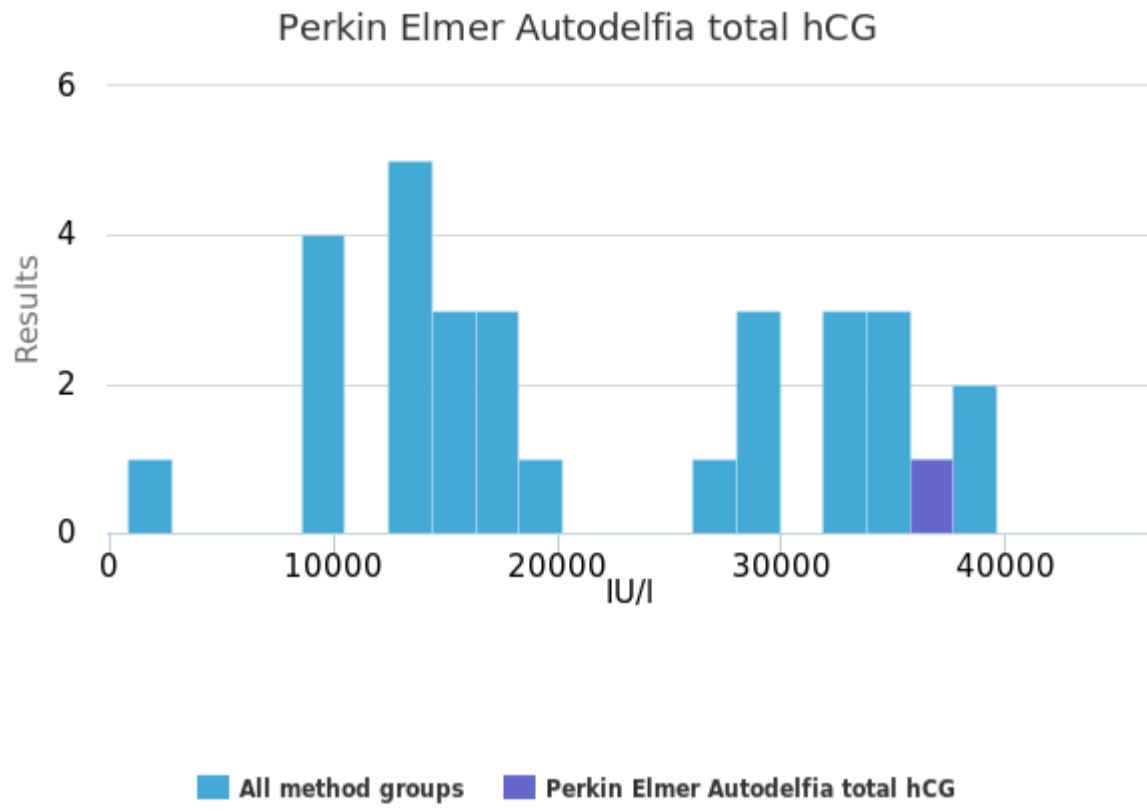
■ All method groups
 ■ Beckman Coulter hCG



