

External Quality Assessment Scheme

## Leucocyte differential count, 5-part, automated Round 1, 2023

### Specimens

According to your order you will receive one of the following blood cell suspensions S001, S002, S003, S004, S005, S006, S007, S009 or S010, each 3 mL. S001 is for Coulter MaxM, HMX, GenS and LH750 analysers (not for AcT 5 diff.), S002 for Cell-Dyn analysers, S003 for Advia analysers, S004 for Sysmex analysers, S005 for Coulter AcT 5-diff and ABX Pentra analysers, S006 for Mindray analysers, S007 for Nihon Kohden Celltac MEK analysers and S009 is for Mythic analysers. S010 is suitable for Coulter DxH 560 AL analysers.

### 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

B-Leuc  
B-Lym  
B-Mon  
B-Neutr  
B-Eos  
B-Baso

### Storage and use

After arrival store sample in a refrigerator (+2...8 °C), do not freeze. Allow tube to stand at room temperature at least 15 minutes before analysing. Mix the sample by gentle hand inversions until suspension appears homogenous.

Advia 120,2120,2120i analysers: Sample should be analysed as a control sample. Total leucocyte value should be answered from the Baso channel.

Sysmex analysers: Sample should be analyzed as a control sample in control channel (QC mode), not as a patient sample. The users of XN analyser should analyse the sample in Control Level 1 channel and XN-L users in XN-L Control Level 1 channel. Sysmex XS users should analyse the sample in Control Level 1 channel. Leucocyte values should be given same way as from patient samples. The basophile results should be handled differently from other leucocyte values because the EQA sample gives very high basophile values with XE and XT analysers. The high basophile value is characteristic and normal phenomenon with this sample.

Coulter AcT 5.diff., ABX, Mindray and Mythic analysers: Please carry out the sample as a control sample in Quality Control section of your analyzer.

Coulter DxH 560 AL analyser: Analyse as a patient sample.

The other analysers than above: If the analyser counts total value of leucocytes in several channels the result should be given from the same channel as the differential counts.

2023-03-13

### INSTRUCTIONS

Product no. 4230-4237,4239-4240  
LQ711823011-017/US  
LQ711823019-110/US

If the kit is incomplete or contains damaged specimens, please report immediately to [info@labquality.fi](mailto:info@labquality.fi).

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The results should be reported no later than **March 29, 2023.**

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### Inquiries

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*Accreditation does not cover products 4239-4240.*



Leucocyte differential count, 5-part, automated

**Result reporting**

Please enter the results and methods via LabScala ([www.labscala.com](http://www.labscala.com)). If you cannot find your instrument or reagent from the registry, please contact the EQA Coordinator. Results should be given as an absolute value.

S001



S006



S002



S007



S003



S009



S004



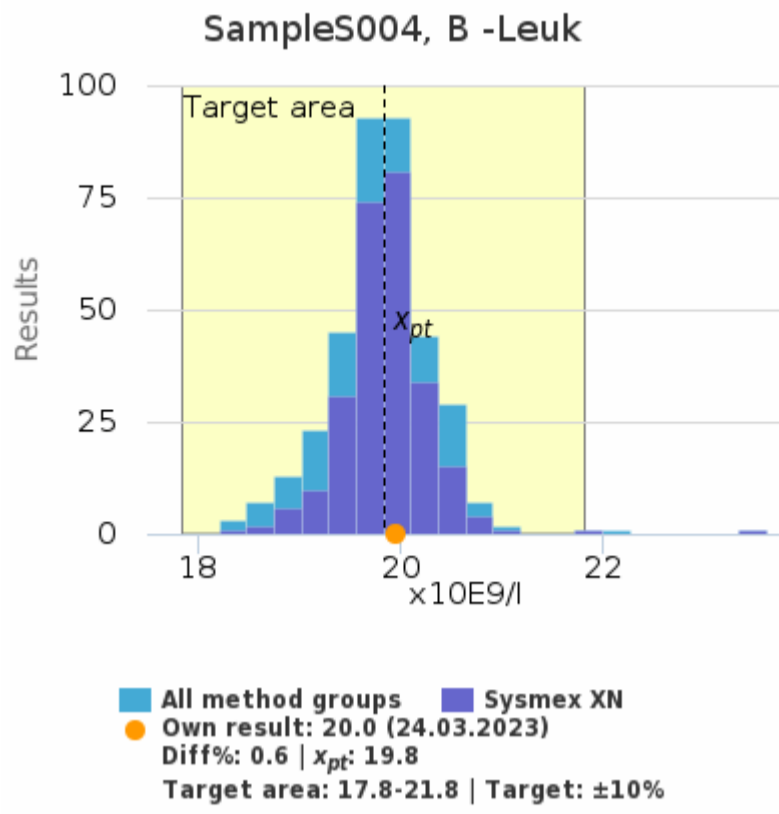
S010



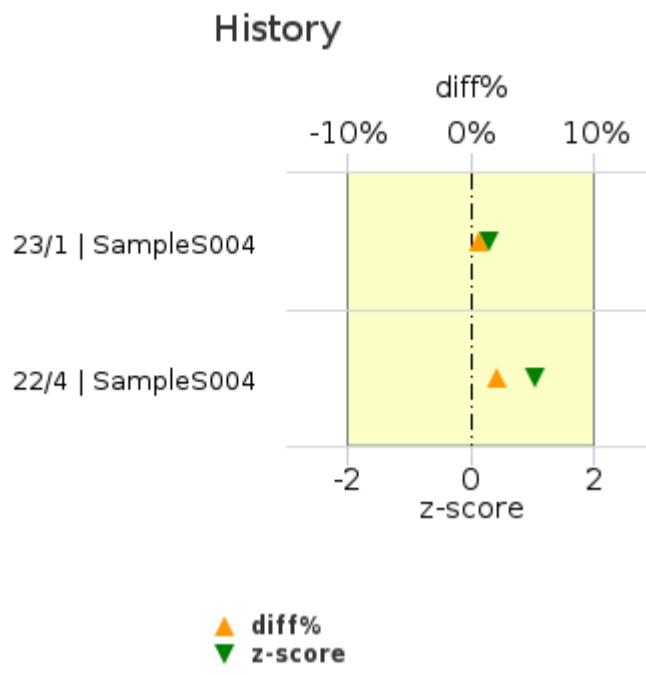
S005



B -Leuk | Sysmex

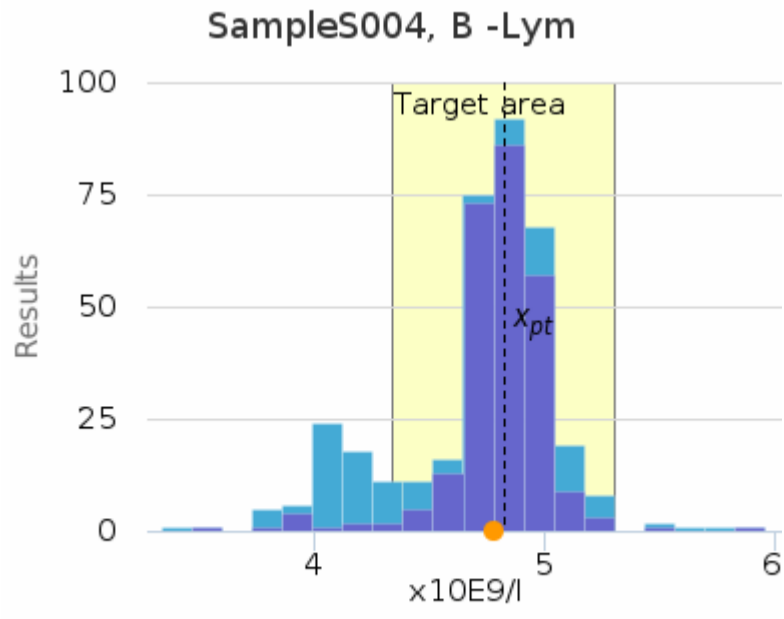


	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	19.8 x10E9/l	0.4	<0.1	2.0	261
All methods	19.8 x10E9/l	0.5	<0.1	2.3	362



Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	19.8	20.0	0.6%	0.30
22/4	Sample S004	3.9	4.0	2.1%	1.03

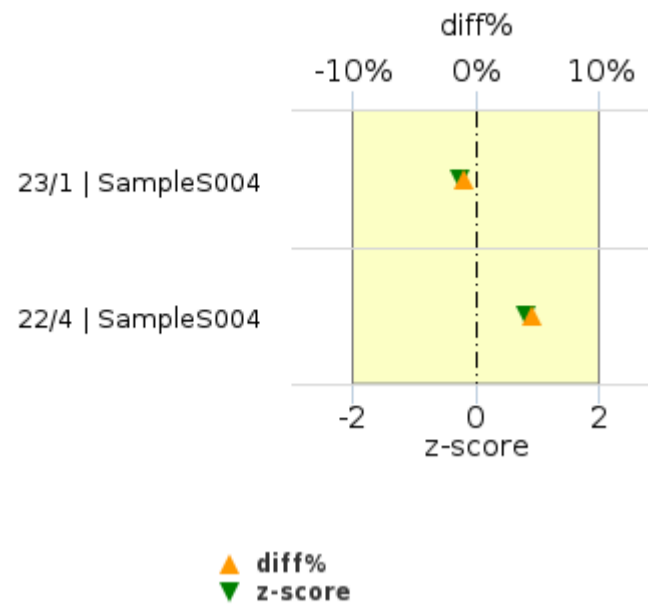
B -Lym | Sysmex



■ All method groups    ■ Sysmex XN  
● Own result: 4.78 (24.03.2023)  
 Diff%: -0.92 |  $x_{pt}$ : 4.82  
 Target area: 4.34-5.31 | Target:  $\pm 10\%$

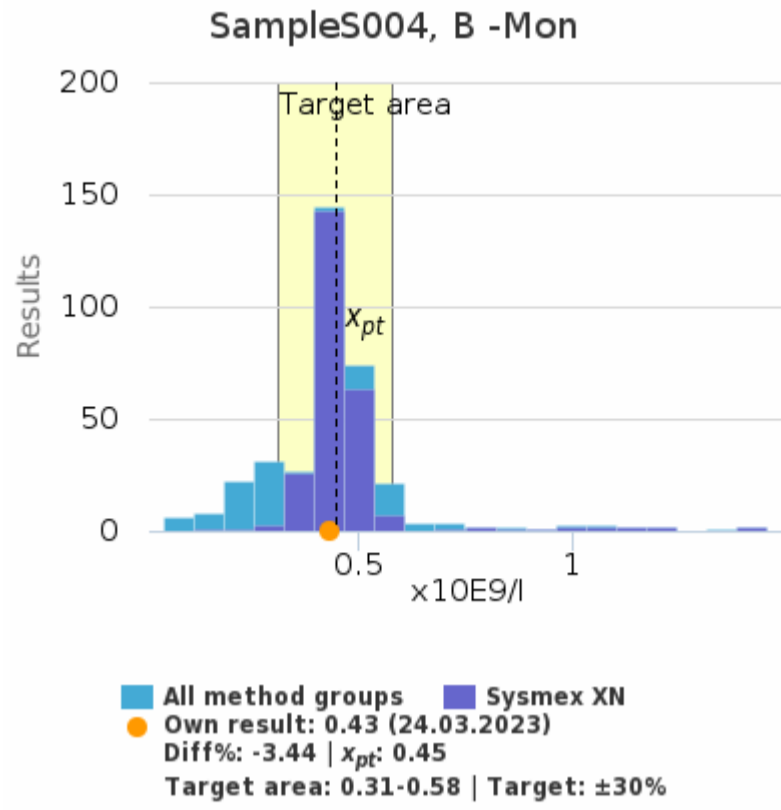
	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	4.82 x10E9/l	0.16	0.01	3.4	259
All methods	4.72 x10E9/l	0.34	0.02	7.1	360

History

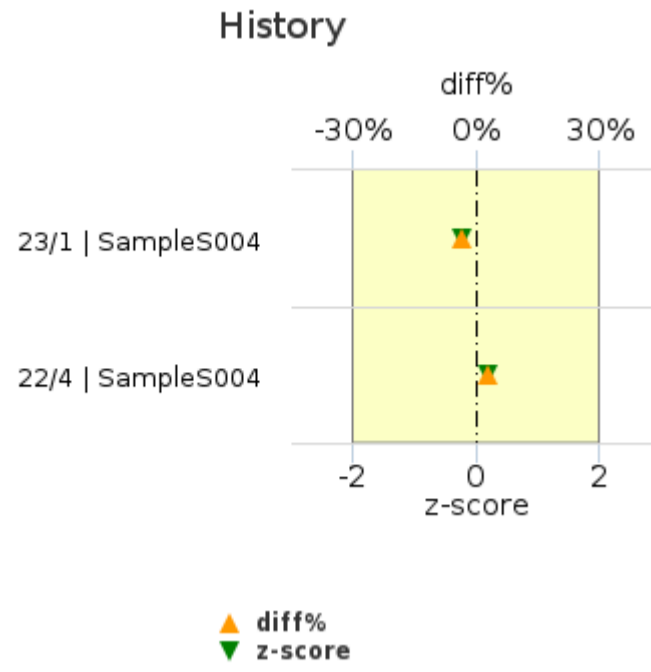


Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	4.82	4.78	-0.92%	-0.27
22/4	Sample S004	0.59	0.62	4.57%	0.82

B - Mon | Sysmex

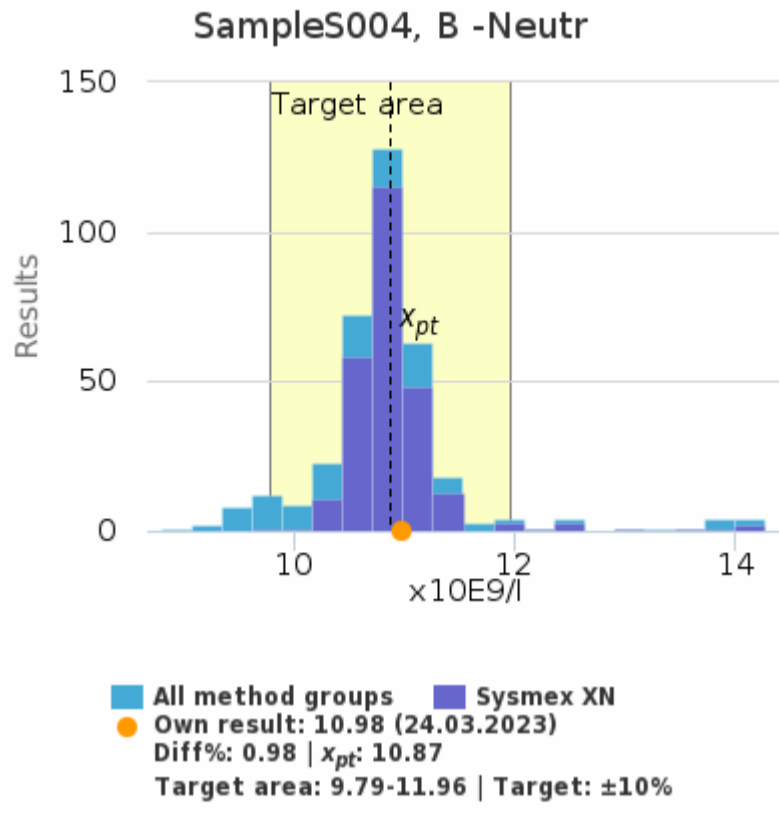


	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	0.45 x10E9/l	0.07	<0.01	15.4	259
All methods	0.42 x10E9/l	0.13	<0.01	30.6	360

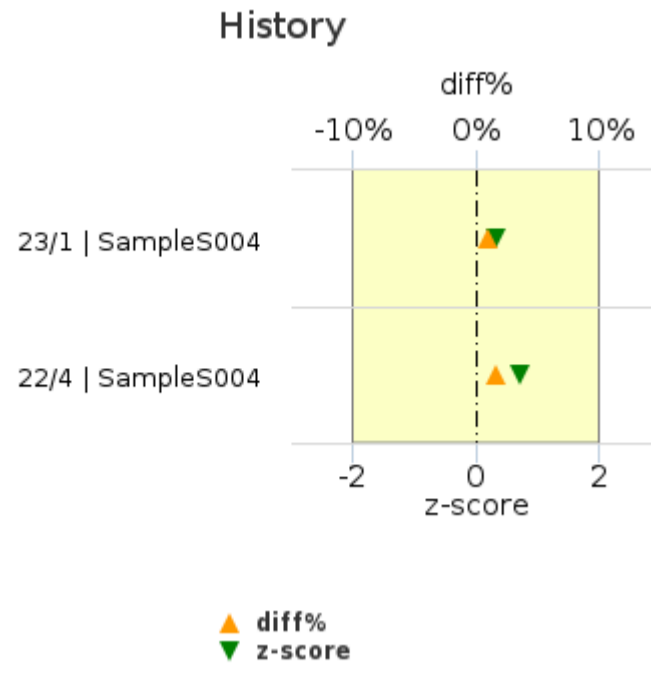


Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	0.45	0.43	-3.44%	-0.22
22/4	Sample S004	0.08	0.08	3.01%	0.20

B -Neutr | Sysmex

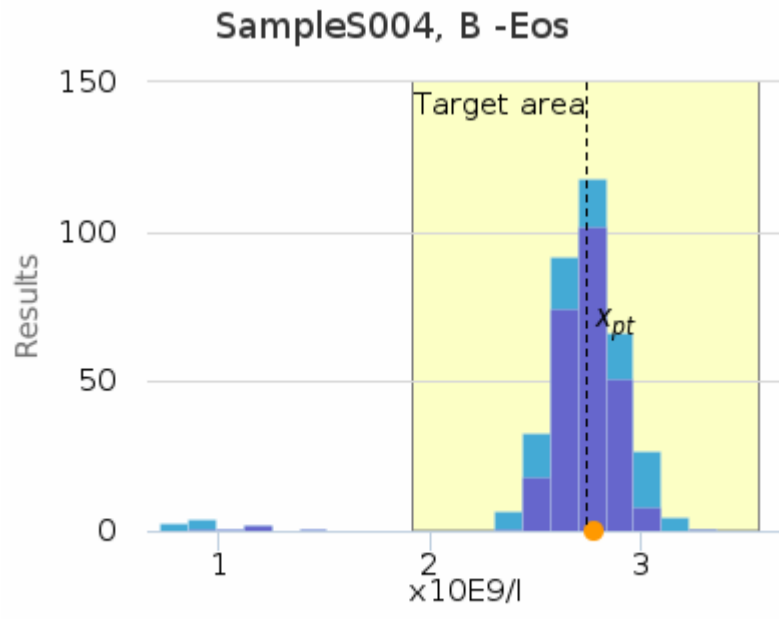


	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	10.87 x10E9/l	0.32	0.02	2.9	259
All methods	10.77 x10E9/l	0.49	0.03	4.5	359



Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	10.87	10.98	0.98%	0.33
22/4	Sample S004	2.38	2.42	1.74%	0.70

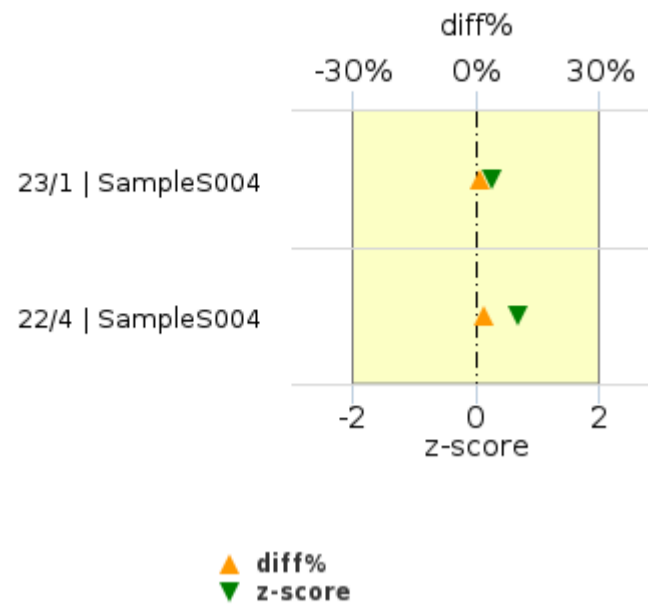
B -Eos | Sysmex



■ All method groups    ■ Sysmex XN  
● Own result: 2.77 (24.03.2023)  
 Diff%: 1.15 |  $x_{pt}$ : 2.74  
 Target area: 1.92-3.56 | Target:  $\pm 30\%$

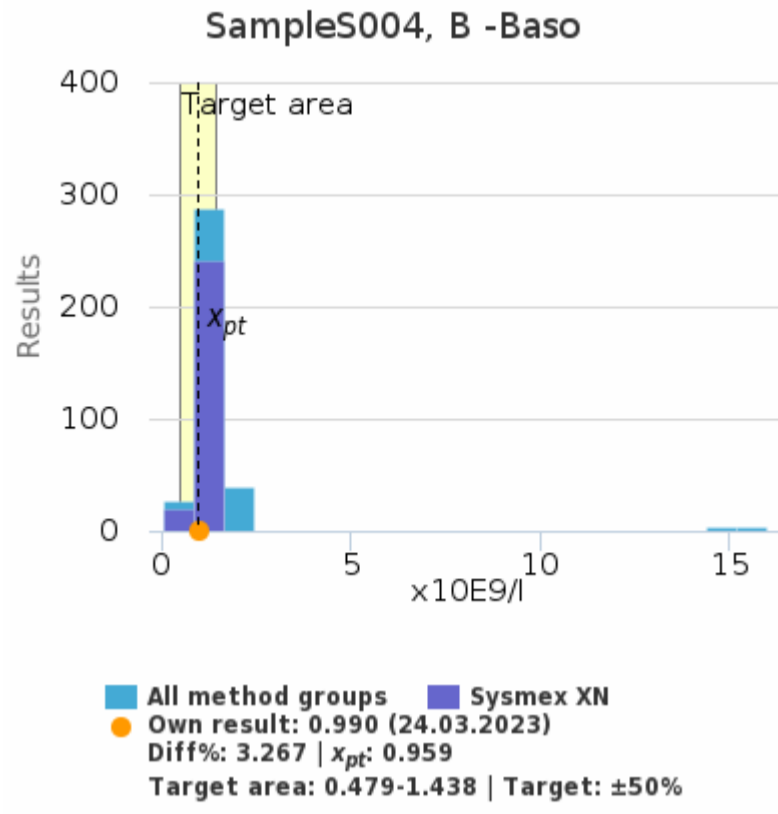
	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	2.74 x10E9/l	0.13	<0.01	4.6	260
All methods	2.75 x10E9/l	0.16	<0.01	5.7	360

History

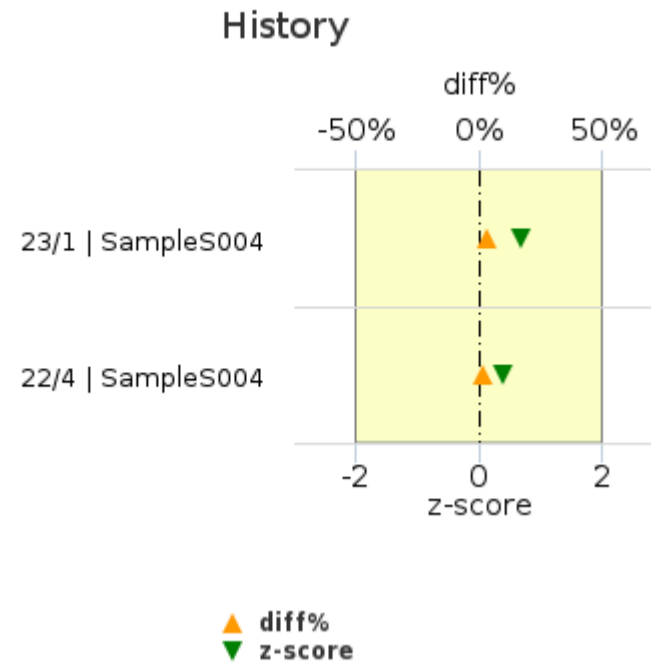


Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	2.74	2.77	1.15%	0.25
22/4	Sample S004	0.63	0.64	1.88%	0.68

B -Baso | Sysmex



	$x_{pt}$	sd	SEM	CV%	n
Sysmex XN	0.959 x10E9/l	0.045	0.003	4.7	260
All methods	1.054 x10E9/l	0.402	0.021	38.1	361



Round	Sample	$x_{pt}$	Result	diff%	z-score
23/1	Sample S004	0.959	0.990	3.267%	0.69
22/4	Sample S004	0.187	0.190	1.460%	0.40



**Report info****Participants**

300 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  $\pm 3$  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.

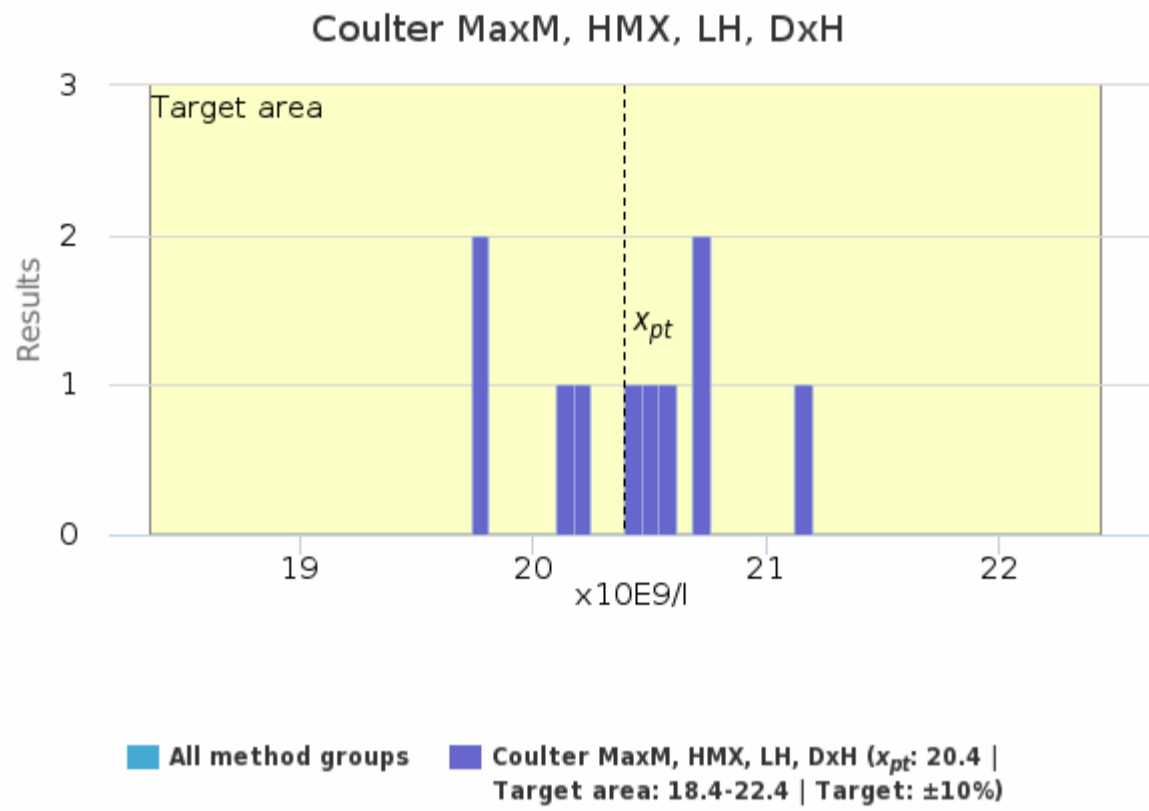
Results reported with  $<$  or  $>$  -signs cannot be included in the statistics.

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

Sample S001 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	20.4	20.5	0.4	2.2	0.1	19.7	21.2	-	10
<b>All</b>	<b>20.4</b>	<b>20.5</b>	<b>0.4</b>	<b>2.2</b>	<b>0.1</b>	<b>19.7</b>	<b>21.2</b>	-	<b>10</b>

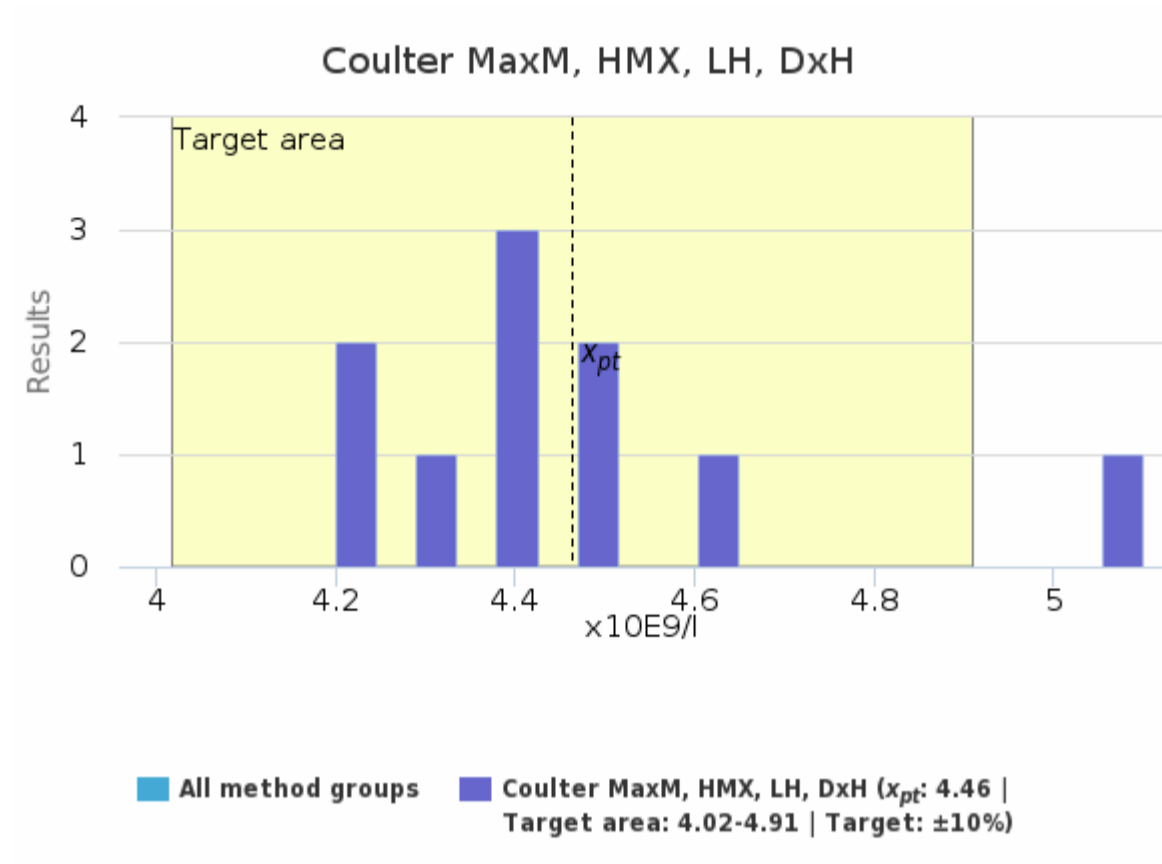
Sample S001 | B -Leuk, x10E9/l | histogram summaries in LabScala



Sample S001 | B -Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	4.46	4.41	0.26	5.8	0.08	4.20	5.10	-	10
<b>All</b>	<b>4.46</b>	<b>4.41</b>	<b>0.26</b>	<b>5.8</b>	<b>0.08</b>	<b>4.20</b>	<b>5.10</b>	-	<b>10</b>

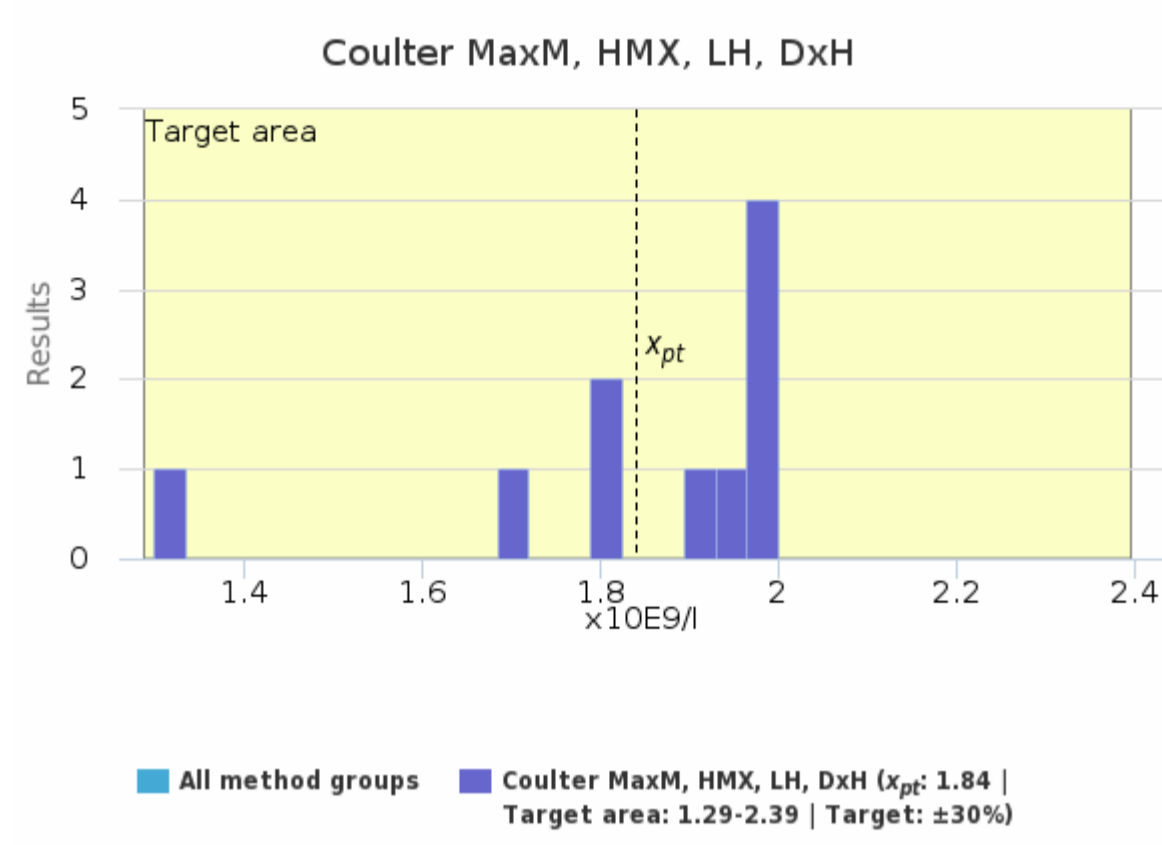
Sample S001 | B -Lym, x10E9/l| histogram summaries in LabScala



Sample S001 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	1.84	1.92	0.22	11.7	0.07	1.30	2.00	-	10
<b>All</b>	<b>1.84</b>	<b>1.92</b>	<b>0.22</b>	<b>11.7</b>	<b>0.07</b>	<b>1.30</b>	<b>2.00</b>	-	<b>10</b>

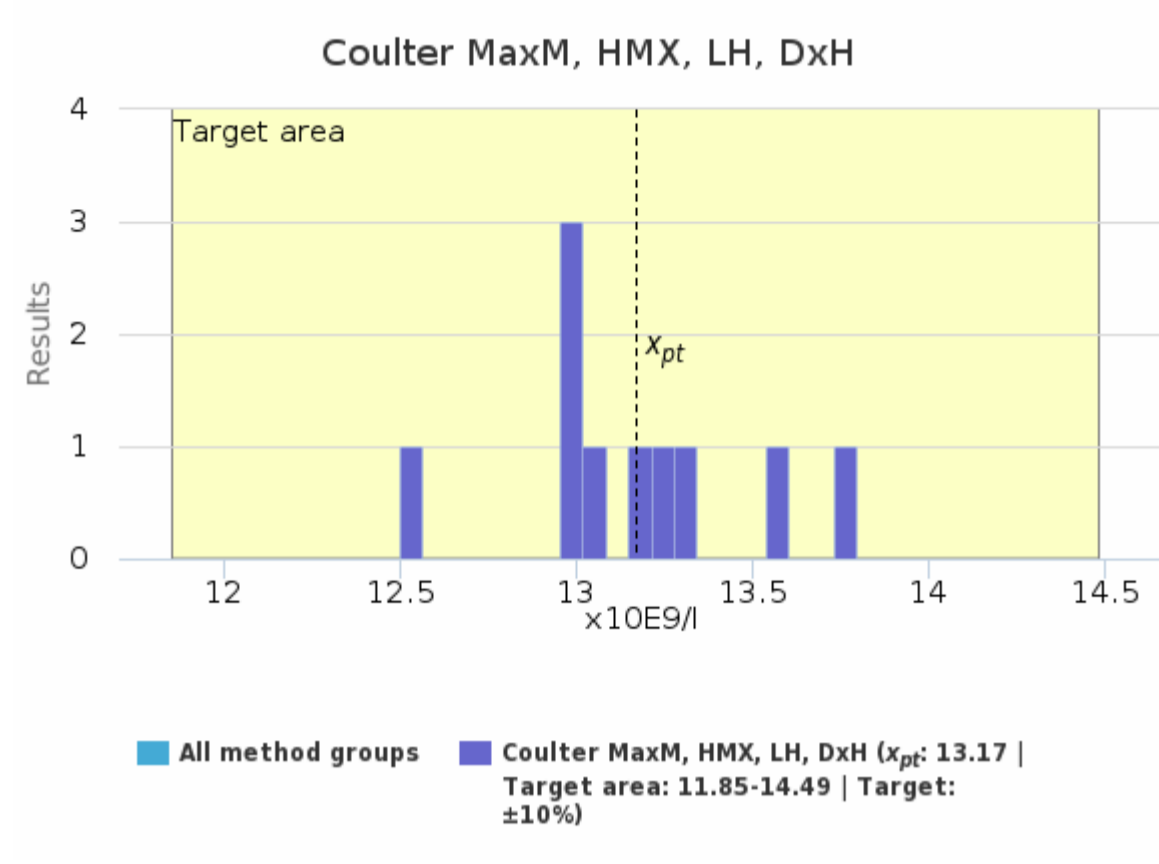
Sample S001 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S001 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	13.17	13.12	0.36	2.7	0.11	12.50	13.80	-	10
<b>All</b>	<b>13.17</b>	<b>13.12</b>	<b>0.36</b>	<b>2.7</b>	<b>0.11</b>	<b>12.50</b>	<b>13.80</b>	-	<b>10</b>

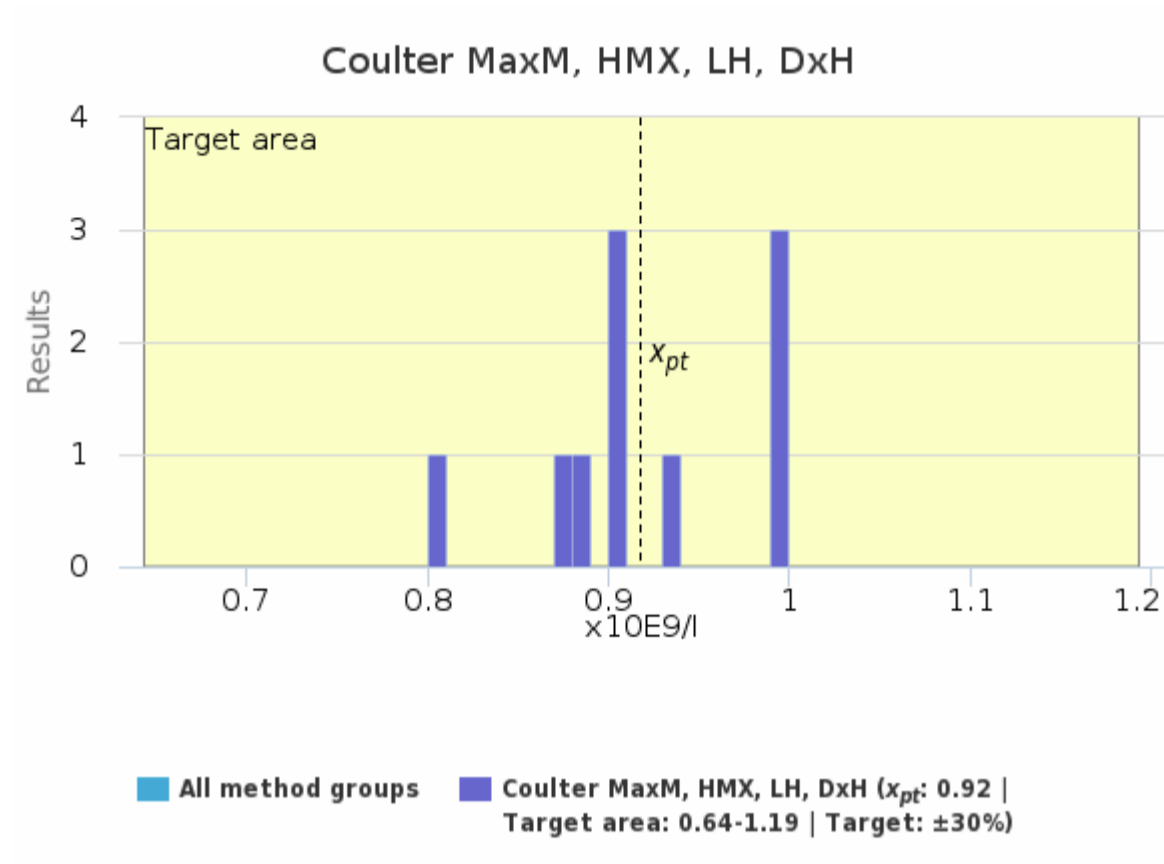
Sample S001 | B -Neutr, x10E9/l | histogram summaries in LabScala



Sample S001 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	0.92	0.90	0.07	7.2	0.02	0.80	1.00	-	10
<b>All</b>	<b>0.92</b>	<b>0.90</b>	<b>0.07</b>	<b>7.2</b>	<b>0.02</b>	<b>0.80</b>	<b>1.00</b>	-	<b>10</b>

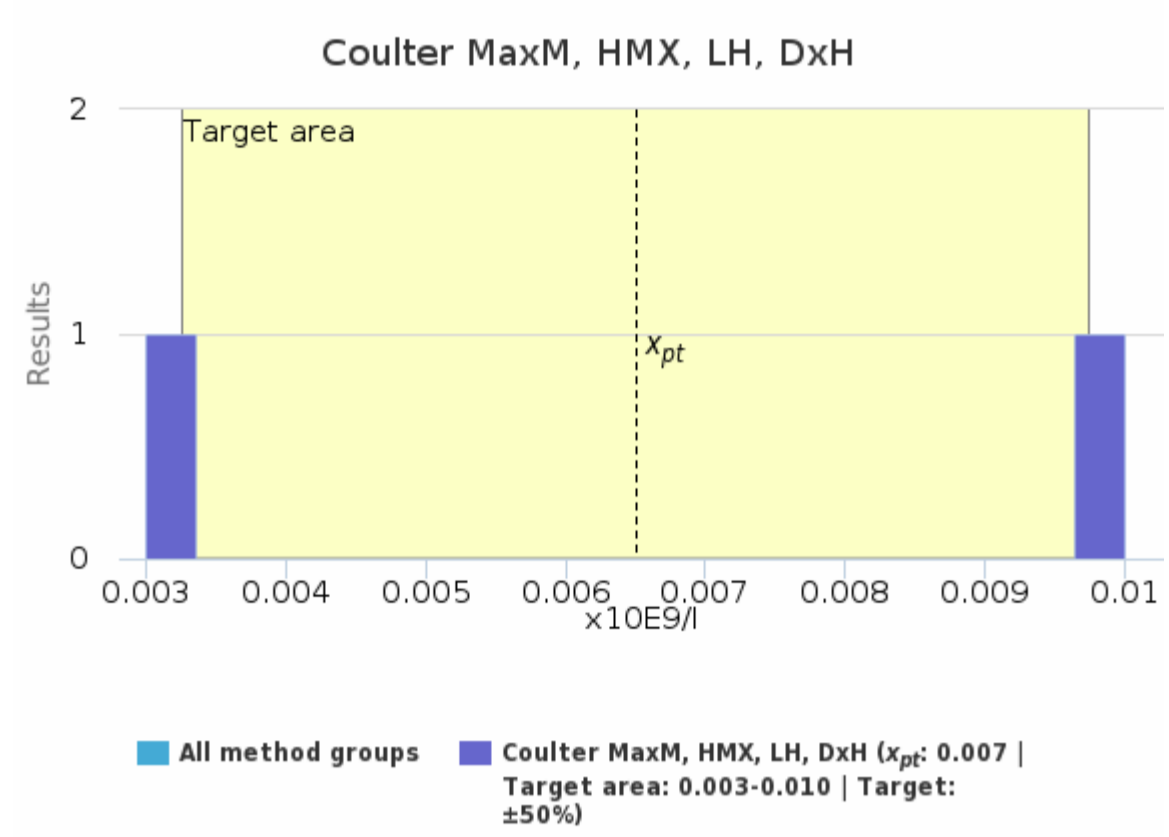
Sample S001 | B -Eos, x10E9/l| histogram summaries in LabScala