■ All method groups
 ■ Mindray hCG



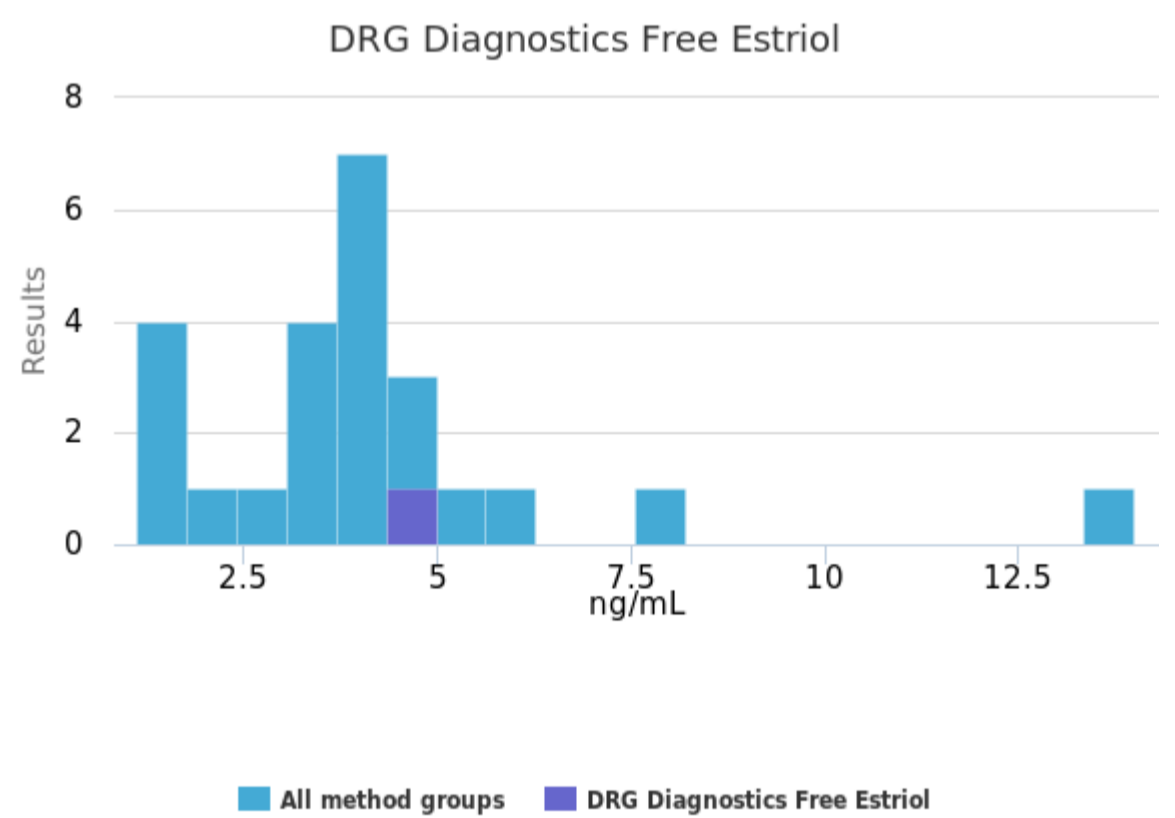
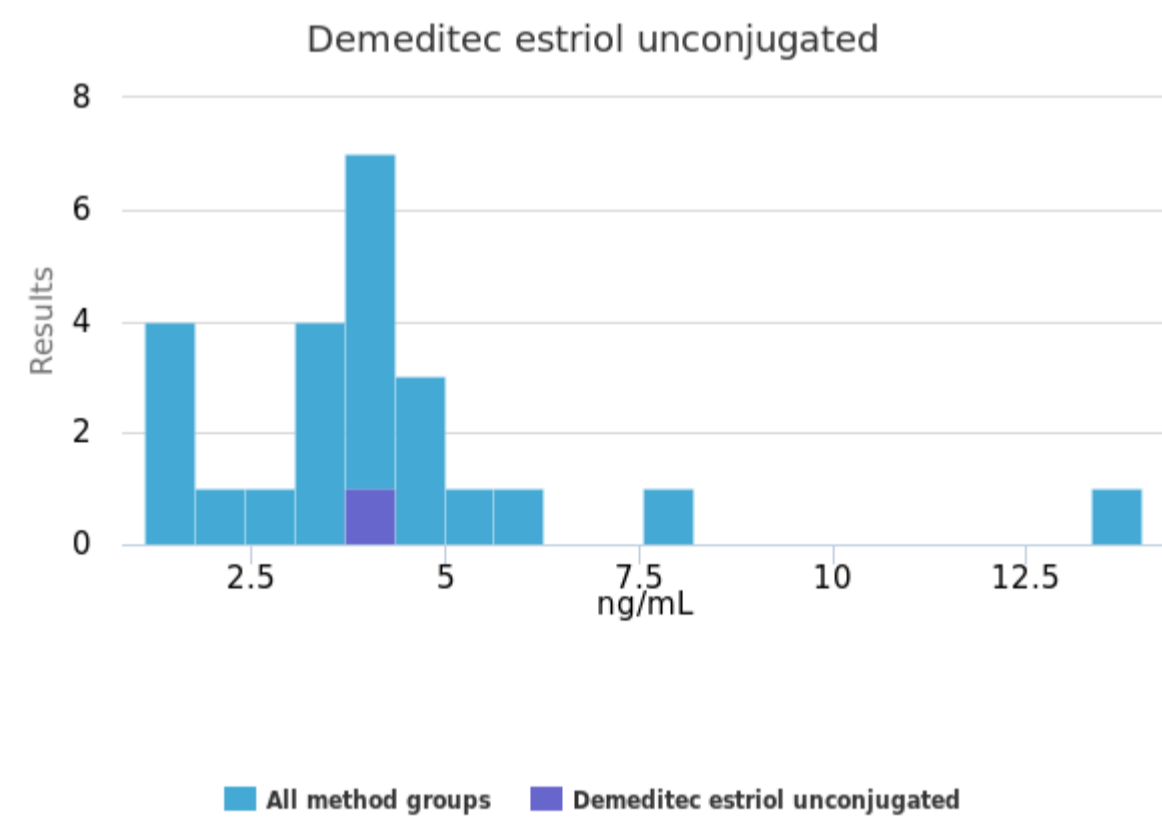