Sample S001 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter MaxM, HMX, LH, DxH	0.007	0.007	0.005	76.1	0.004	0.003	0.010	-	2
<b>All</b>	<b>0.007</b>	<b>0.007</b>	<b>0.005</b>	<b>76.1</b>	<b>0.004</b>	<b>0.003</b>	<b>0.010</b>	-	<b>2</b>

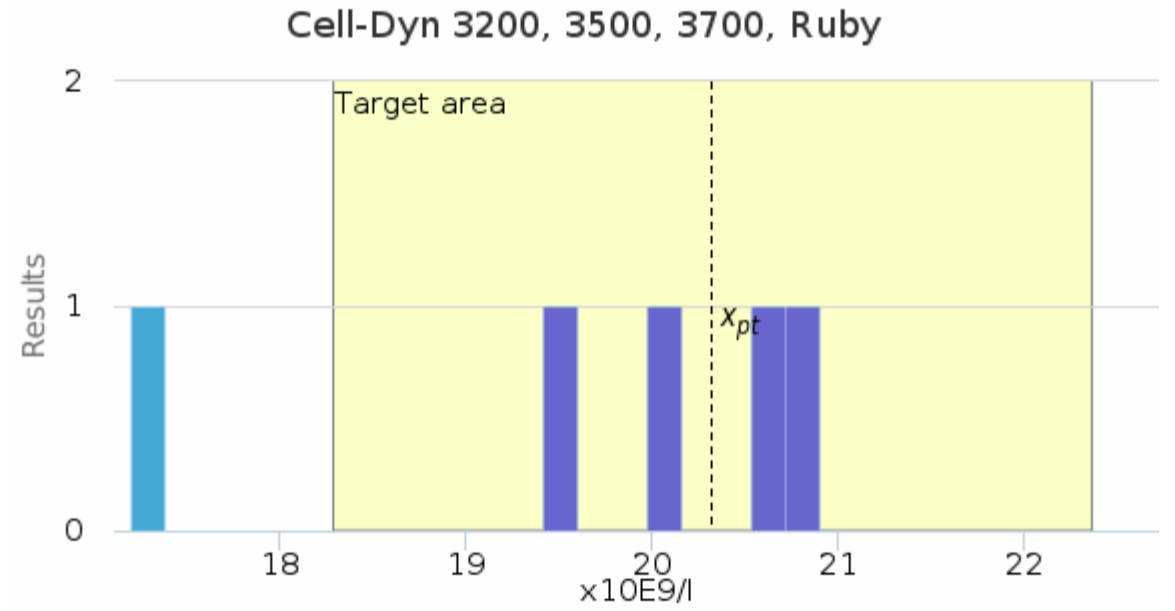
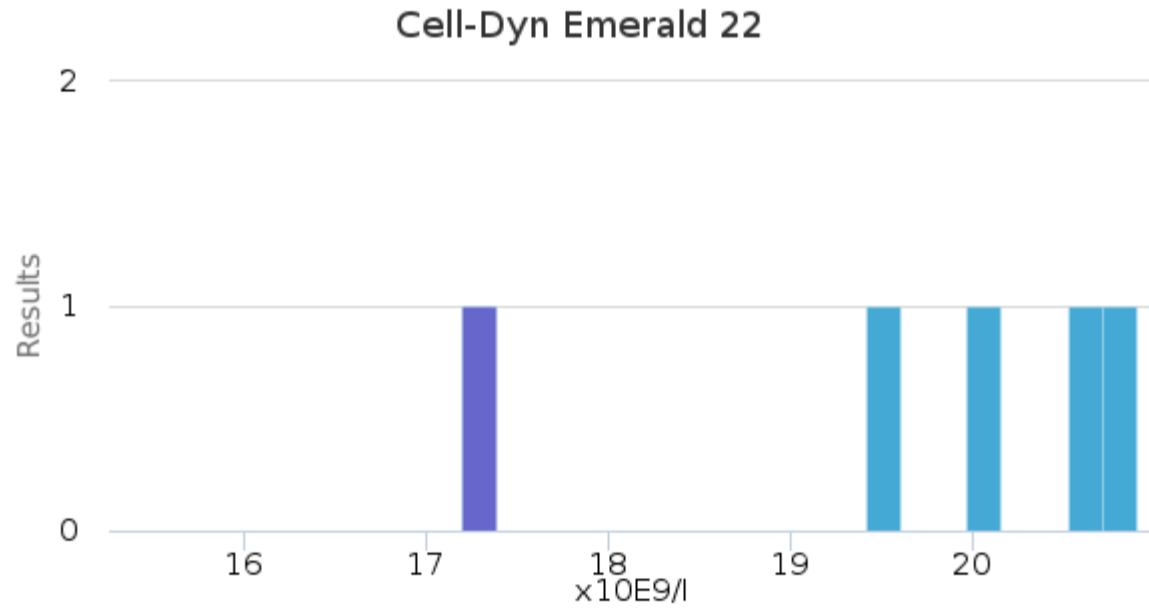
Sample S001 | B -Baso, x10E9/l | histogram summaries in LabScala



Sample S002 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn Emerald 22	-	-	-	-	-	17.2	17.2	-	1
Cell-Dyn 3200, 3500, 3700, Ruby	20.3	20.4	0.6	2.9	0.3	19.6	20.9	-	4
<b>All</b>	<b>19.7</b>	<b>20.1</b>	<b>1.5</b>	<b>7.6</b>	<b>0.7</b>	<b>17.2</b>	<b>20.9</b>	-	<b>5</b>

Sample S002 | B -Leuk, x10E9/l | histogram summaries in LabScala



■ All method groups ■ Cell-Dyn Emerald 22

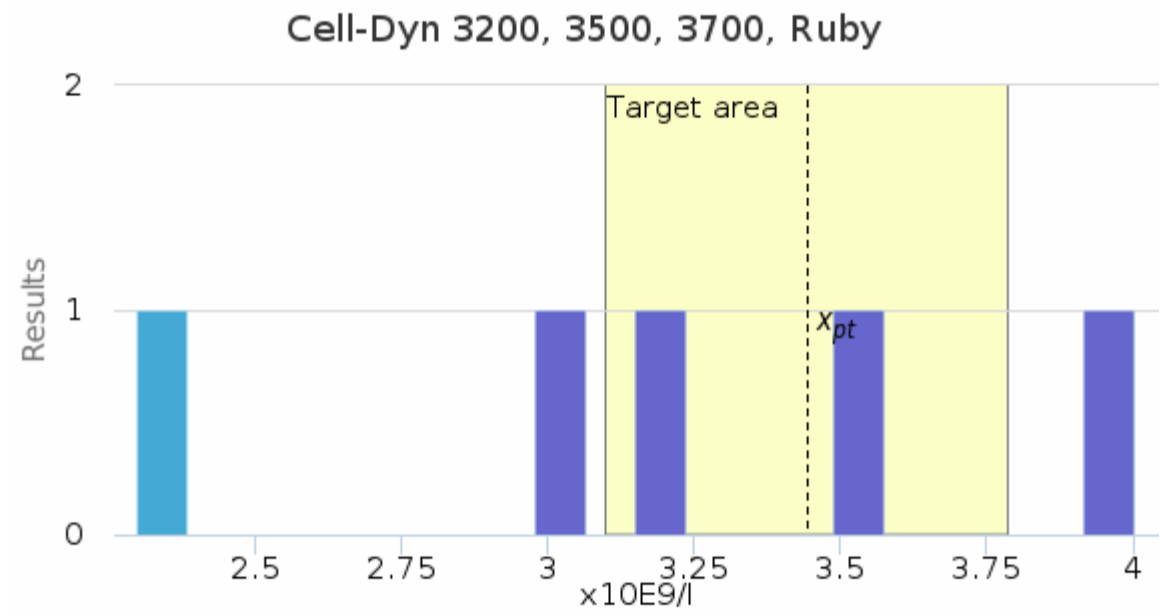
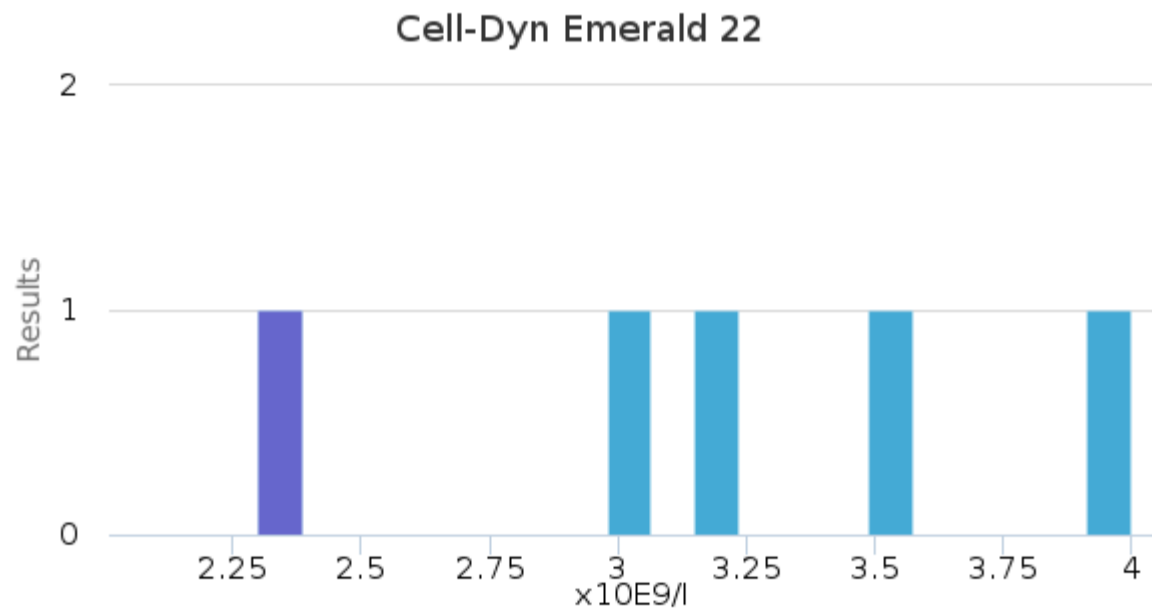
■ All method groups ■ Cell-Dyn 3200, 3500, 3700, Ruby ( $x_{pt}$ : 20.3 | Target area: 18.3-22.4 | Target:  $\pm 10\%$ )



Sample S002 | B-Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn Emerald 22	-	-	-	-	-	2.30	2.30	-	1
Cell-Dyn 3200, 3500, 3700, Ruby	3.44	3.38	0.43	12.5	0.22	3.02	4.00	-	4
<b>All</b>	<b>3.21</b>	<b>3.20</b>	<b>0.63</b>	<b>19.7</b>	<b>0.28</b>	<b>2.30</b>	<b>4.00</b>	-	<b>5</b>

Sample S002 | B-Lym, x10E9/l| histogram summaries in LabScala



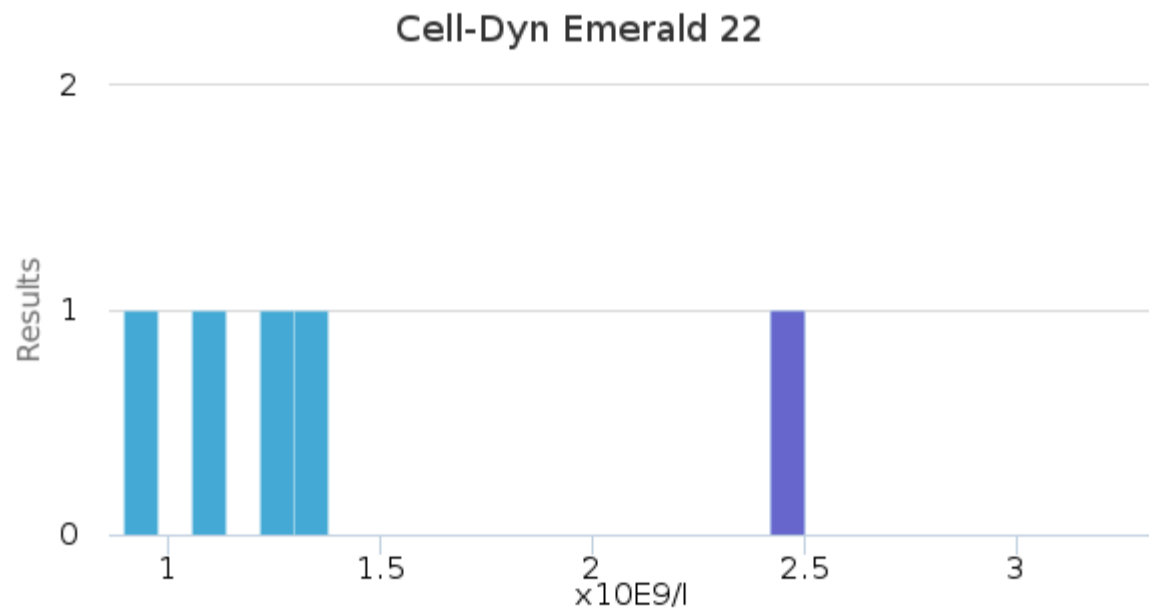
■ All method groups ■ Cell-Dyn Emerald 22

■ All method groups ■ Cell-Dyn 3200, 3500, 3700, Ruby ( $x_{pt}$ : 3.44 | Target area: 3.10-3.79 | Target:  $\pm 10\%$ )

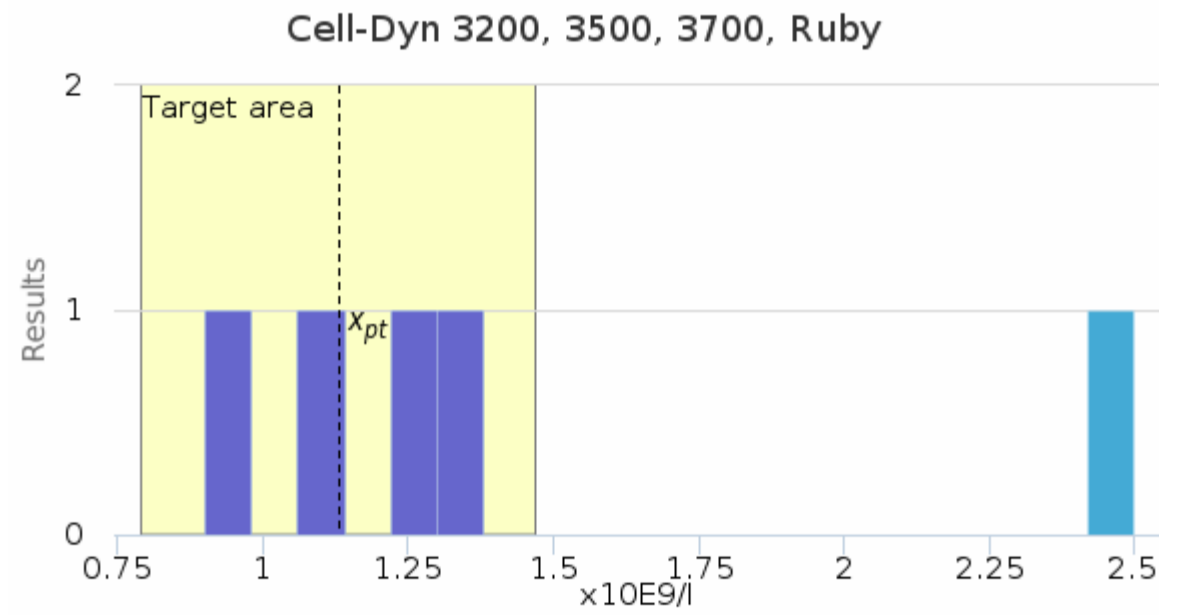
Sample S002 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn Emerald 22	-	-	-	-	-	2.50	2.50	-	1
Cell-Dyn 3200, 3500, 3700, Ruby	1.13	1.16	0.18	15.6	0.09	0.90	1.30	-	4
<b>All</b>	<b>1.40</b>	<b>1.23</b>	<b>0.63</b>	<b>45.0</b>	<b>0.28</b>	<b>0.90</b>	<b>2.50</b>	-	<b>5</b>

Sample S002 | B -Mon, x10E9/l| histogram summaries in LabScala



■ All method groups ■ Cell-Dyn Emerald 22

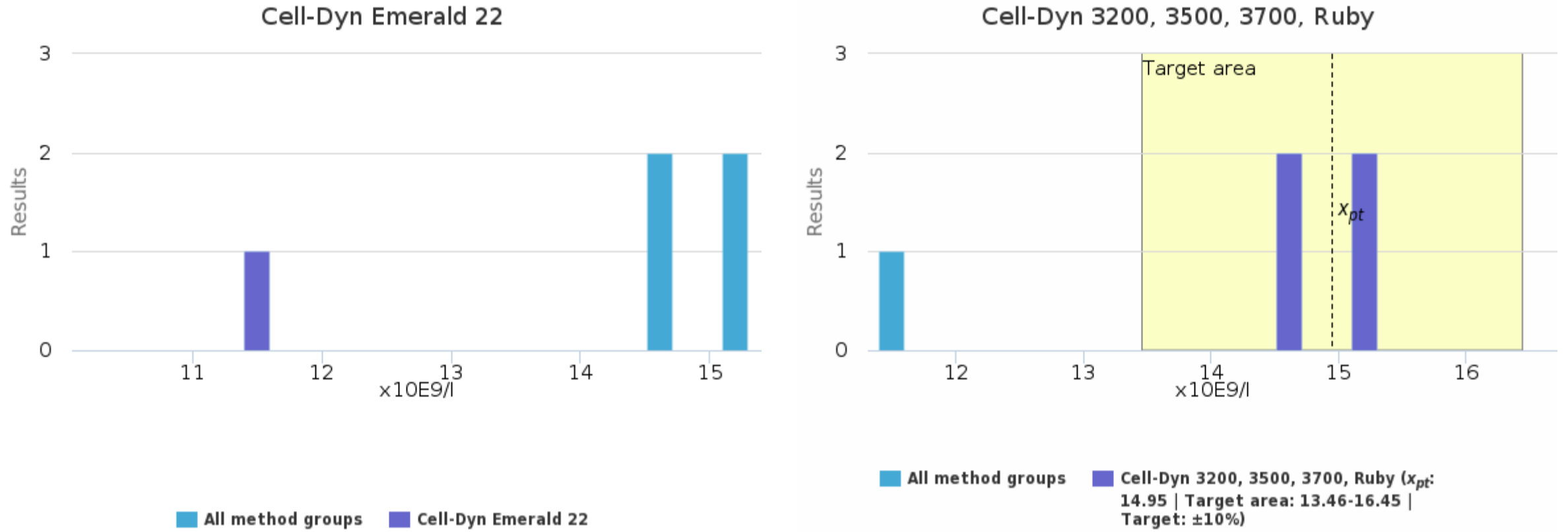


■ All method groups ■ Cell-Dyn 3200, 3500, 3700, Ruby ( $x_{pt}$ : 1.13 | Target area: 0.79-1.47 | Target:  $\pm 30\%$ )

Sample S002 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn Emerald 22	-	-	-	-	-	11.40	11.40	-	1
Cell-Dyn 3200, 3500, 3700, Ruby	14.95	14.95	0.35	2.3	0.18	14.60	15.30	-	4
<b>All</b>	<b>14.24</b>	<b>14.70</b>	<b>1.62</b>	<b>11.4</b>	<b>0.72</b>	<b>11.40</b>	<b>15.30</b>	-	<b>5</b>

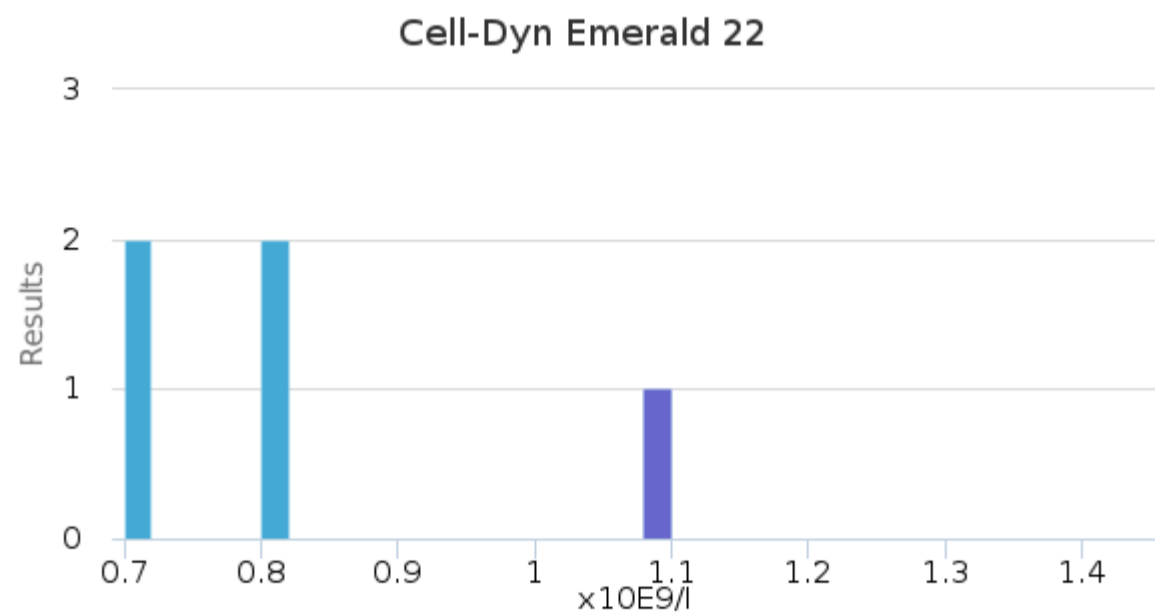
Sample S002 | B -Neutr, x10E9/l| histogram summaries in LabScala