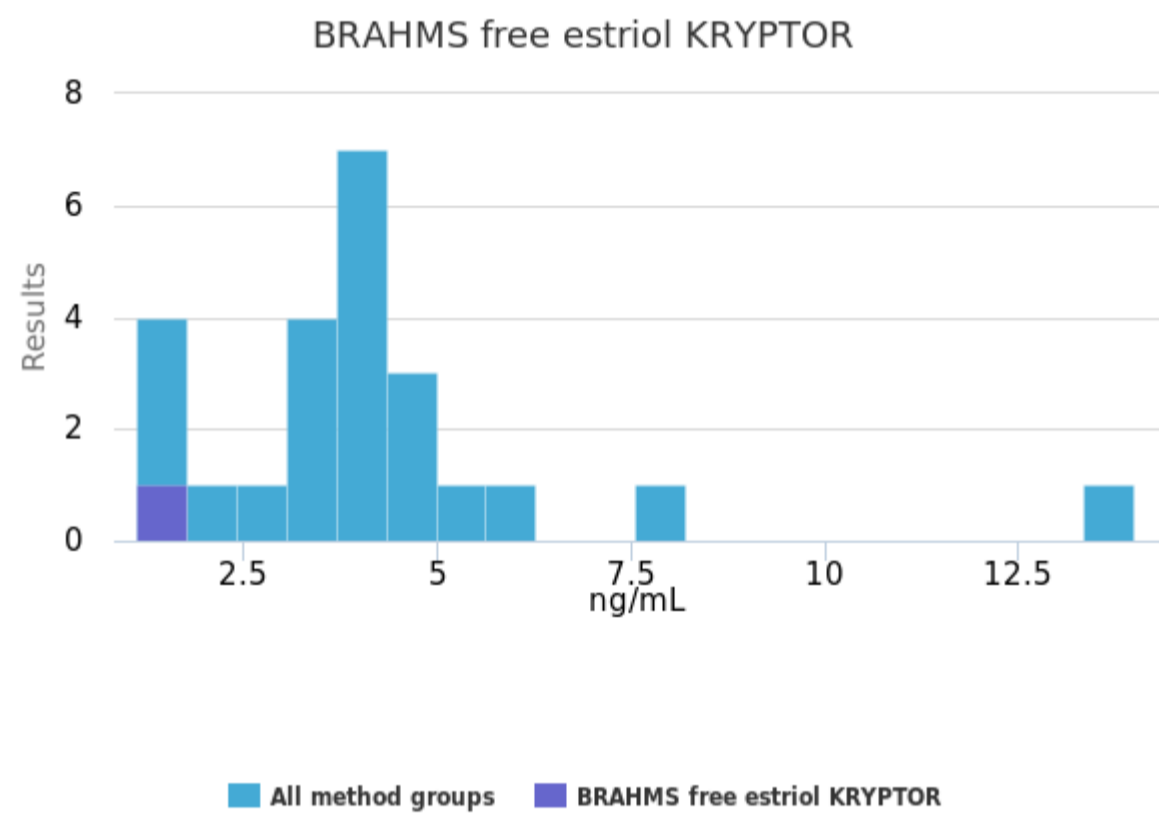
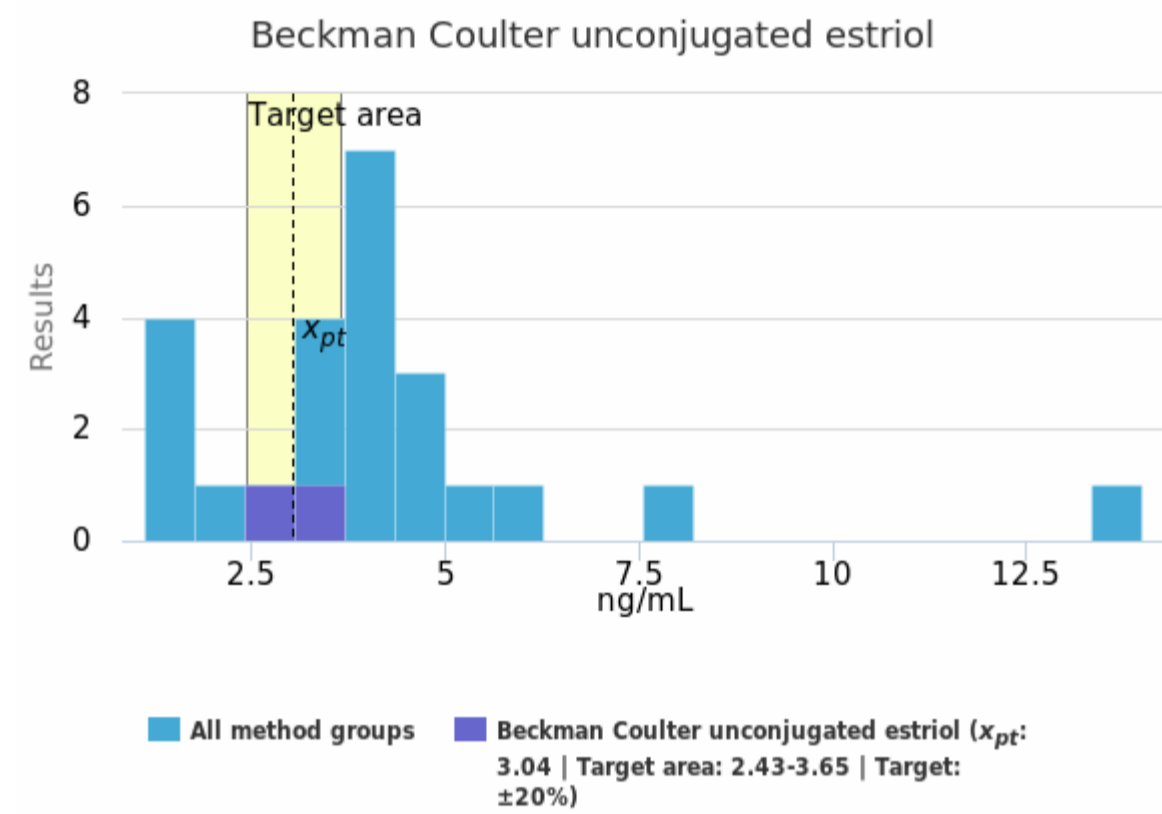
■ All method groups
 ■ Monobing total hCG

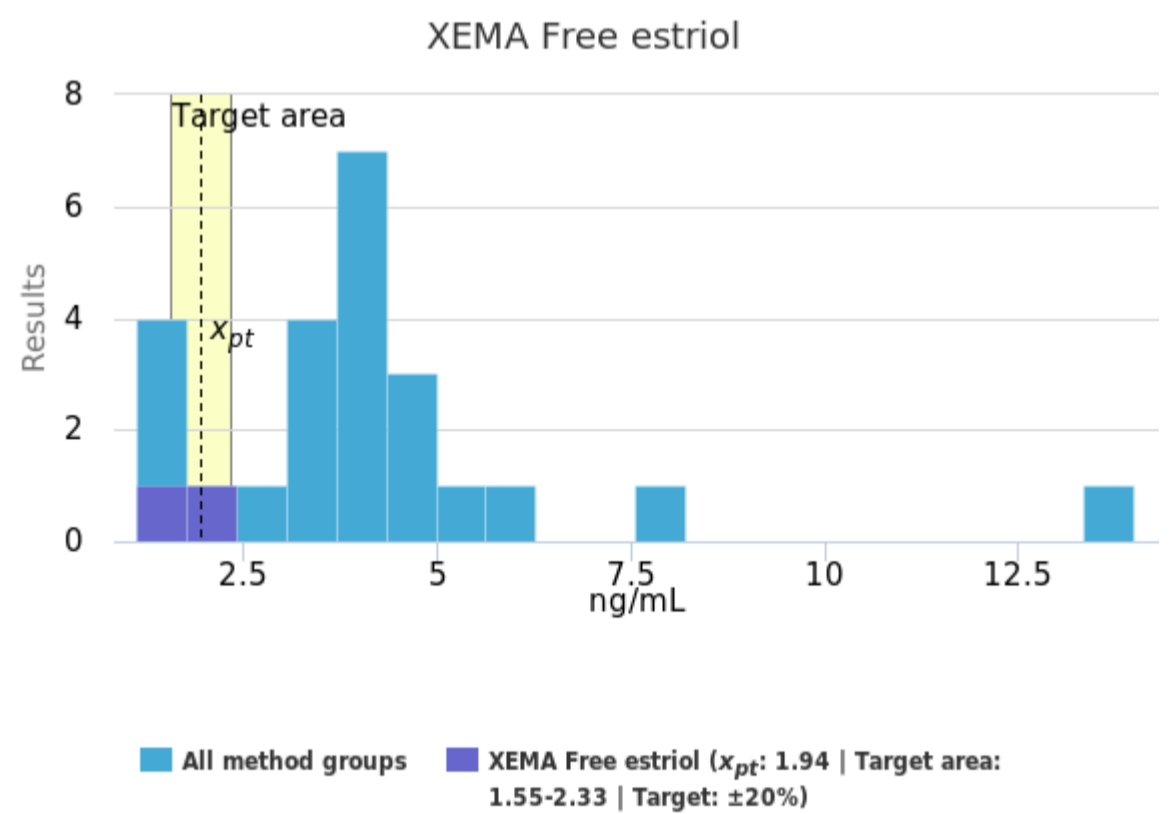
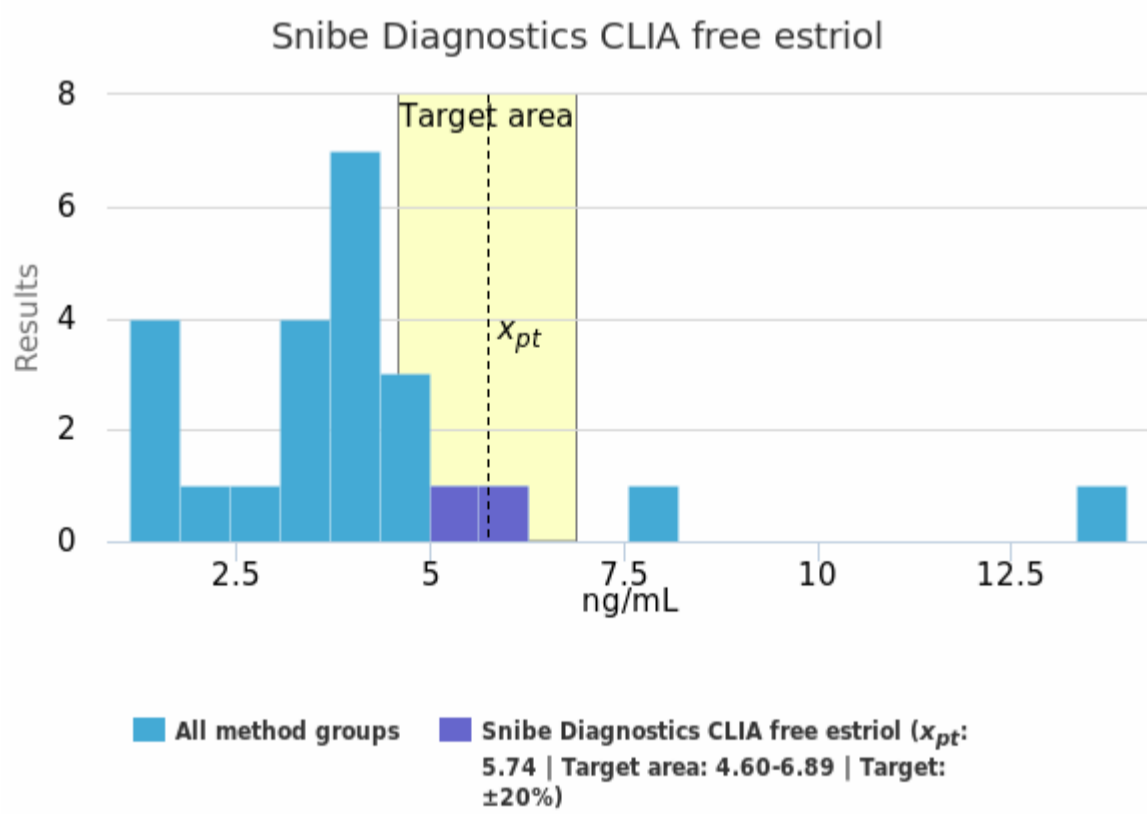