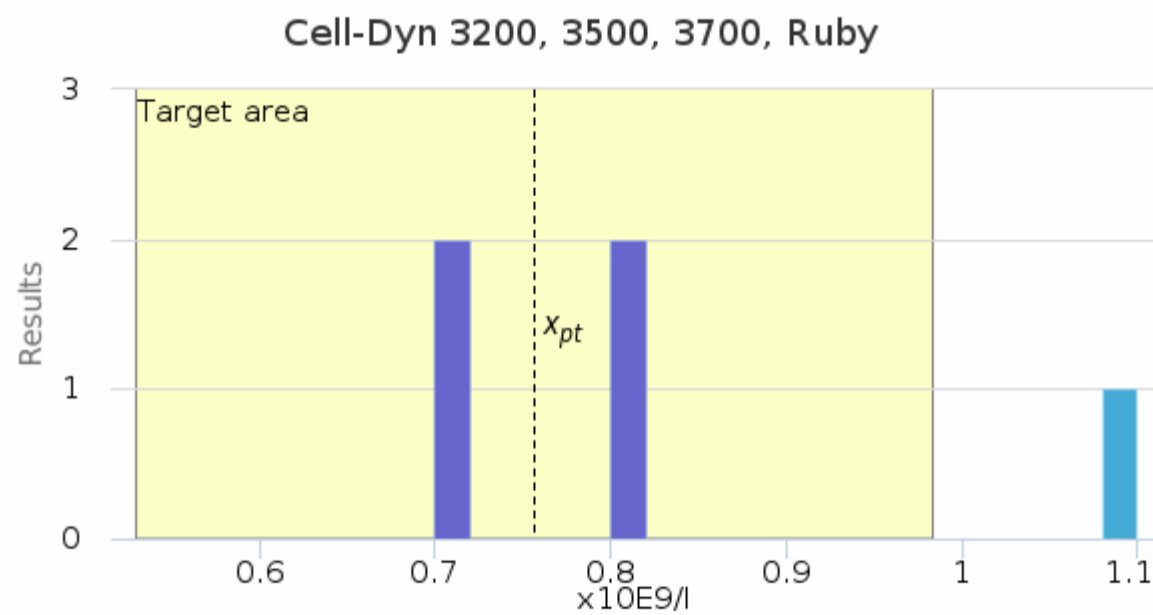
### Sample S002 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn Emerald 22	-	-	-	-	-	1.10	1.10	-	1
Cell-Dyn 3200, 3500, 3700, Ruby	0.76	0.75	0.06	8.1	0.03	0.70	0.82	-	4
<b>All</b>	<b>0.83</b>	<b>0.80</b>	<b>0.16</b>	<b>19.7</b>	<b>0.07</b>	<b>0.70</b>	<b>1.10</b>	-	<b>5</b>

### Sample S002 | B -Eos, x10E9/l| histogram summaries in LabScala



■ All method groups ■ Cell-Dyn Emerald 22

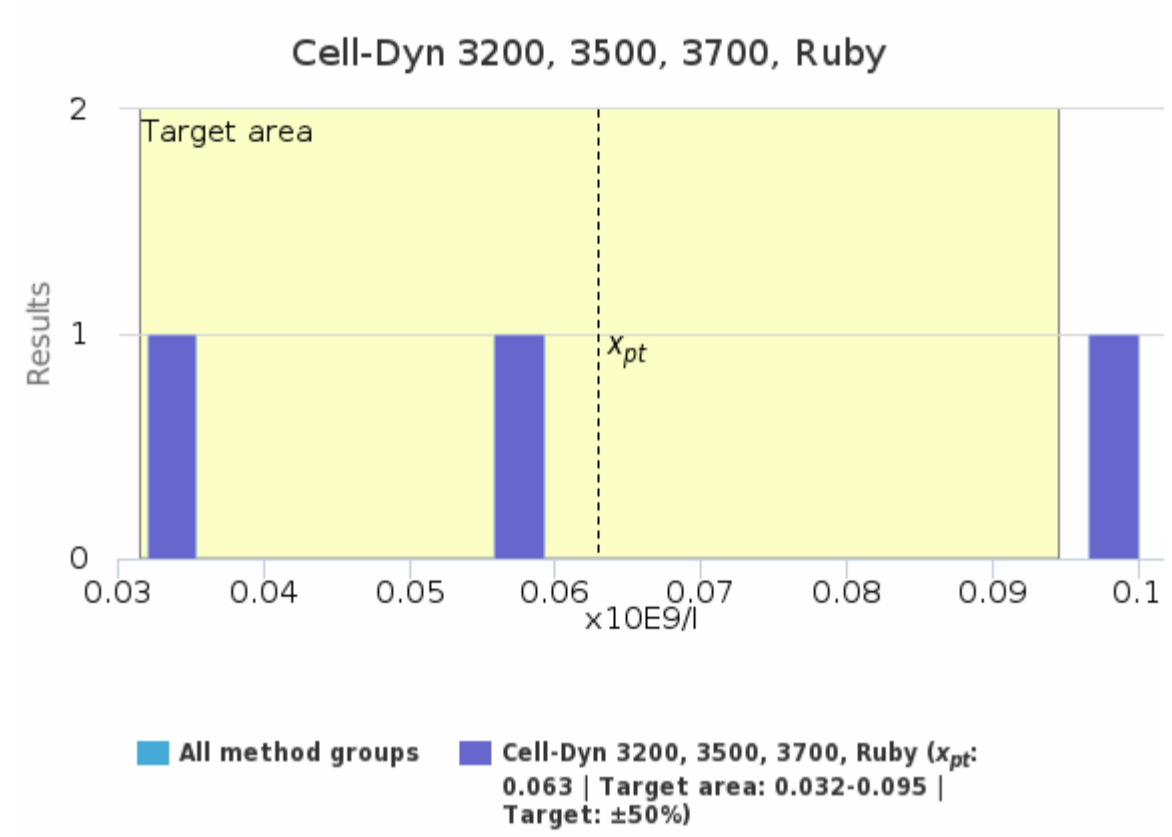


■ All method groups ■ Cell-Dyn 3200, 3500, 3700, Ruby ( $x_{pt}$ : 0.76 | Target area: 0.53-0.98 | Target:  $\pm 30\%$ )

Sample S002 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Cell-Dyn 3200, 3500, 3700, Ruby	0.063	0.057	0.034	54.6	0.020	0.032	0.100	-	3
<b>All</b>	<b>0.063</b>	<b>0.057</b>	<b>0.034</b>	<b>54.6</b>	<b>0.020</b>	<b>0.032</b>	<b>0.100</b>	-	<b>3</b>

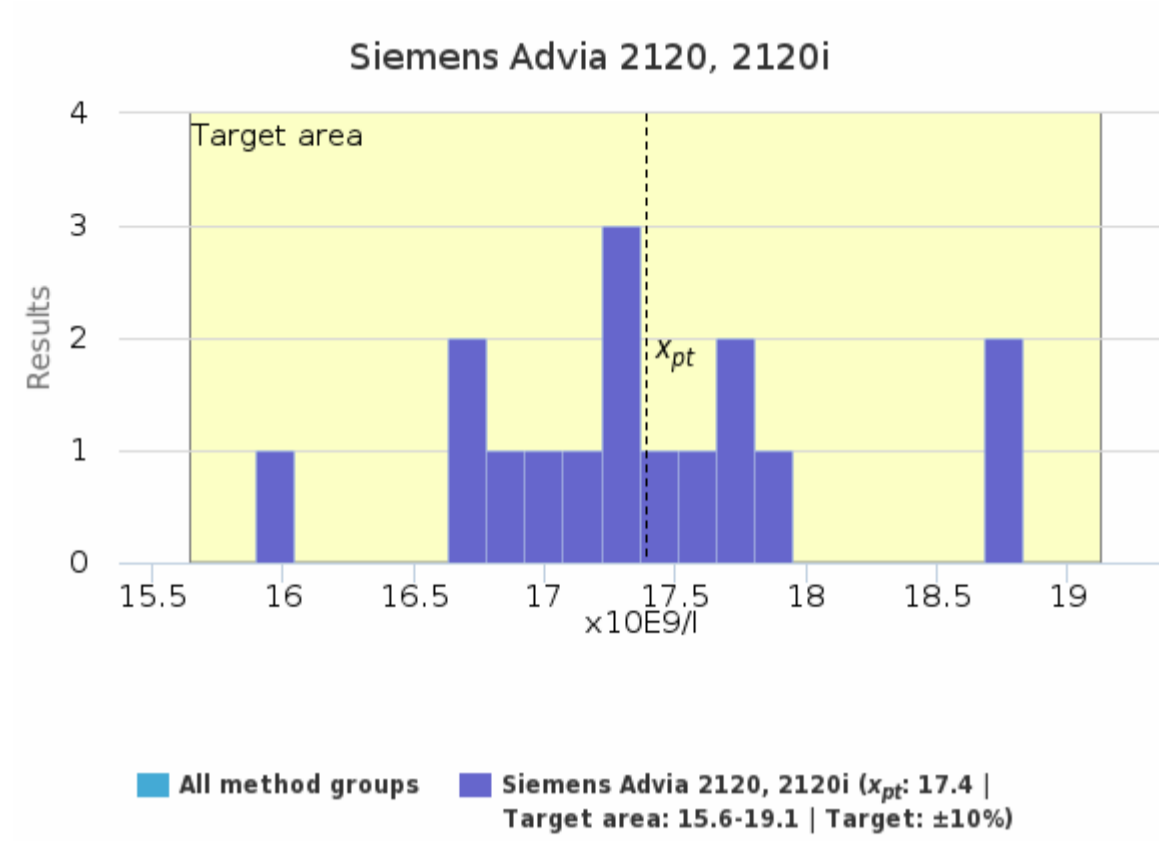
Sample S002 | B -Baso, x10E9/l | histogram summaries in LabScala



Sample S003 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	17.4	17.3	0.7	4.3	0.2	15.9	18.8	-	16
<b>All</b>	<b>17.4</b>	<b>17.3</b>	<b>0.7</b>	<b>4.3</b>	<b>0.2</b>	<b>15.9</b>	<b>18.8</b>	-	<b>16</b>

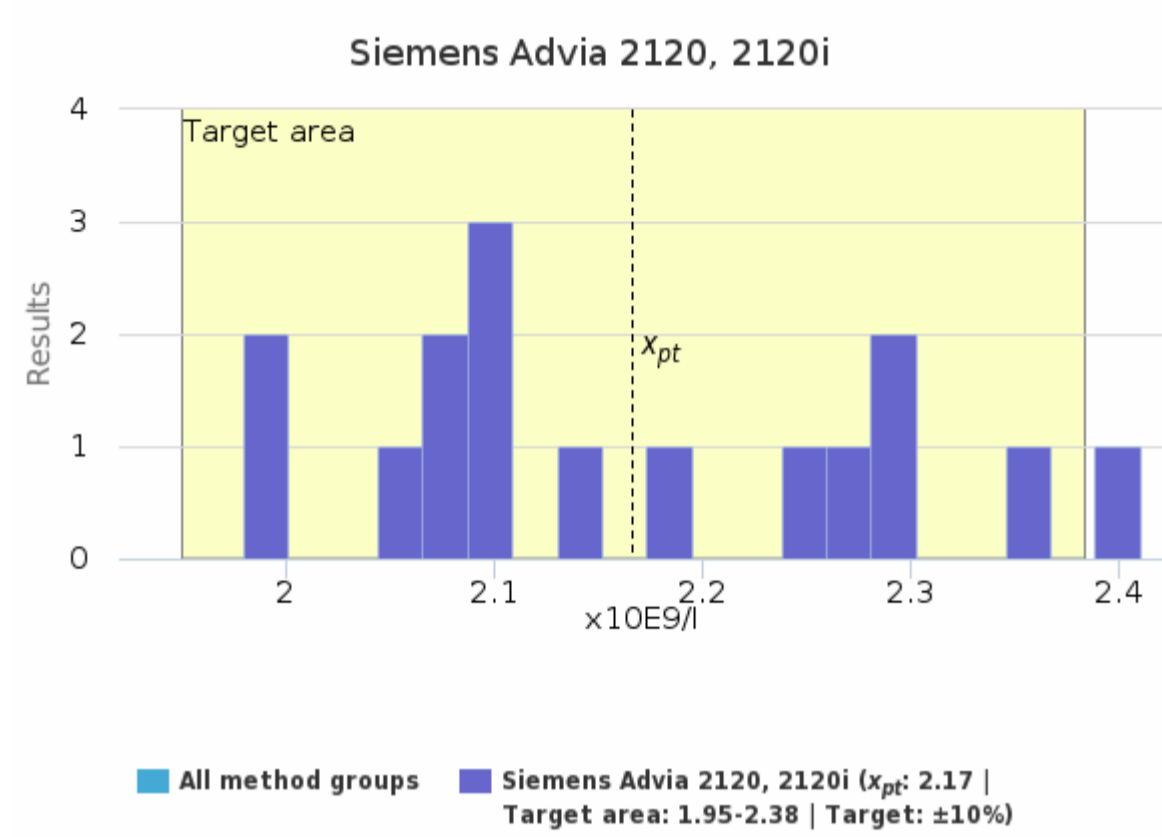
Sample S003 | B -Leuk, x10E9/l | histogram summaries in LabScala



Sample S003 | B -Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	2.17	2.13	0.13	6.0	0.03	1.98	2.41	-	16
<b>All</b>	<b>2.17</b>	<b>2.13</b>	<b>0.13</b>	<b>6.0</b>	<b>0.03</b>	<b>1.98</b>	<b>2.41</b>	-	<b>16</b>

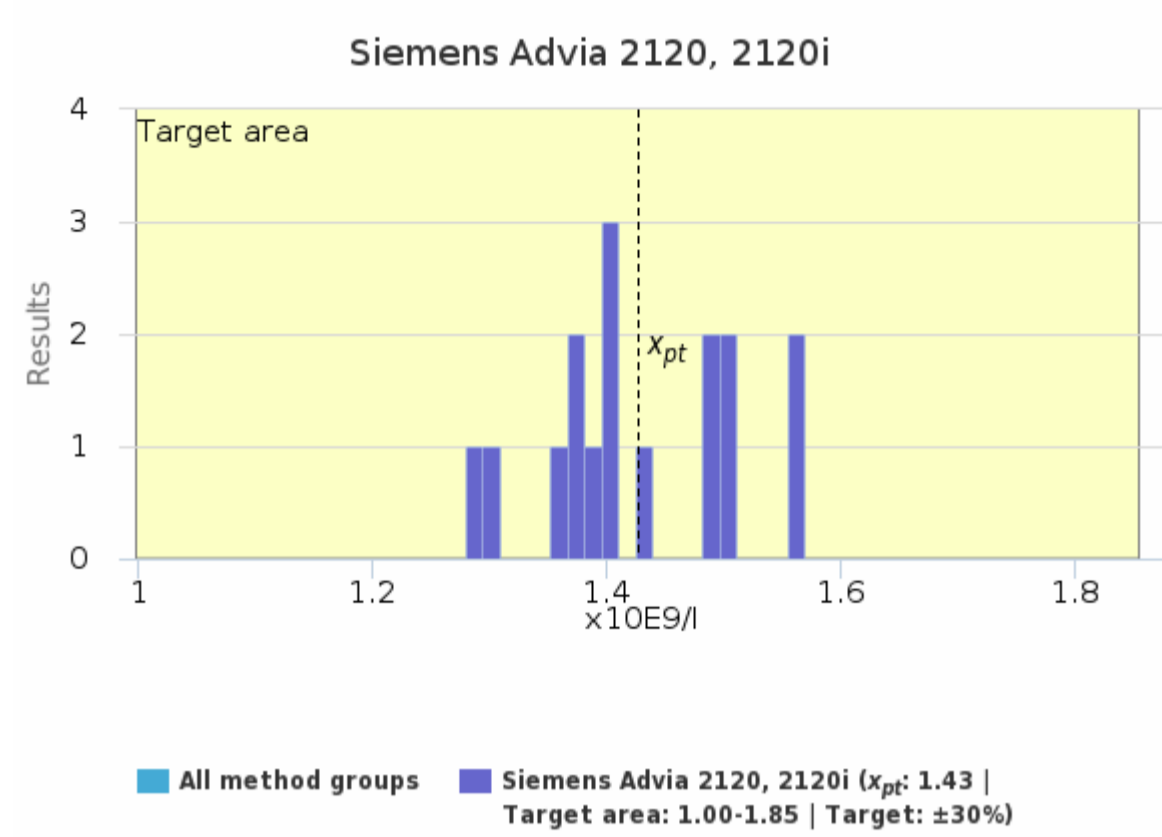
Sample S003 | B -Lym, x10E9/l| histogram summaries in LabScala



Sample S003 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	1.43	1.41	0.08	5.9	0.02	1.28	1.57	-	16
<b>All</b>	<b>1.43</b>	<b>1.41</b>	<b>0.08</b>	<b>5.9</b>	<b>0.02</b>	<b>1.28</b>	<b>1.57</b>	-	<b>16</b>

Sample S003 | B -Mon, x10E9/l| histogram summaries in LabScala

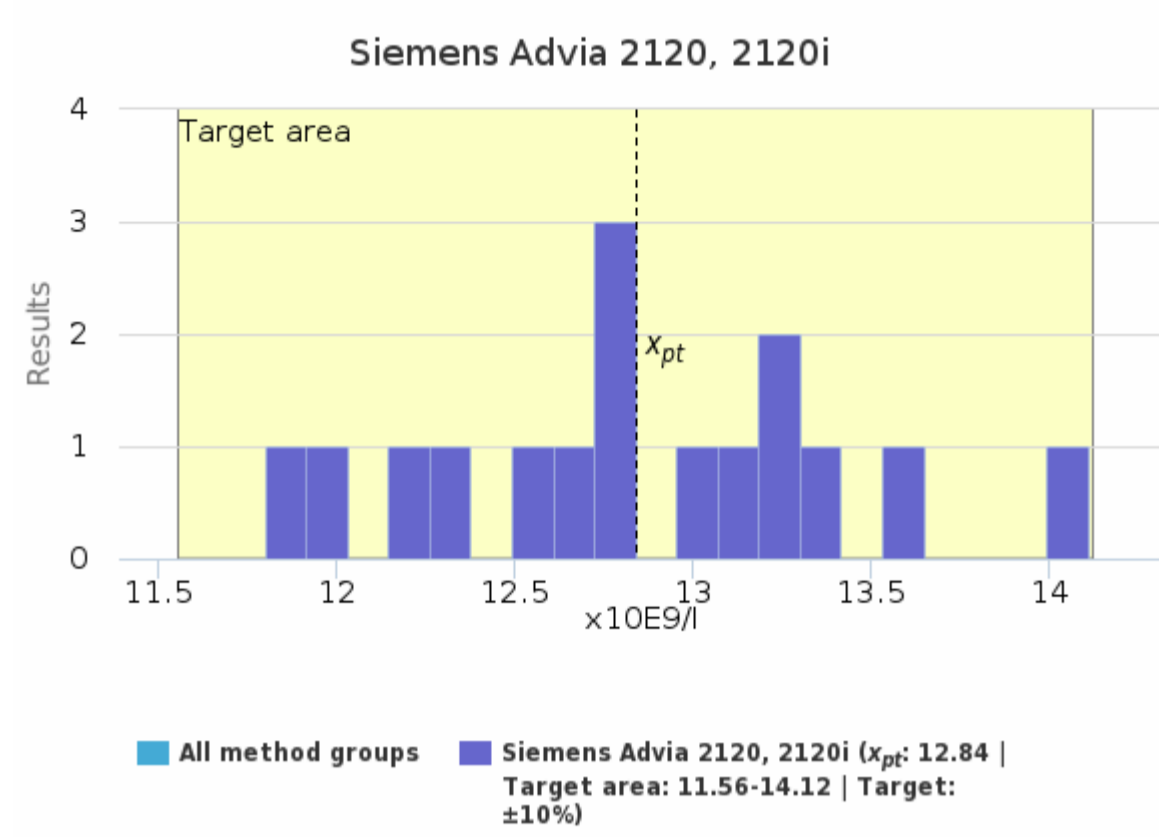




Sample S003 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	12.84	12.82	0.61	4.7	0.15	11.80	14.11	-	16
<b>All</b>	<b>12.84</b>	<b>12.82</b>	<b>0.61</b>	<b>4.7</b>	<b>0.15</b>	<b>11.80</b>	<b>14.11</b>	-	<b>16</b>