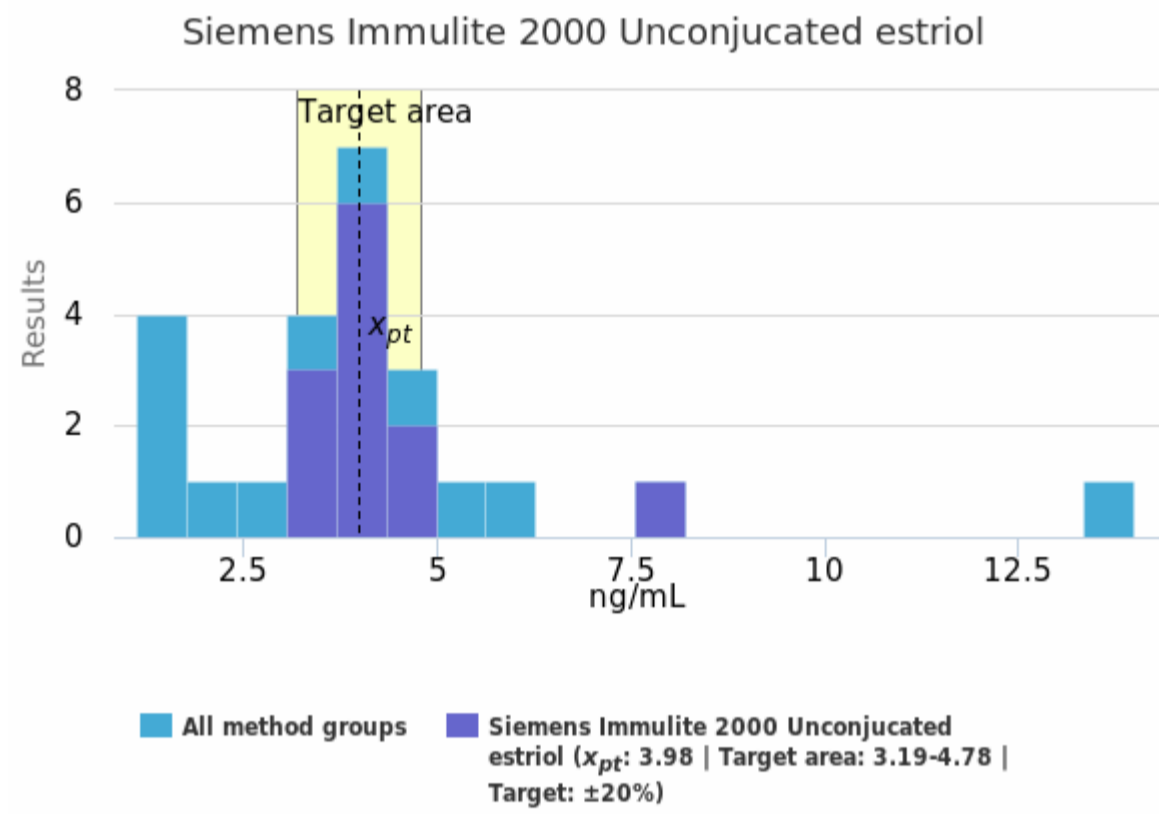
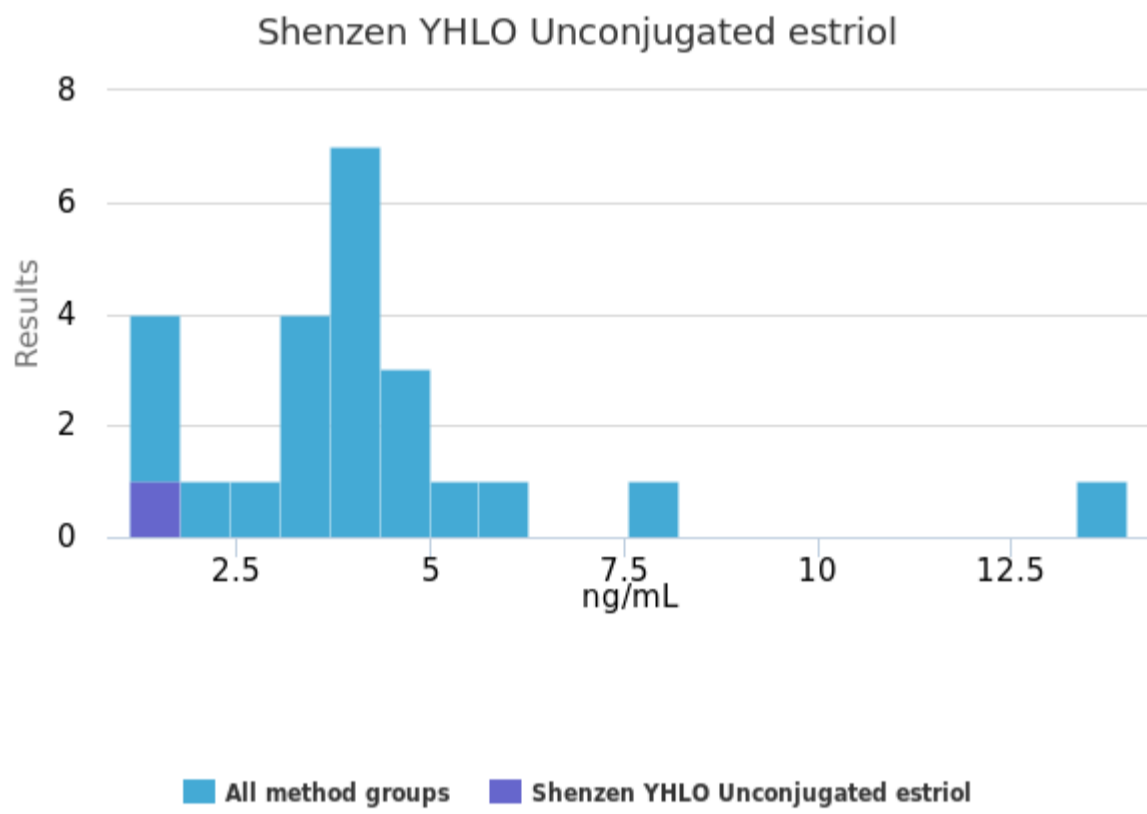
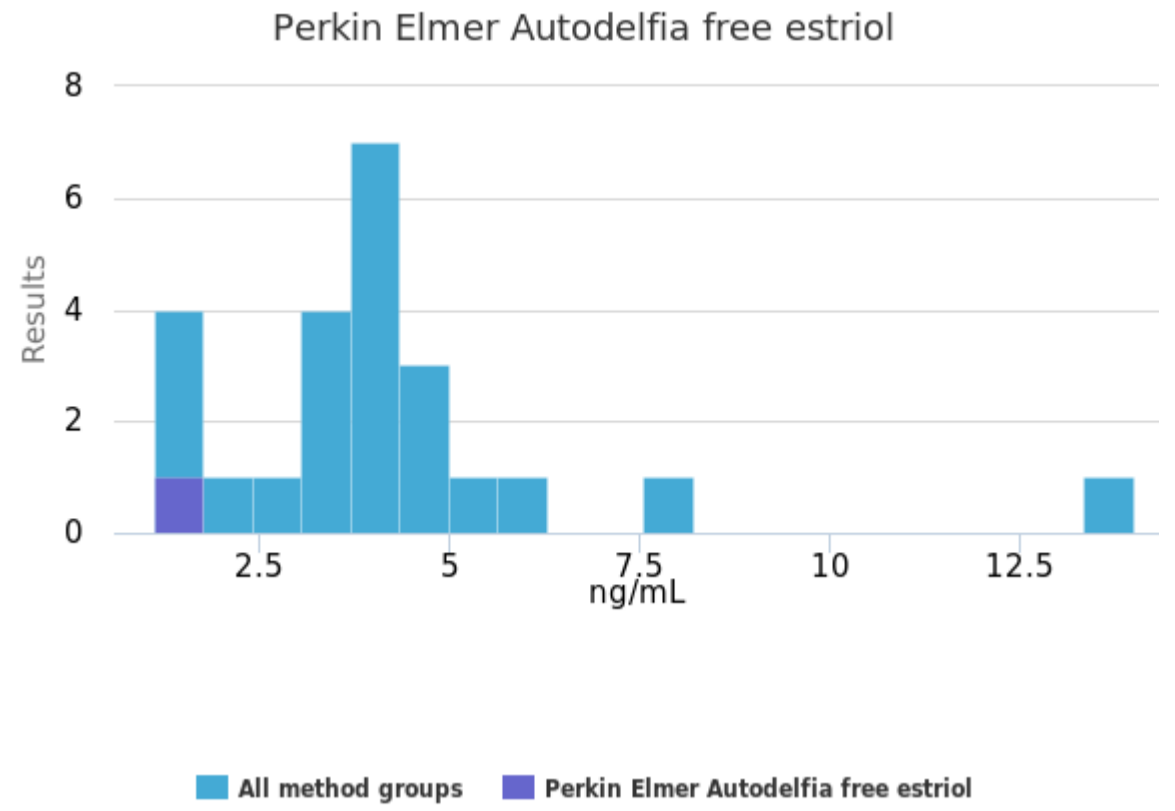