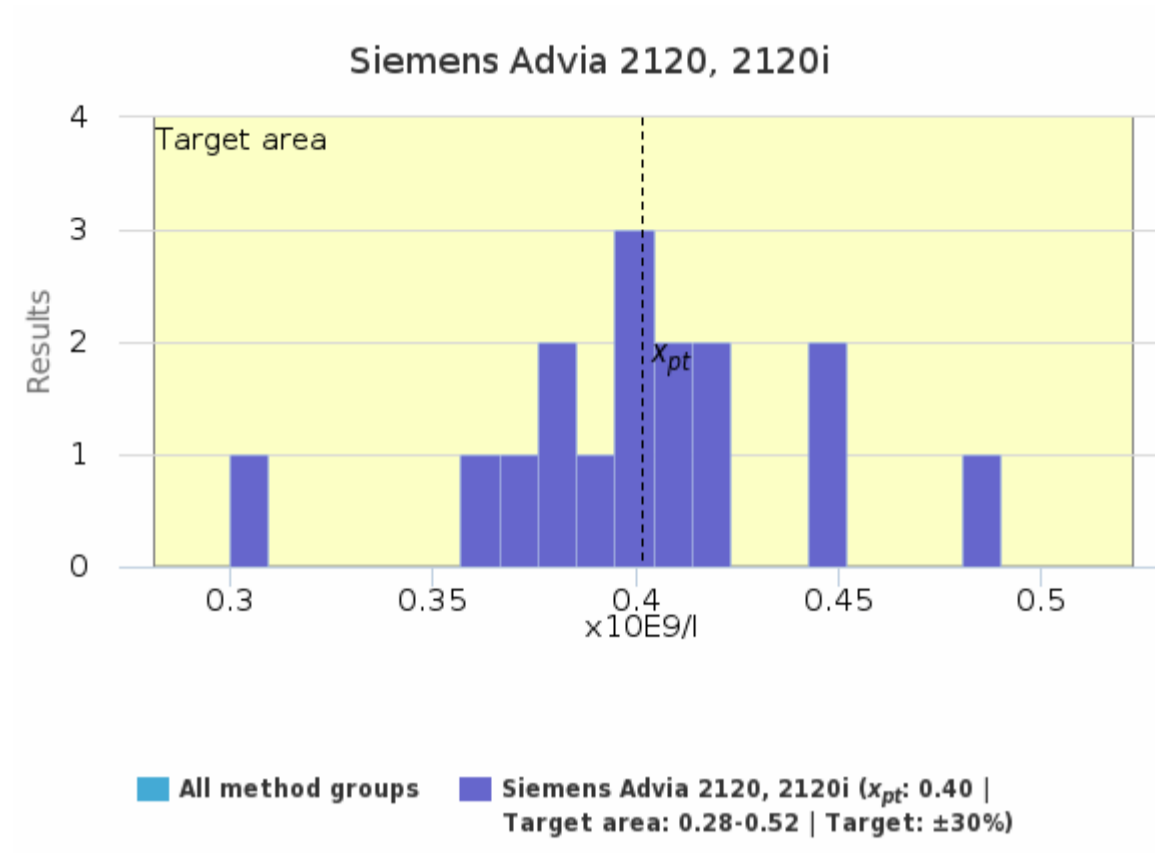
Sample S003 | B -Neutr, x10E9/l | histogram summaries in LabScala



Sample S003 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	0.40	0.40	0.04	10.6	0.01	0.30	0.49	-	16
<b>All</b>	<b>0.40</b>	<b>0.40</b>	<b>0.04</b>	<b>10.6</b>	<b>0.01</b>	<b>0.30</b>	<b>0.49</b>	-	<b>16</b>

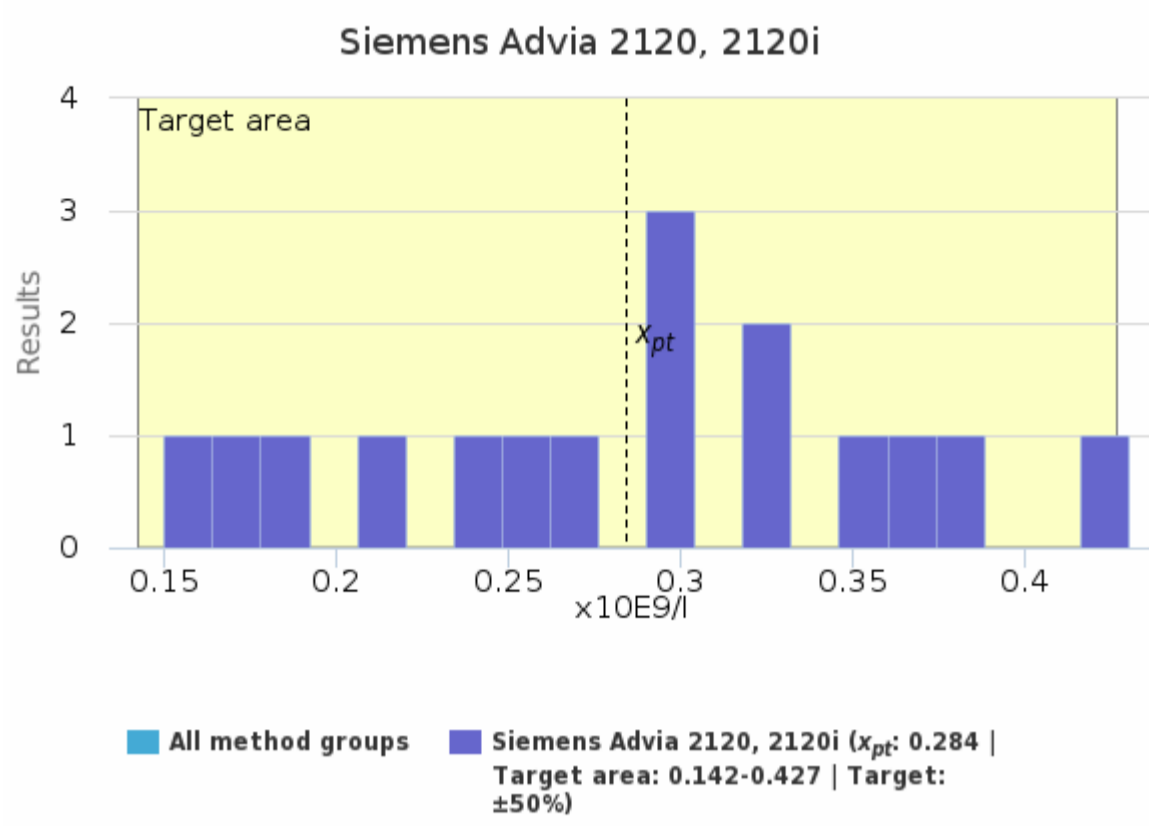
Sample S003 | B -Eos, x10E9/l| histogram summaries in LabScala



Sample S003 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	0.284	0.295	0.079	27.8	0.020	0.150	0.430	-	16
<b>All</b>	<b>0.284</b>	<b>0.295</b>	<b>0.079</b>	<b>27.8</b>	<b>0.020</b>	<b>0.150</b>	<b>0.430</b>	-	<b>16</b>

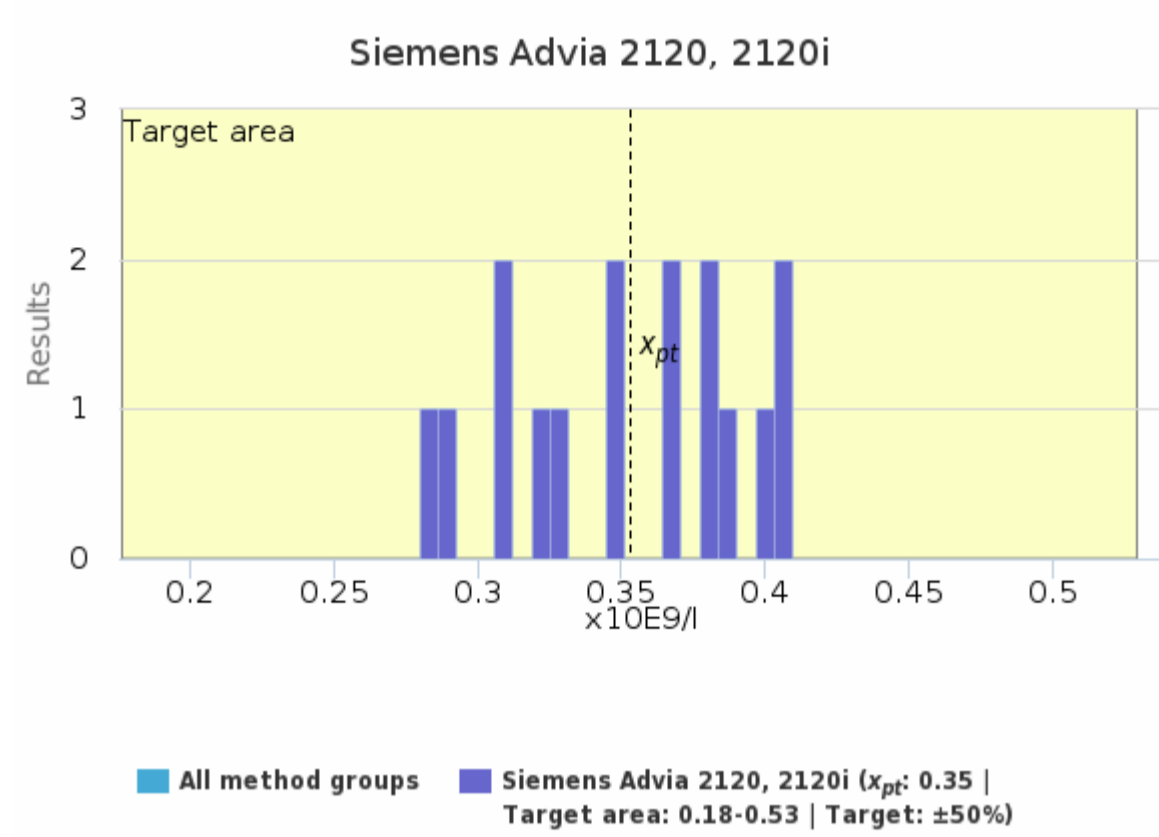
Sample S003 | B -Baso, x10E9/l | histogram summaries in LabScala



Sample S003 | B -LUC, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Siemens Advia 2120, 2120i	0.35	0.36	0.04	12.0	0.01	0.28	0.41	-	16
<b>All</b>	<b>0.35</b>	<b>0.36</b>	<b>0.04</b>	<b>12.0</b>	<b>0.01</b>	<b>0.28</b>	<b>0.41</b>	-	<b>16</b>

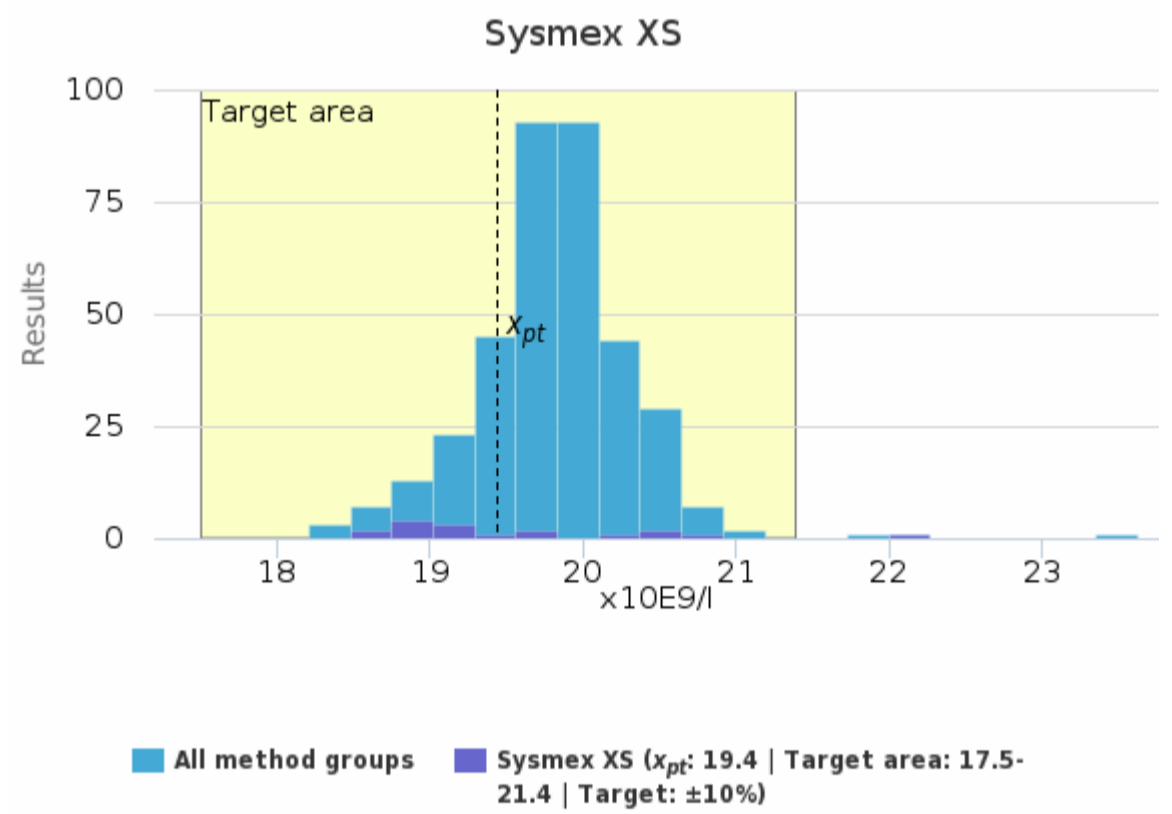
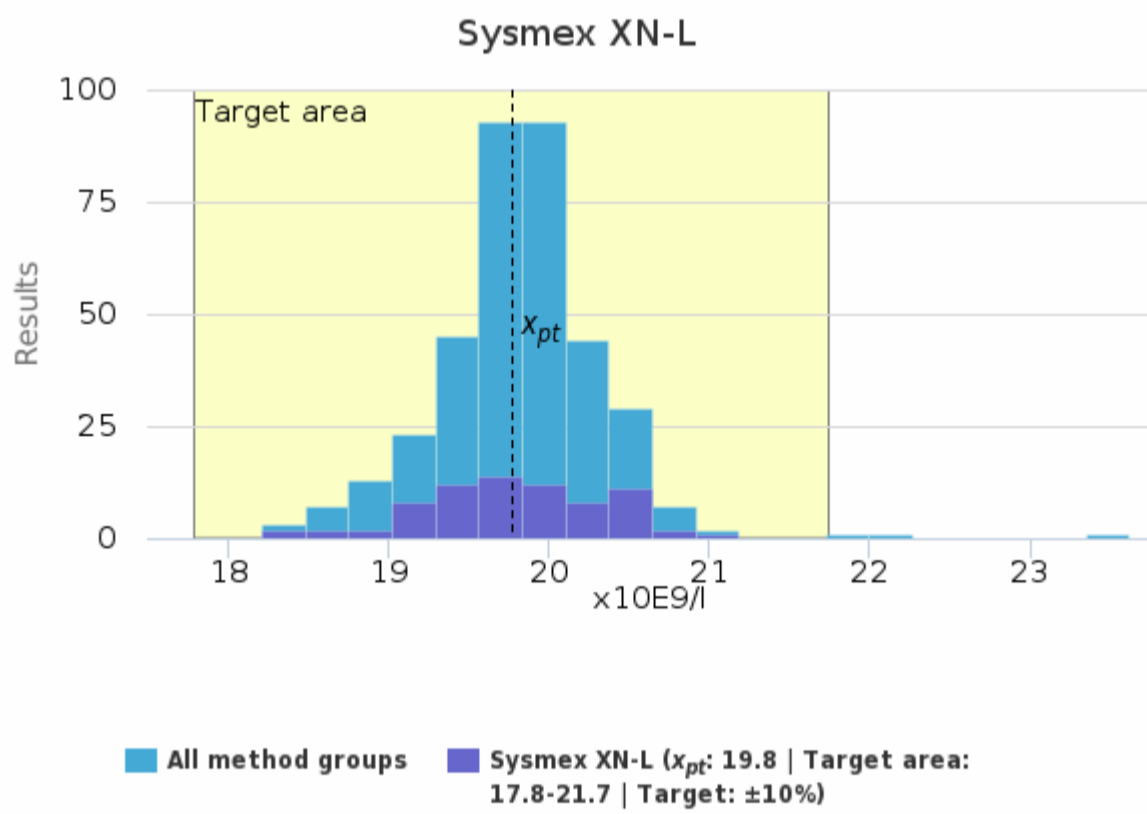
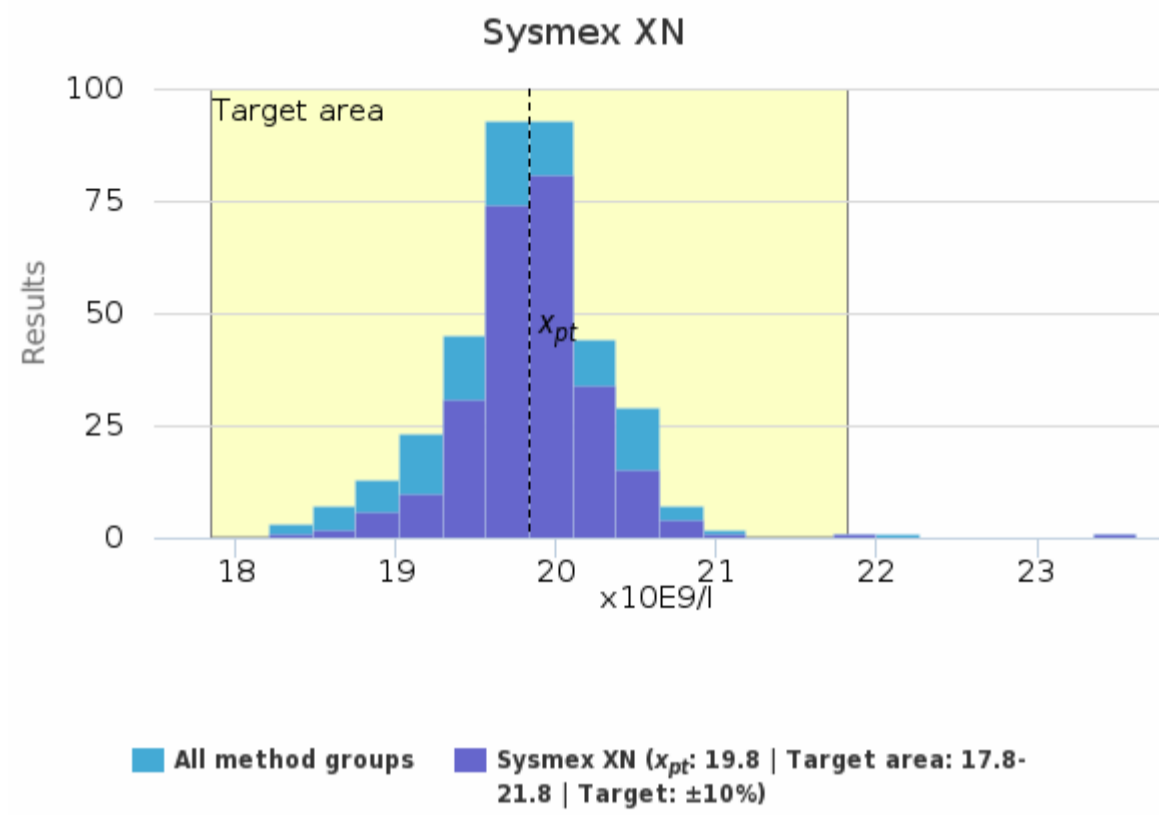
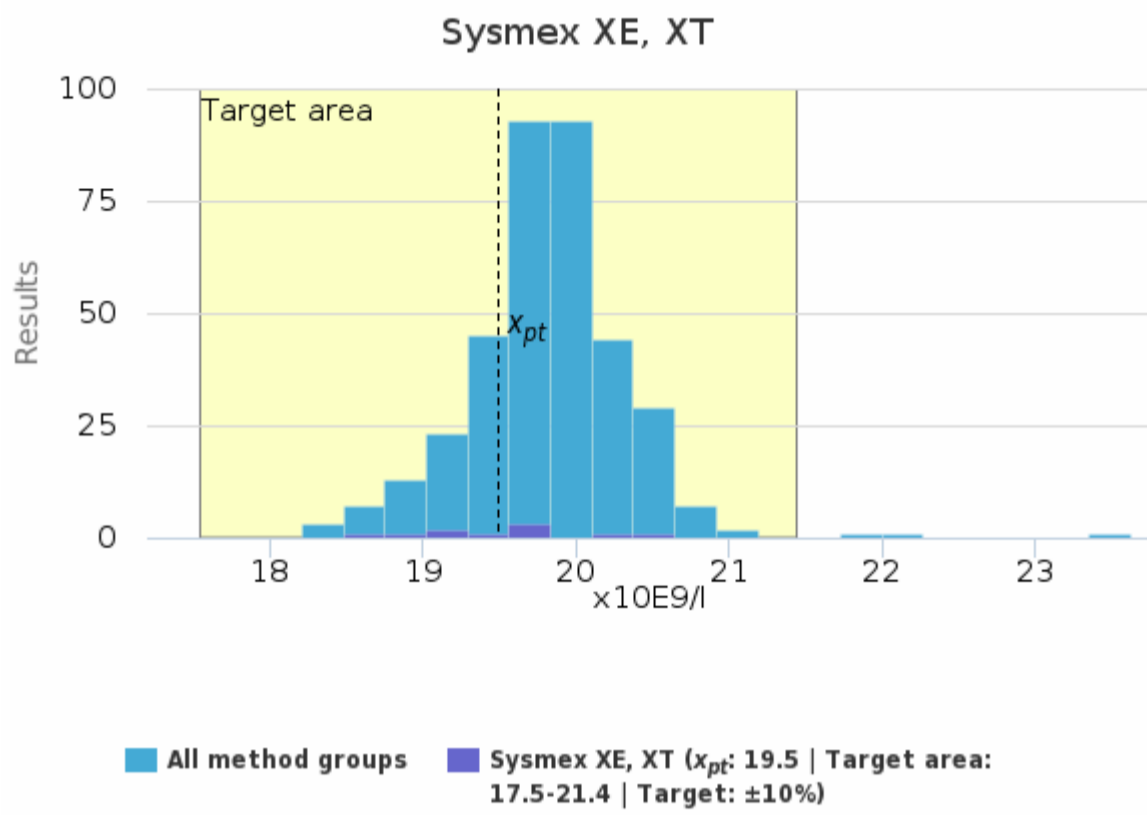
Sample S003 | B -LUC, x10E9/l| histogram summaries in LabScala



### Sample S004 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	19.5	19.5	0.6	3.0	0.2	18.7	20.5	-	10
Sysmex XN	19.8	19.9	0.4	2.0	<0.1	18.5	21.0	2	261
Sysmex XN-L	19.8	19.7	0.6	2.9	<0.1	18.2	21.0	-	74
Sysmex XS	19.4	19.2	0.7	3.7	0.2	18.5	20.7	1	17
<b>All</b>	<b>19.8</b>	<b>19.8</b>	<b>0.5</b>	<b>2.3</b>	<b>&lt;0.1</b>	<b>18.4</b>	<b>21.0</b>	<b>4</b>	<b>362</b>