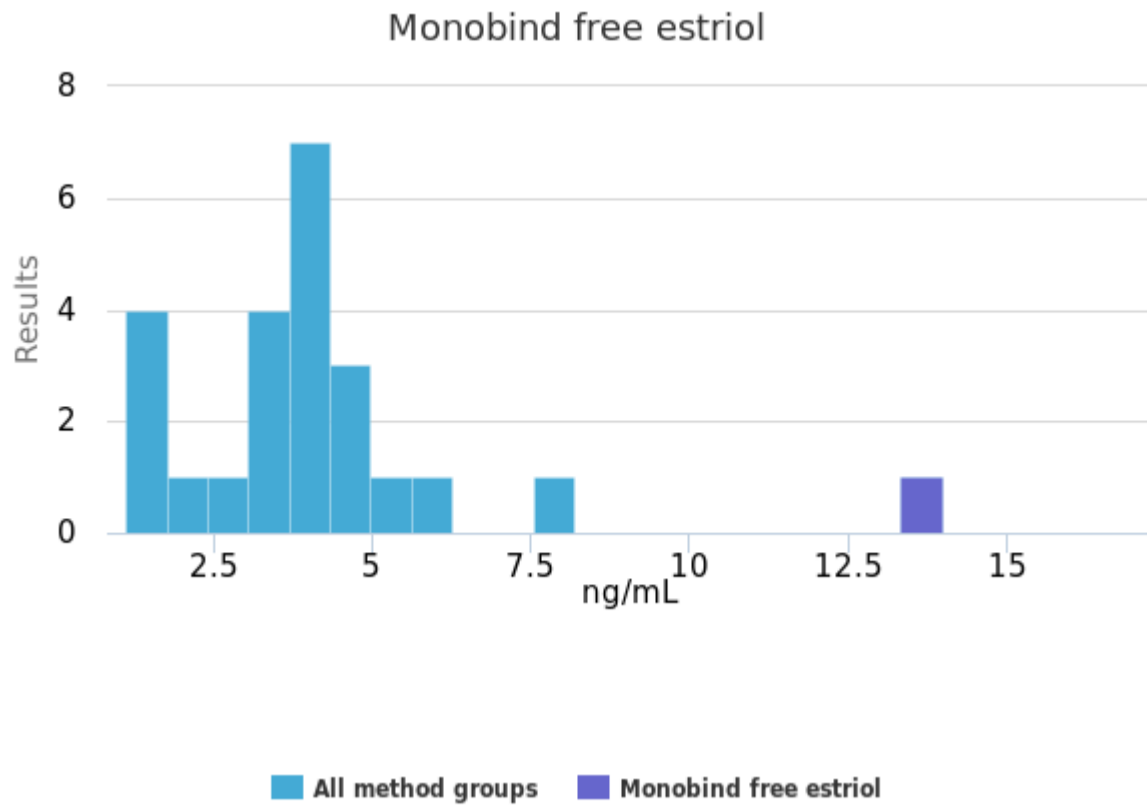


Sample S003 | unconjugated Estriol, ng/mL

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Beckman Coulter unconjugated estriol	3.04	3.04	0.06	2.0	0.04	3.00	3.09	-	2
BRAHMS free estriol KRYPTOR	-	-	-	-	-	1.64	1.64	-	1
Demeditec estriol unconjugated	-	-	-	-	-	3.80	3.80	-	1
DRG Diagnostics Free Estriol	-	-	-	-	-	4.66	4.66	-	1
Monobind free estriol	-	-	-	-	-	13.98	13.98	-	1
Perkin Elmer Autodelphia free estriol	-	-	-	-	-	1.13	1.13	-	1
Shenzen YHLO Unconjugated estriol	-	-	-	-	-	1.67	1.67	-	1
Siemens Immulite 2000 Unconjugated estriol	3.98	3.92	0.41	10.3	0.12	3.40	4.71	1	12
Snibe Diagnostics CLIA free estriol	5.74	5.74	0.66	11.5	0.47	5.28	6.21	-	2
XEMA Free estriol	1.94	1.94	0.64	33.1	0.45	1.49	2.39	-	2
All	3.73	3.83	1.52	40.6	0.32	1.13	7.69	1	24

Sample S003 | unconjugated Estriol, ng/mL | histogram summaries in LabScala





Report info**Participants**

50 participants from 18 countries.

Report info

Your own result should be compared to others using the same method.

Assigned values (\bar{x}_p , 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 "EOAS Interpretation guidelines" LabScala User instructions (top right corner ?Help link).

External Quality Assessment Scheme

Maternal serum screening Round 1, 2023 (Pilot)

Thank you for participating in the pilot round. In year 2024, there will be two rounds and the new scheme is 2707 Maternal serum screening. Please remember to register to round 1 as soon as possible.

Please give us your valuable feedback regarding this scheme by responding to a [short questionnaire through this link](#) anonymously. By responding, you can participate in the lottery of a Finnish treat box. Your name cannot be linked to your answers.

Specimens

Sample S001 (LQ741623011), sample S002 (LQ741623012) and sample S003 (LQ741623013) were lyophilized serum samples.

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 histogram 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 – EQA Coordinator

AFP

Most of the results were reported using Siemens or Roche methods. The result levels of all methods are quite uniform except DRG Diagnostics which has a level twice as high as other method levels in each of the three samples.

Free beta hCG and total hCG

The results of free beta hCG are quite uniform in all method groups. Siemens Atellica and Siemens Immulite results agree well with each other in contrast to total hCG where Siemens Immulite results are much higher than Siemens Atellica results. For this reason, method groups were established in different ways for free beta hCG and total hCG. In total hCG, the Siemens methods are in different method groups, while in free beta hCG they are in the same group. Total hCG has also one result in XEMA method group which is much higher than other results.

PAPP-A

The results of PAPP-A are bimodal the lower group consisting of results from Perkin Elmer, Roche, Siemens Advia Centaur & Atellica, Snibe and Thermo Scientific while the higher group consists of DRG Diagnostics, Immunocentrix, Siemens Immulite and XEMA. Again, Siemens Advia Centaur & Atellica and Siemens Immulite results differ from each other so much that the results are placed in their own separate groups.

Unconjugated estriol

The results in different method groups differ from each other.

There were no results at all for inhibin.

2023-12-29

FINAL REPORT

Product no. 2707

Samples sent	2023-11-14
Round closed	2023-12-07
Final report	2023-12-29

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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The round went very well. Thirty out of forty-five (30/45) of the clients had all results within target limits. Most of the deviating results were in unconjugated estriol. However, the target range could only be given for analytes and method groups with result $N \geq 2$. The results were very uniform in all method groups.

End of report

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