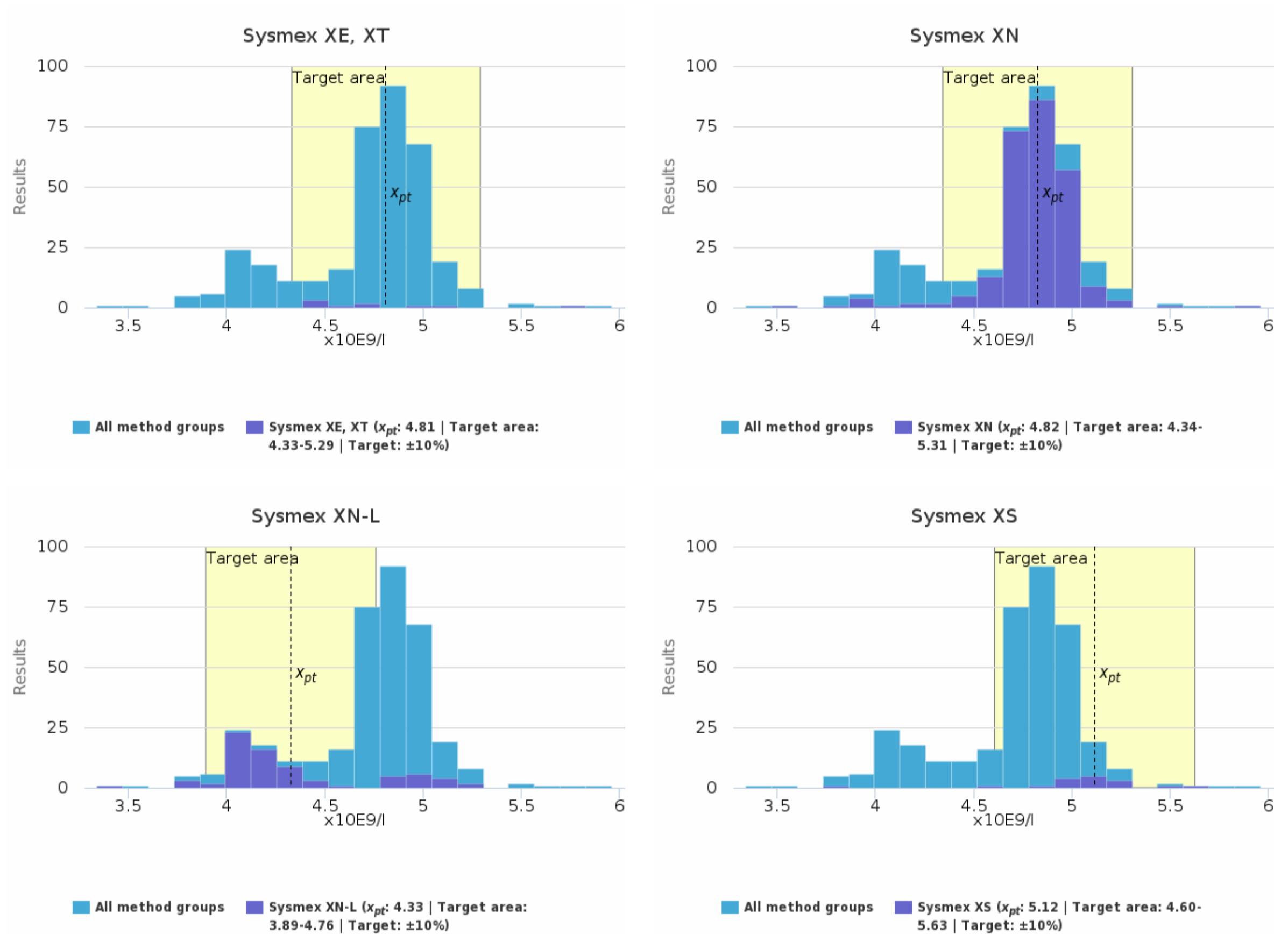
### Sample S004 | B -Leuk, x10E9/l | histogram summaries in LabScala



### Sample S004 | B-Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	4.81	4.75	0.41	8.5	0.14	4.43	5.72	-	9
Sysmex XN	4.82	4.82	0.16	3.4	0.01	4.17	5.50	8	259
Sysmex XN-L	4.33	4.20	0.40	9.2	0.05	3.34	5.21	-	75
Sysmex XS	5.12	5.13	0.23	4.6	0.06	4.62	5.67	1	17
<b>All</b>	<b>4.72</b>	<b>4.80</b>	<b>0.34</b>	<b>7.1</b>	<b>0.02</b>	<b>3.75</b>	<b>5.72</b>	<b>3</b>	<b>360</b>

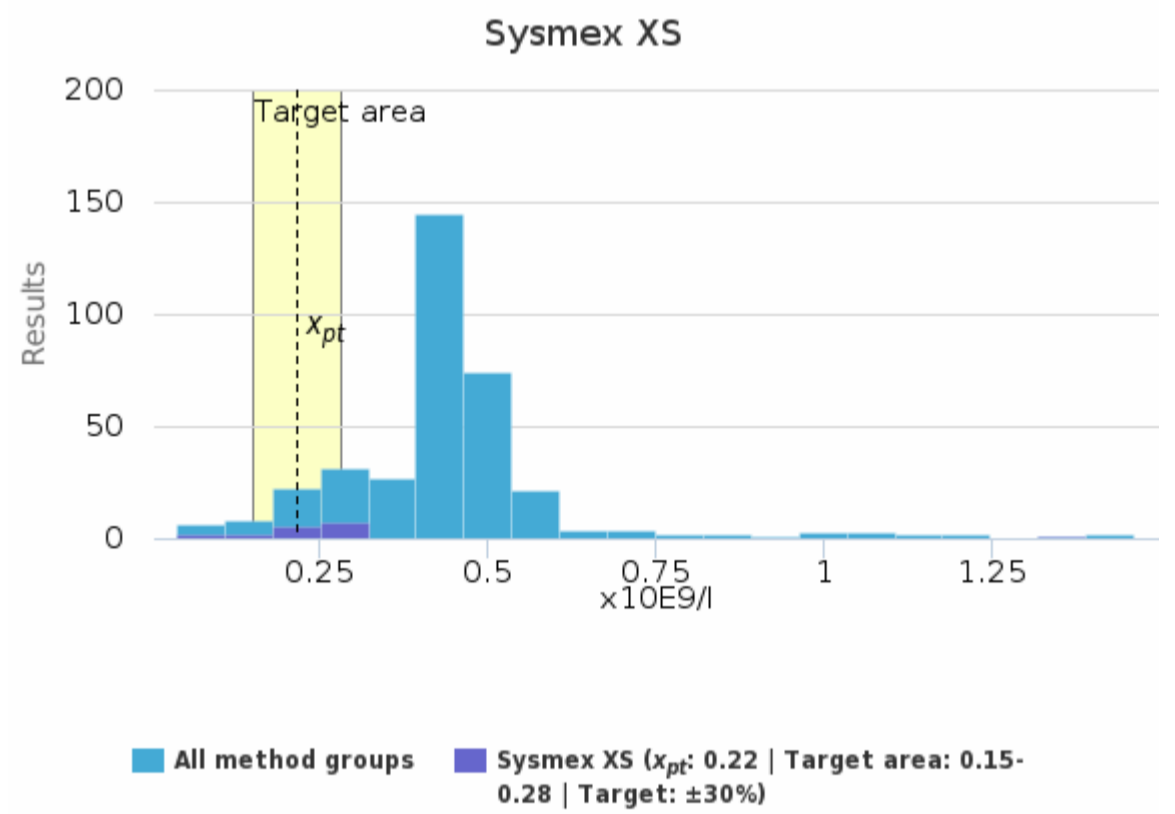
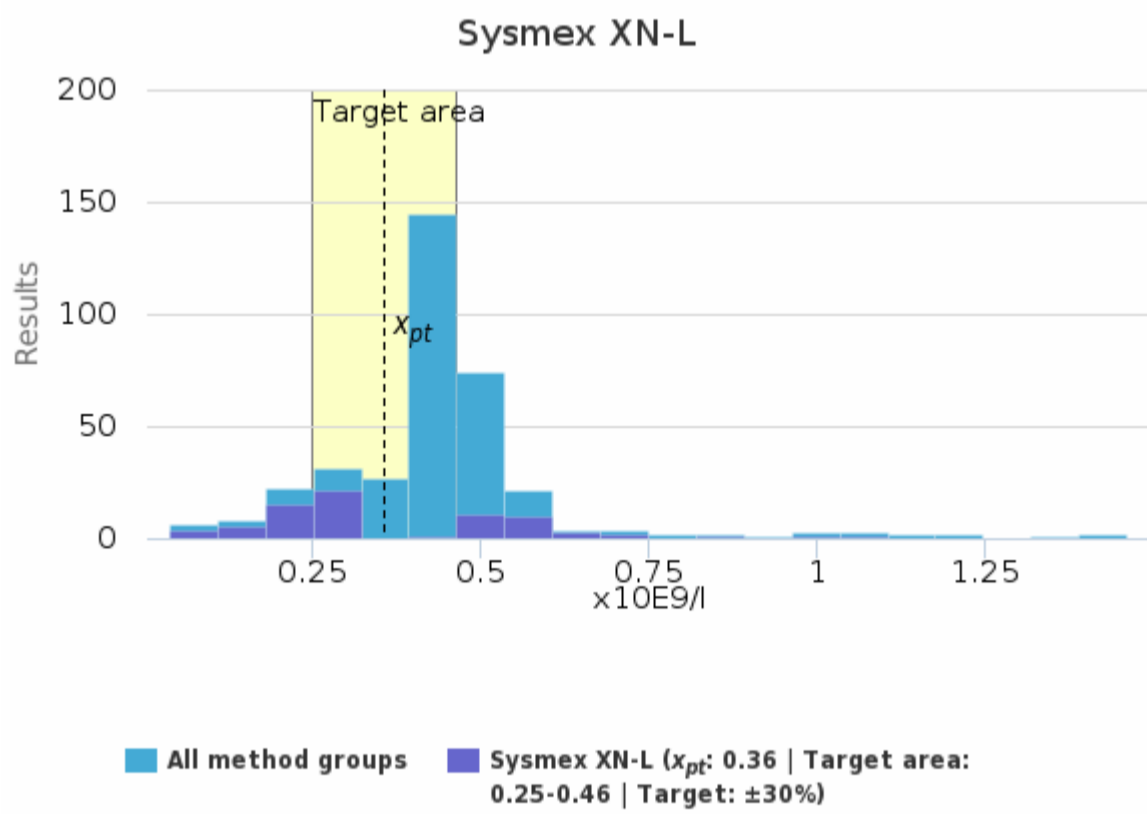
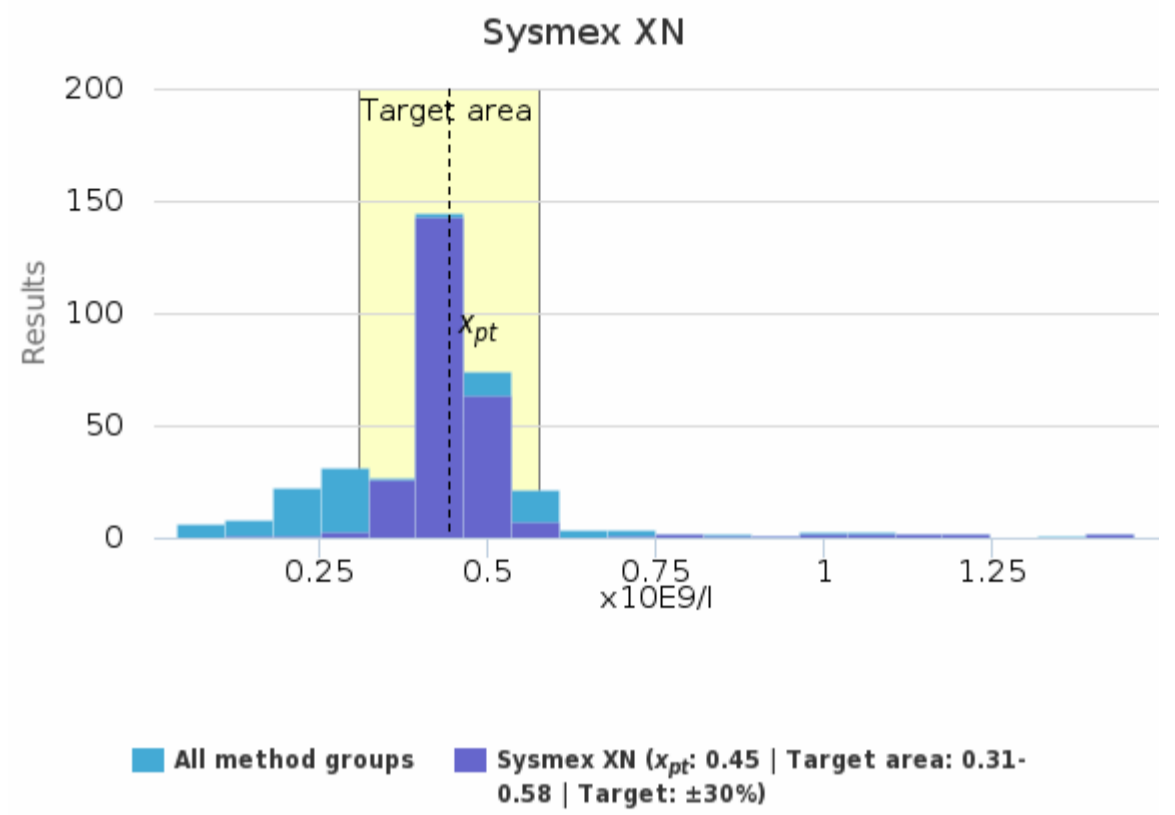
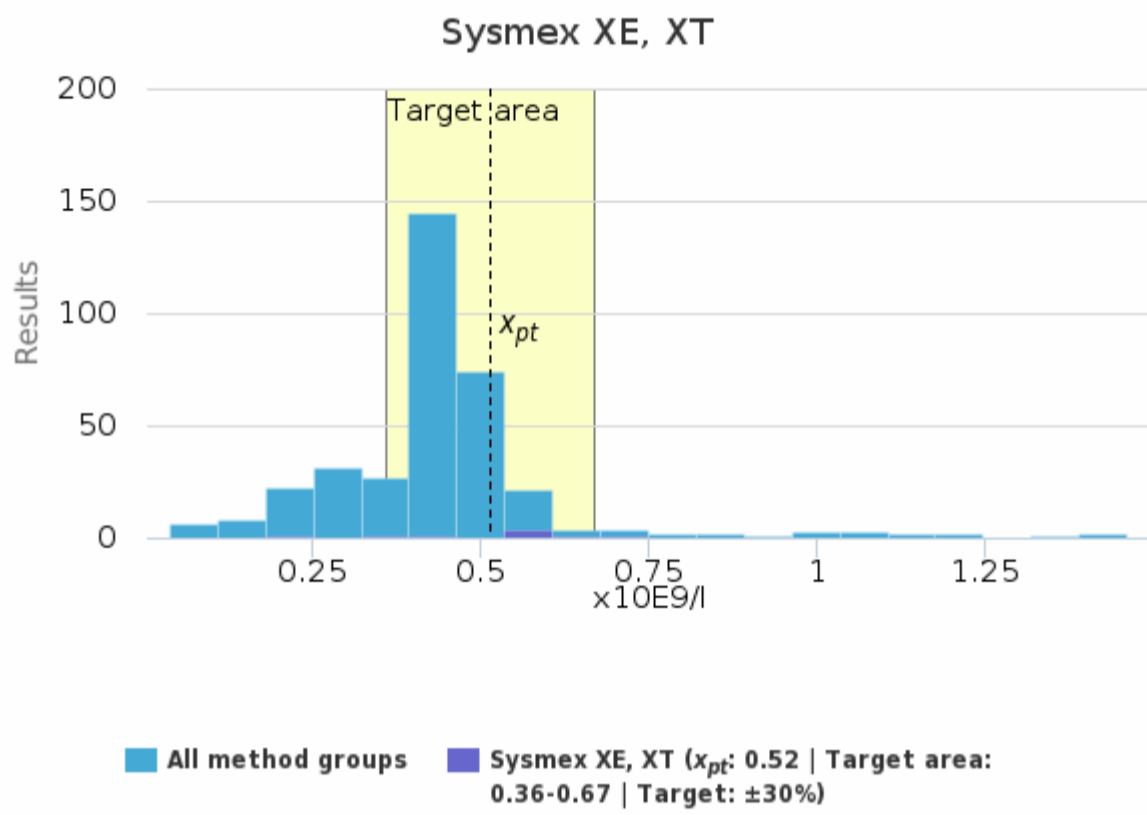
### Sample S004 | B-Lym, x10E9/l| histogram summaries in LabScala



Sample S004 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	0.52	0.56	0.14	27.2	0.05	0.25	0.69	-	9
Sysmex XN	0.45	0.44	0.07	15.4	<0.01	0.13	0.84	11	259
Sysmex XN-L	0.36	0.27	0.18	50.4	0.02	0.04	0.83	2	75
Sysmex XS	0.22	0.23	0.08	36.5	0.02	0.04	0.32	1	17
<b>All</b>	<b>0.42</b>	<b>0.43</b>	<b>0.13</b>	<b>30.6</b>	<b>&lt;0.01</b>	<b>0.04</b>	<b>0.98</b>	<b>11</b>	<b>360</b>

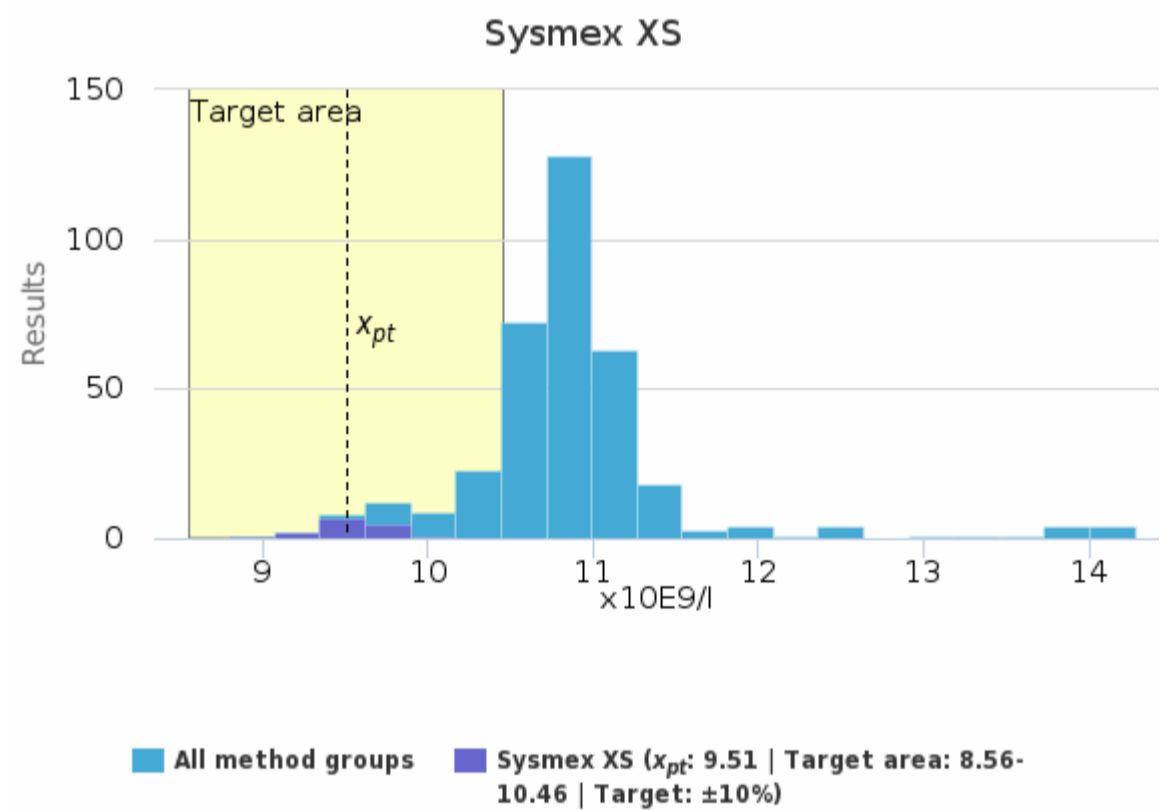
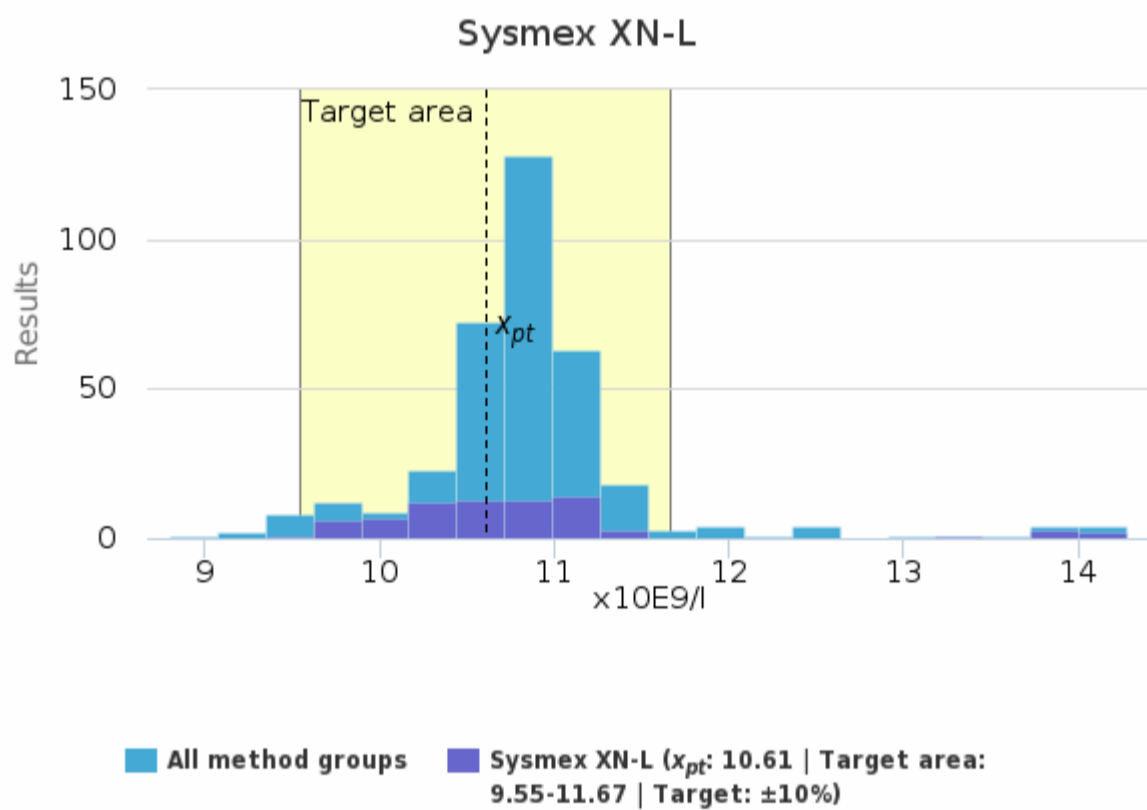
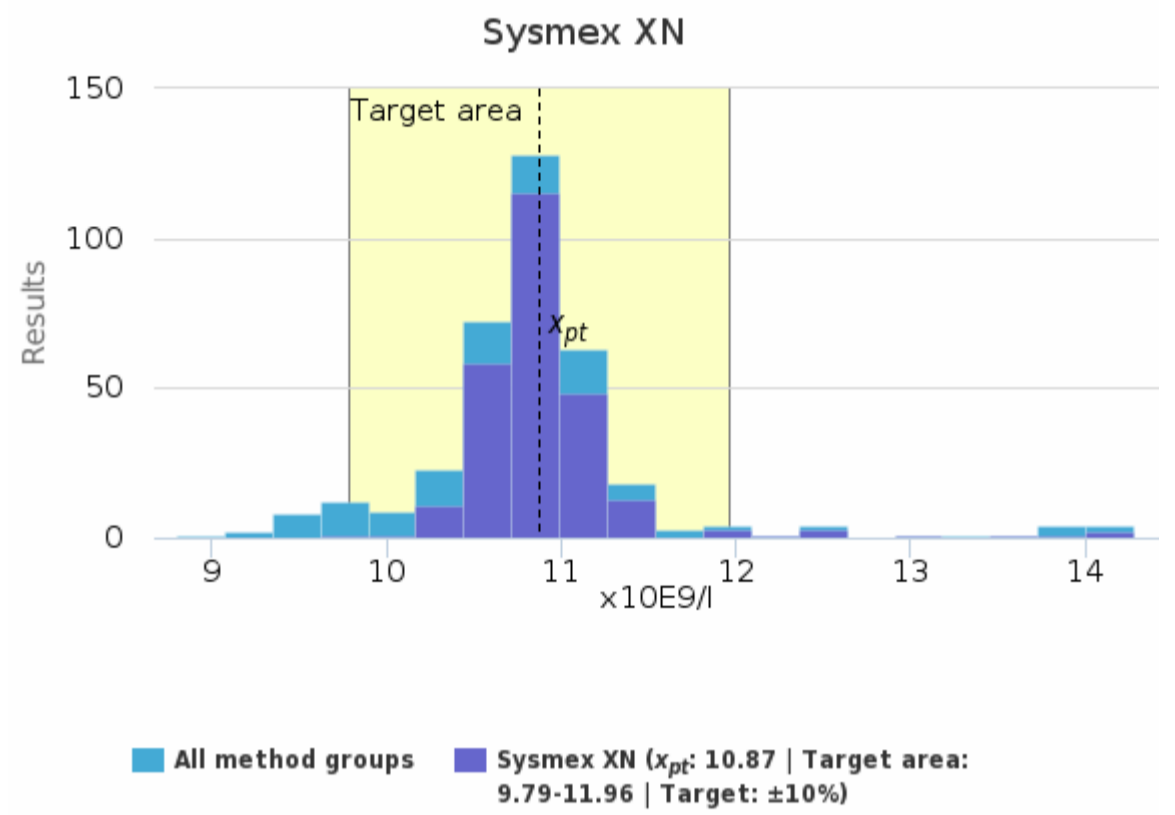
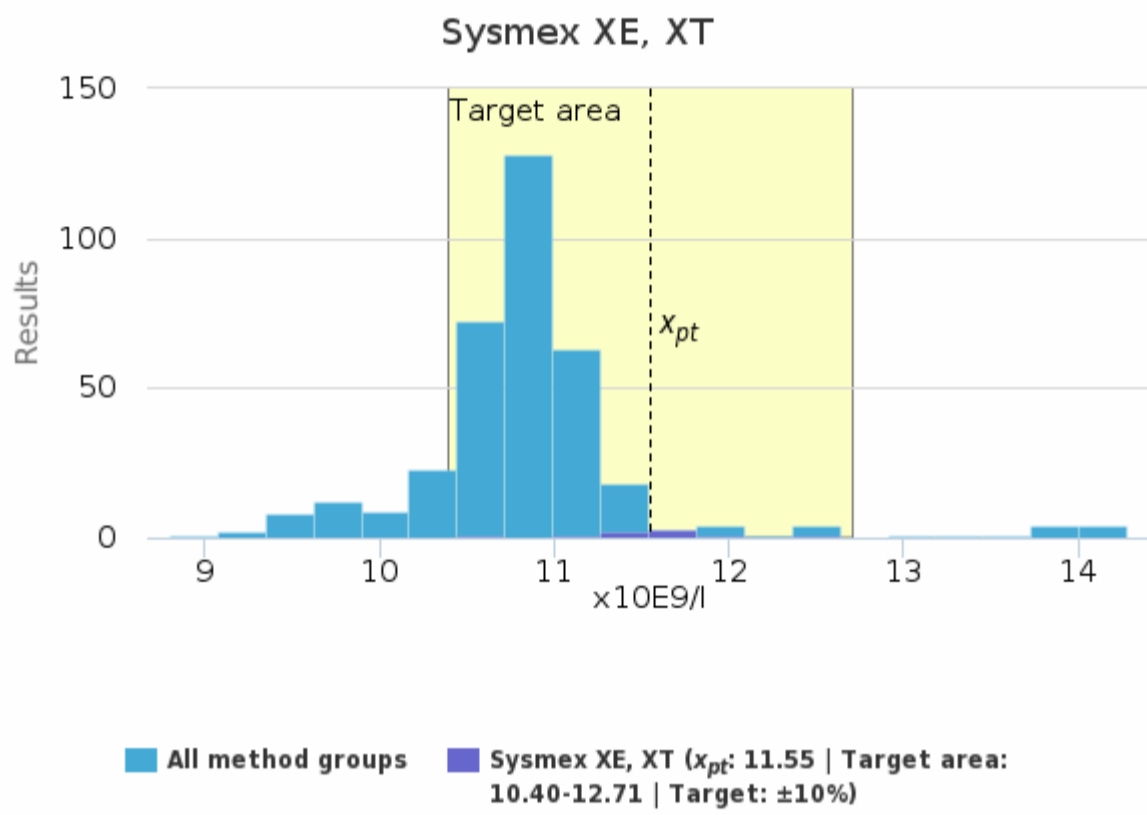
Sample S004 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S004 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	11.55	11.58	0.56	4.8	0.19	10.51	12.46	-	9
Sysmex XN	10.87	10.88	0.32	2.9	0.02	9.88	12.41	6	259
Sysmex XN-L	10.61	10.61	0.56	5.2	0.07	9.51	13.26	5	75
Sysmex XS	9.51	9.55	0.29	3.1	0.07	8.80	9.90	-	16
<b>All</b>	<b>10.77</b>	<b>10.83</b>	<b>0.49</b>	<b>4.5</b>	<b>0.03</b>	<b>8.80</b>	<b>12.47</b>	<b>11</b>	<b>359</b>

Sample S004 | B -Neutr, x10E9/l histogram summaries in LabScala

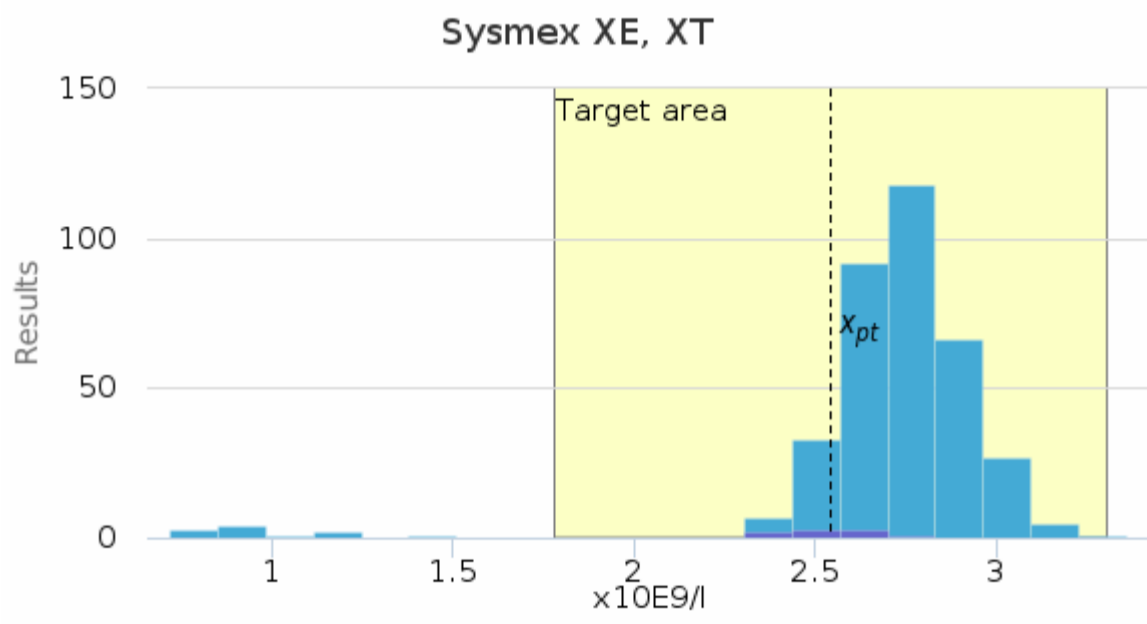




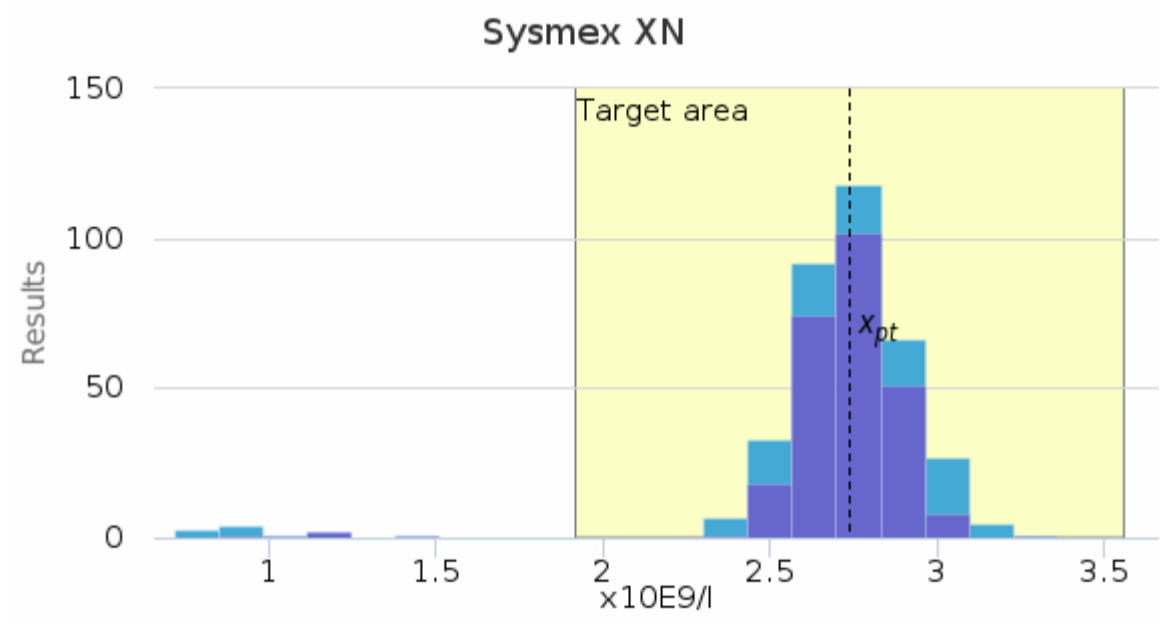
### Sample S004 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	2.54	2.56	0.12	4.9	0.04	2.35	2.73	-	9
Sysmex XN	2.74	2.73	0.13	4.6	<0.01	2.40	3.36	5	260
Sysmex XN-L	2.86	2.88	0.18	6.3	0.02	2.44	3.18	6	75
Sysmex XS	2.53	2.52	0.09	3.6	0.02	2.40	2.72	-	16
<b>All</b>	<b>2.75</b>	<b>2.74</b>	<b>0.16</b>	<b>5.7</b>	<b>&lt;0.01</b>	<b>2.35</b>	<b>3.36</b>	<b>11</b>	<b>360</b>

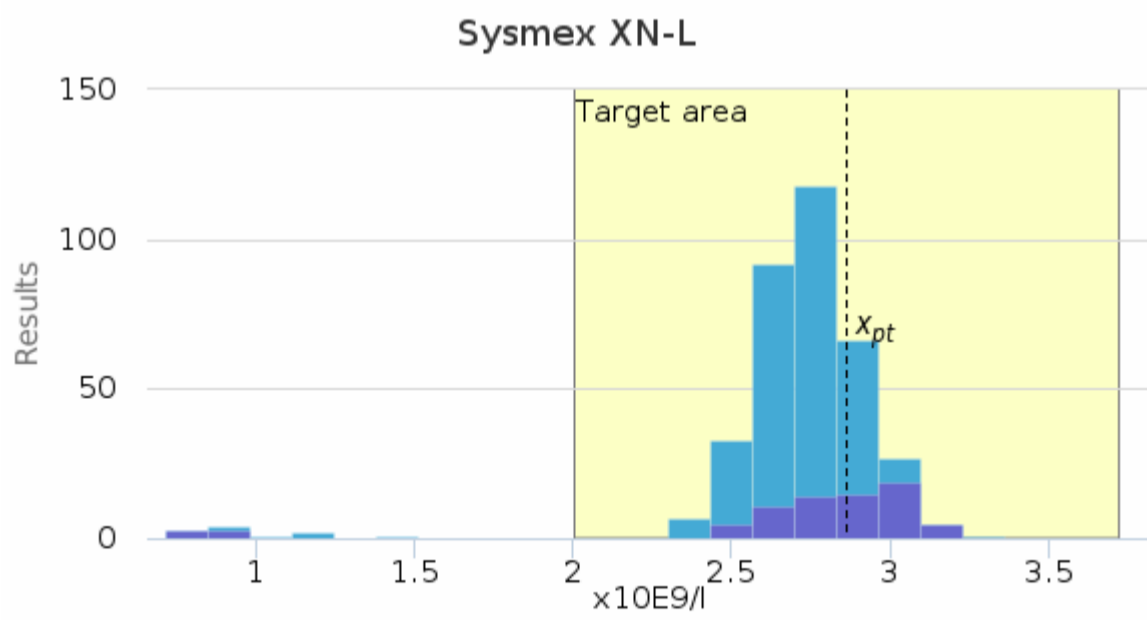
### Sample S004 | B -Eos, x10E9/l| histogram summaries in LabScala



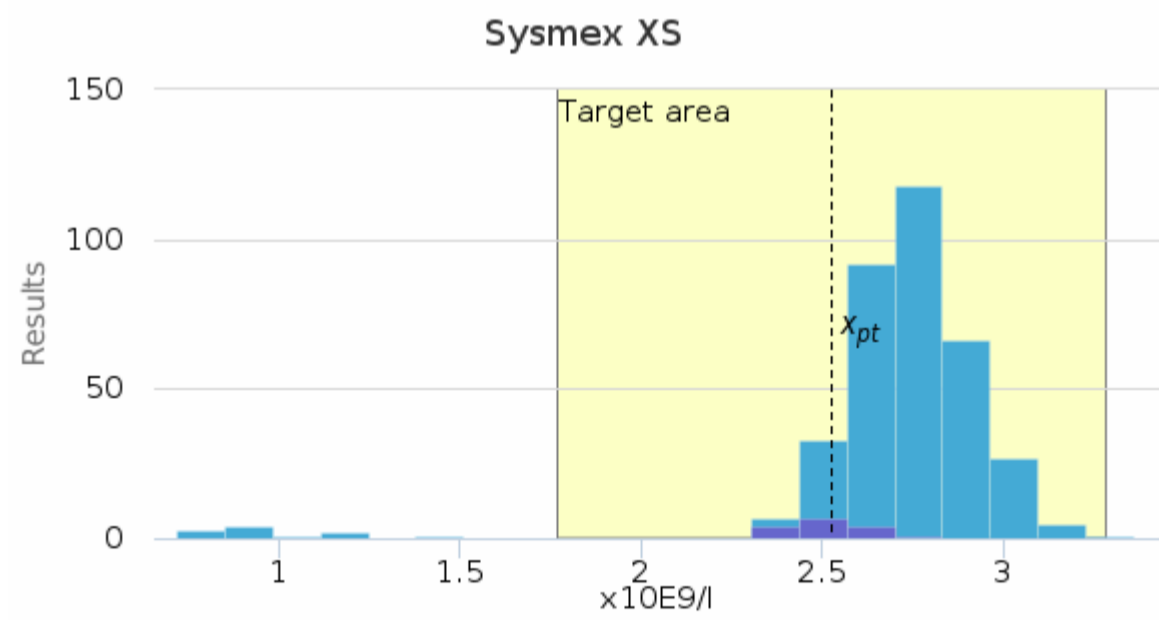
■ All method groups ■ Sysmex XE, XT ( $x_{pt}$ : 2.54 | Target area: 1.78-3.30 | Target:  $\pm 30\%$ )



■ All method groups ■ Sysmex XN ( $x_{pt}$ : 2.74 | Target area: 1.92-3.56 | Target:  $\pm 30\%$ )



■ All method groups ■ Sysmex XN-L ( $x_{pt}$ : 2.86 | Target area: 2.00-3.72 | Target:  $\pm 30\%$ )

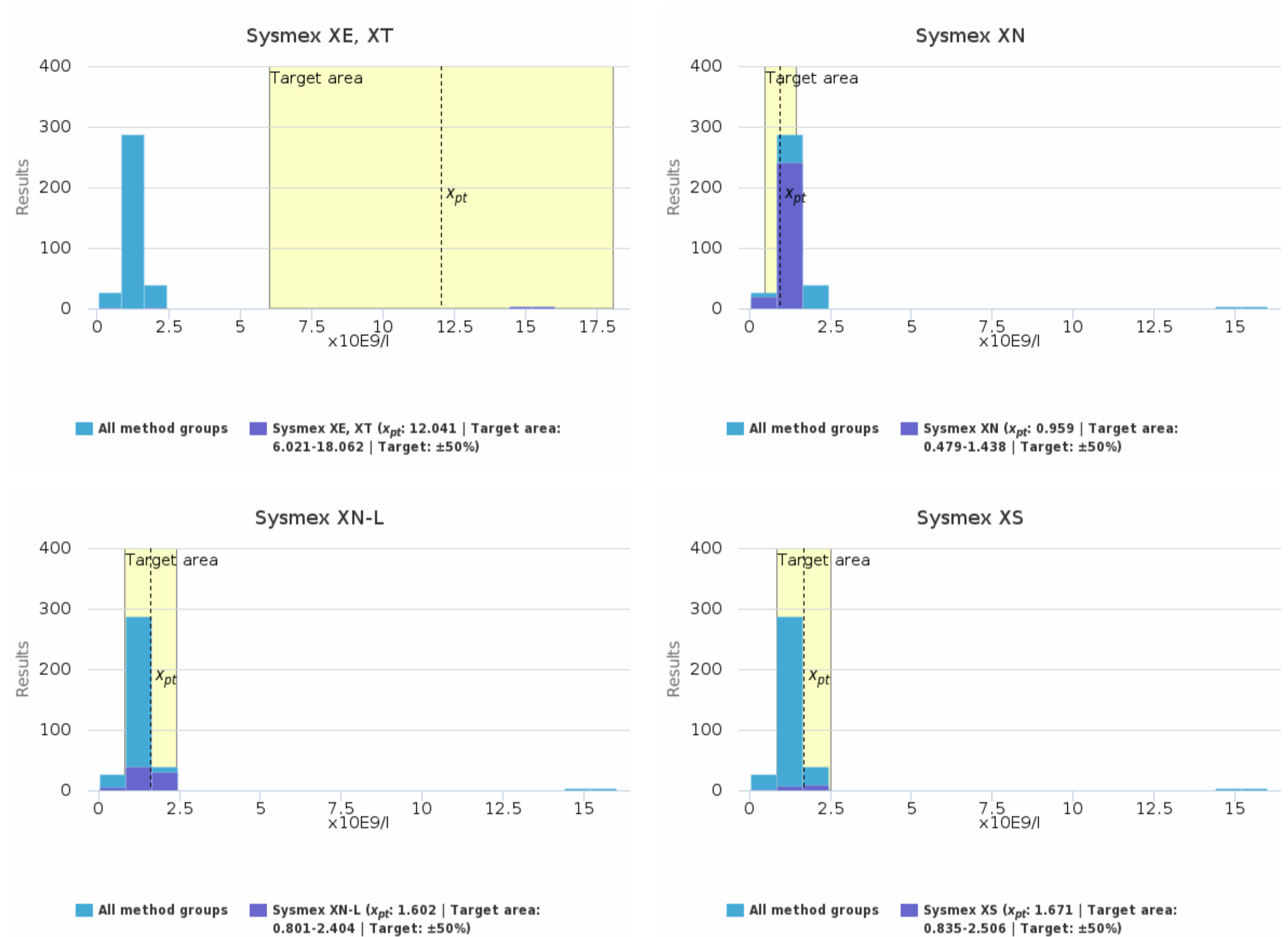


■ All method groups ■ Sysmex XS ( $x_{pt}$ : 2.53 | Target area: 1.77-3.28 | Target:  $\pm 30\%$ )

### Sample S004 | B-Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Sysmex XE, XT	12.041	15.060	6.315	52.4	2.105	0.100	16.020	-	9
Sysmex XN	0.959	0.960	0.045	4.7	0.003	0.420	1.130	18	260
Sysmex XN-L	1.602	1.590	0.147	9.2	0.018	1.100	1.870	6	75
Sysmex XS	1.671	1.670	0.138	8.3	0.034	1.450	1.950	1	17
<b>All</b>	<b>1.054</b>	<b>0.970</b>	<b>0.402</b>	<b>38.1</b>	<b>0.021</b>	<b>0.040</b>	<b>1.950</b>	<b>7</b>	<b>361</b>

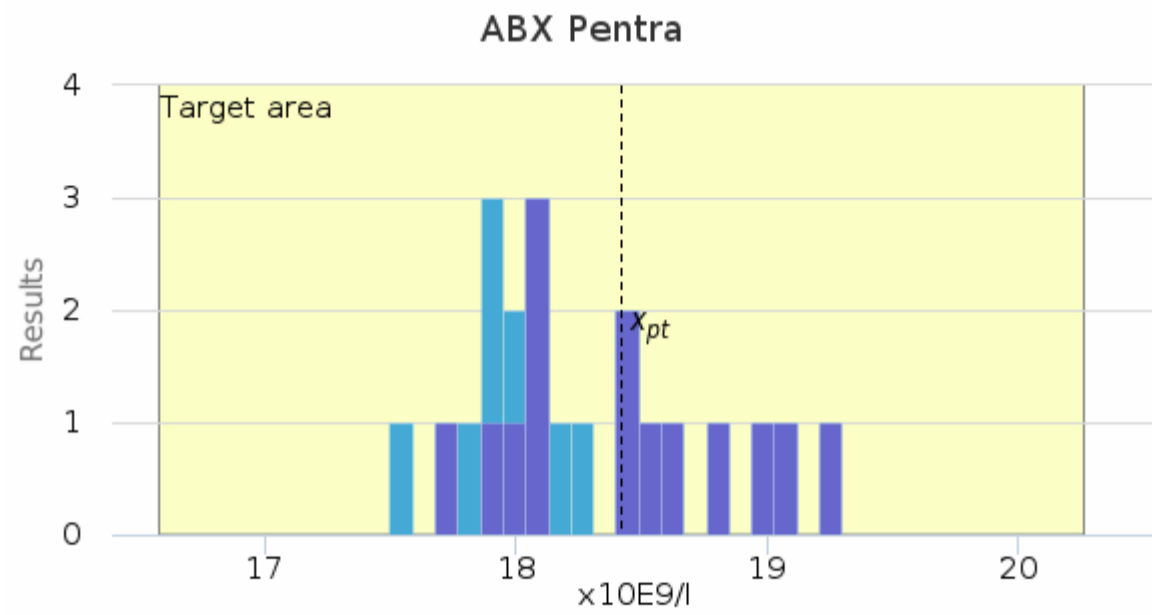
### Sample S004 | B-Baso, x10E9/l | histogram summaries in LabScala



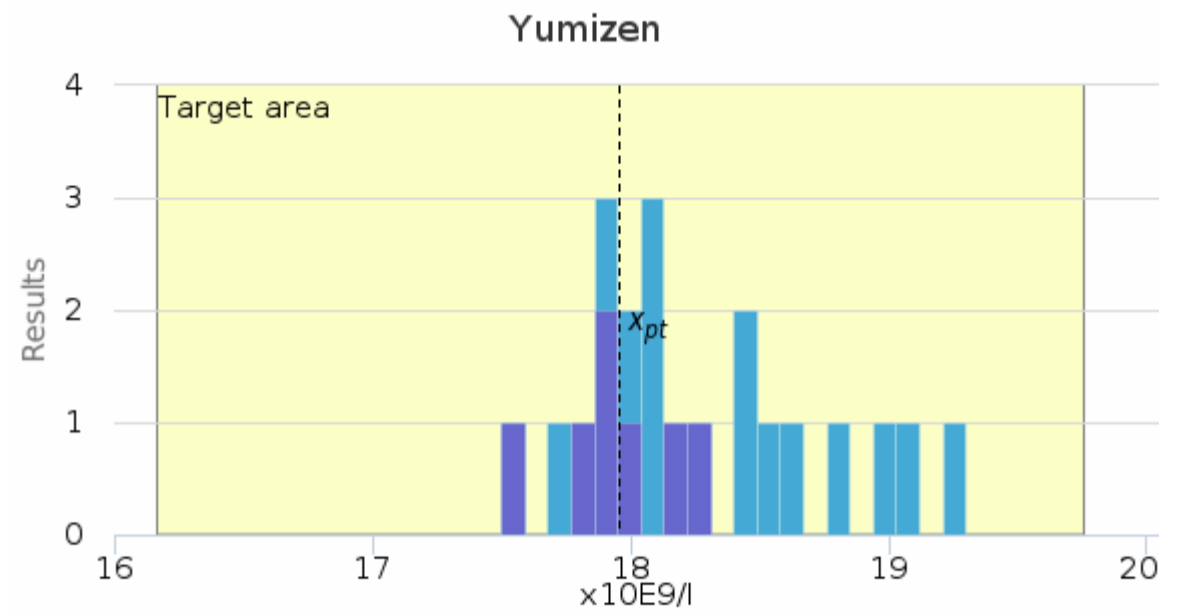
Sample S005 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	18.4	18.4	0.5	2.6	0.1	17.7	19.3	-	14
Yumizen	18.0	17.9	0.3	1.4	<0.1	17.5	18.3	-	7
<b>All</b>	<b>18.3</b>	<b>18.1</b>	<b>0.5</b>	<b>2.6</b>	<b>0.1</b>	<b>17.5</b>	<b>19.3</b>	-	<b>21</b>

Sample S005 | B -Leuk, x10E9/l | histogram summaries in LabScala



■ All method groups ■ ABX Pentra ( $x_{pt}$ : 18.4 | Target area: 16.6-20.3 | Target:  $\pm 10\%$ )

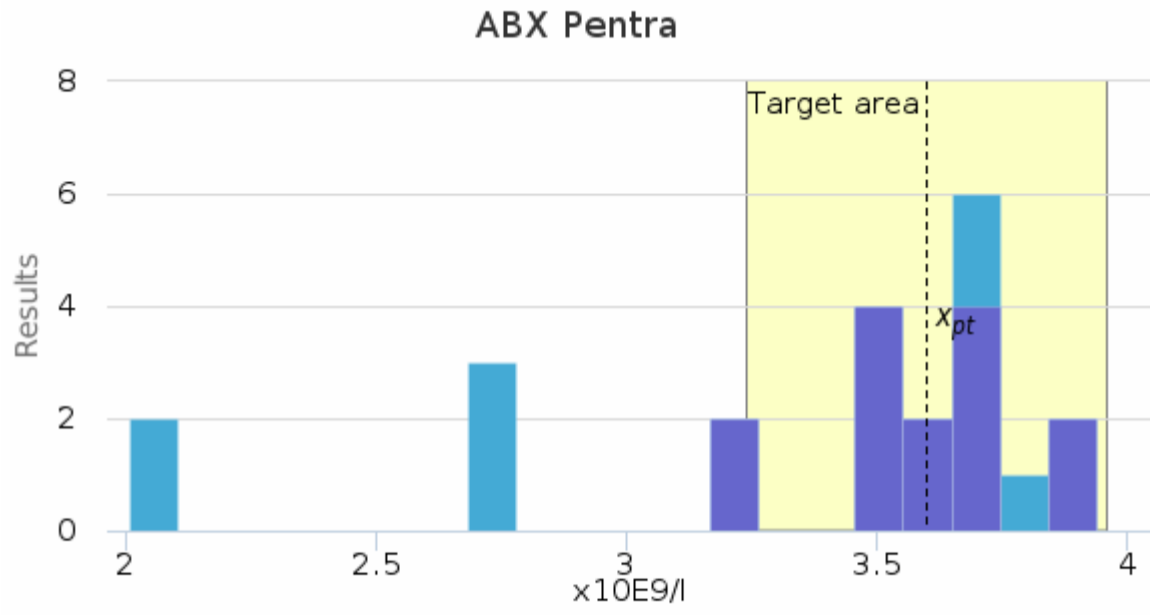


■ All method groups ■ Yumizen ( $x_{pt}$ : 18.0 | Target area: 16.2-19.8 | Target:  $\pm 10\%$ )

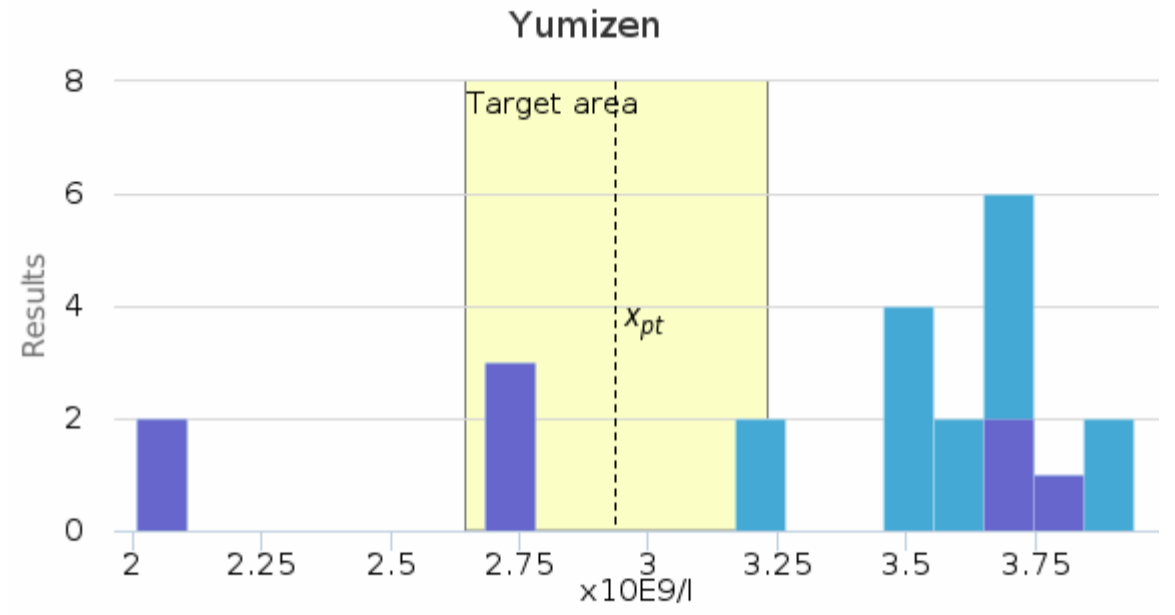
Sample S005 | B-Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	3.60	3.64	0.21	5.7	0.05	3.22	3.94	-	14
Yumizen	2.94	2.78	0.71	24.1	0.25	2.01	3.76	-	8
<b>All</b>	<b>3.36</b>	<b>3.60</b>	<b>0.55</b>	<b>16.3</b>	<b>0.12</b>	<b>2.01</b>	<b>3.94</b>	-	<b>22</b>

Sample S005 | B-Lym, x10E9/l| histogram summaries in LabScala



■ All method groups ■ ABX Pentra ( $x_{pt}$ : 3.60 | Target area: 3.24-3.96 | Target:  $\pm 10\%$ )

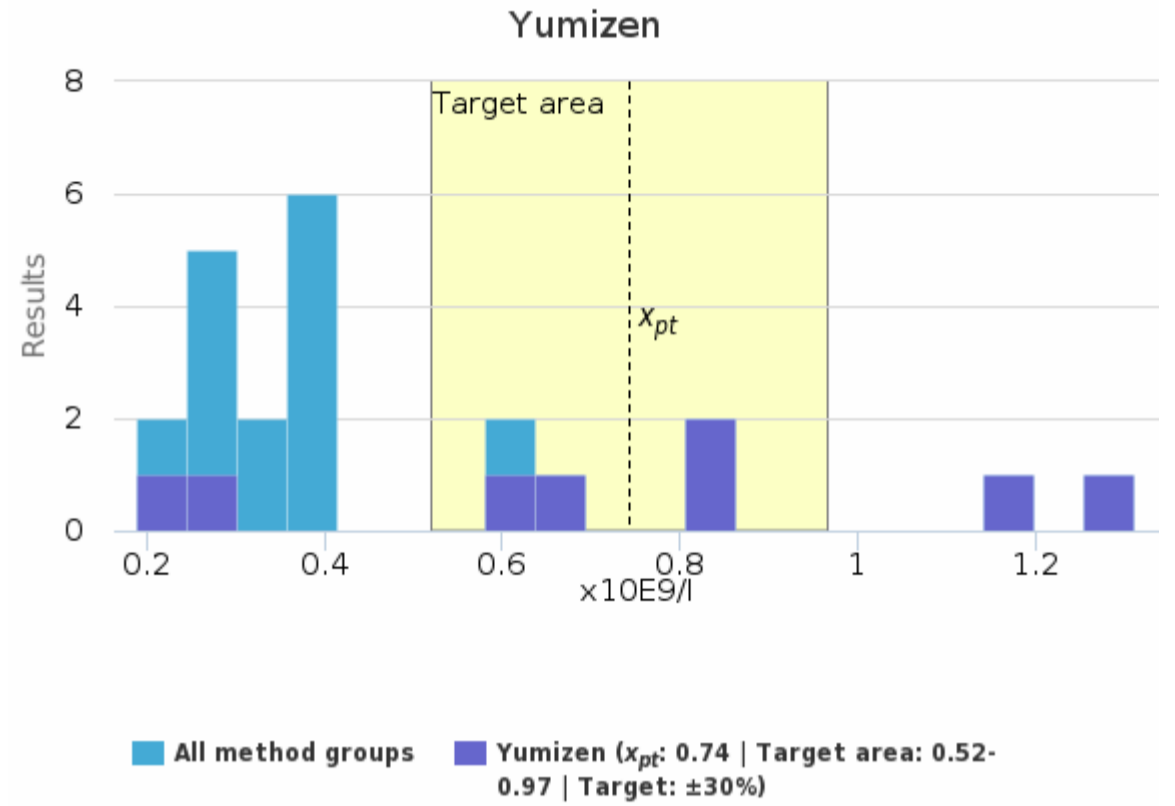
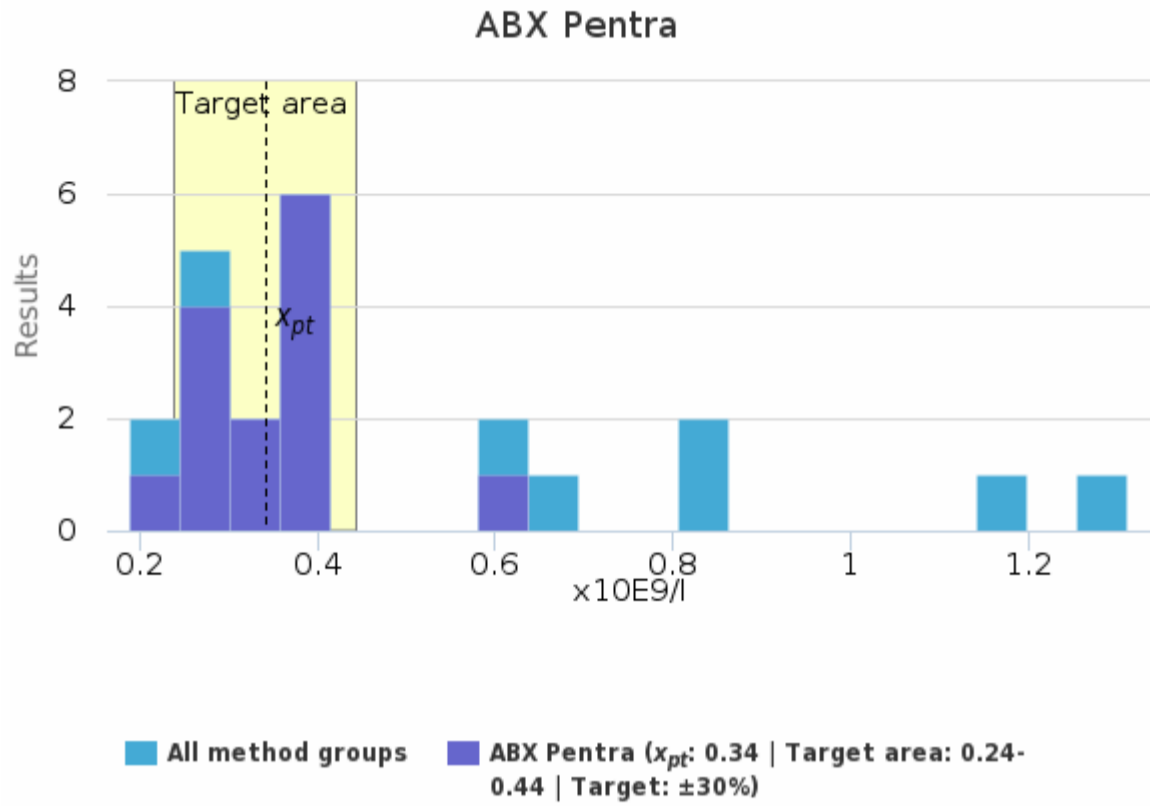


■ All method groups ■ Yumizen ( $x_{pt}$ : 2.94 | Target area: 2.64-3.23 | Target:  $\pm 10\%$ )

Sample S005 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	0.34	0.34	0.09	27.2	0.02	0.19	0.60	-	14
Yumizen	0.74	0.75	0.38	50.8	0.13	0.24	1.31	-	8
<b>All</b>	<b>0.45</b>	<b>0.36</b>	<b>0.25</b>	<b>55.1</b>	<b>0.05</b>	<b>0.19</b>	<b>1.15</b>	<b>1</b>	<b>22</b>

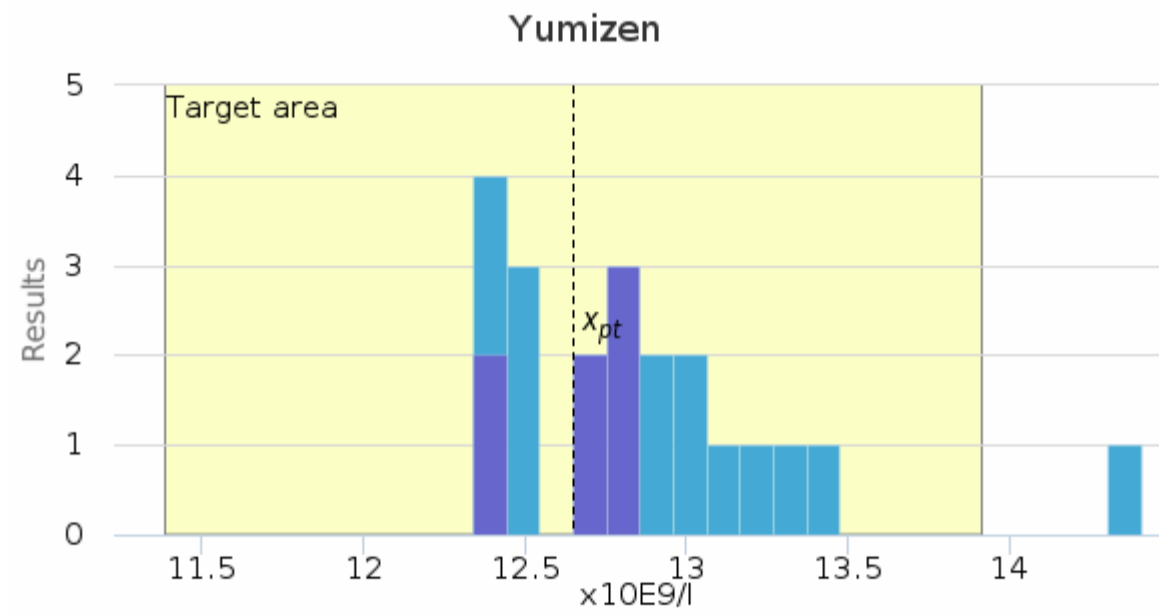
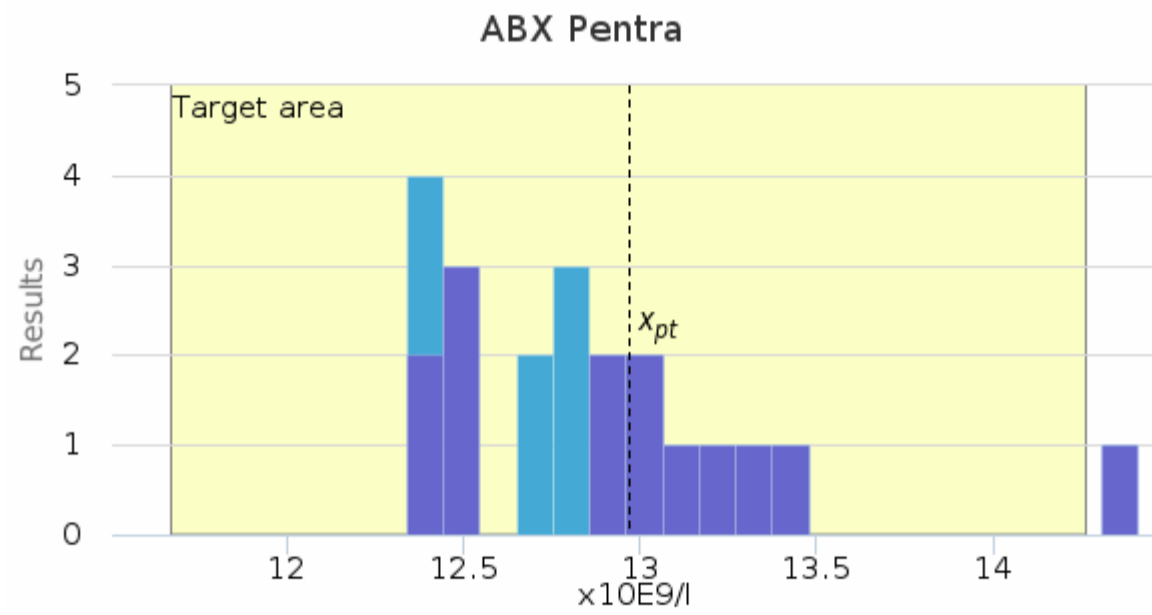
Sample S005 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S005 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	12.97	12.98	0.54	4.1	0.14	12.38	14.41	-	14
Yumizen	12.65	12.72	0.20	1.5	0.07	12.34	12.83	-	7
<b>All</b>	<b>12.79</b>	<b>12.79</b>	<b>0.32</b>	<b>2.5</b>	<b>0.07</b>	<b>12.34</b>	<b>13.41</b>	<b>1</b>	<b>21</b>

Sample S005 | B -Neutr, x10E9/l | histogram summaries in LabScala



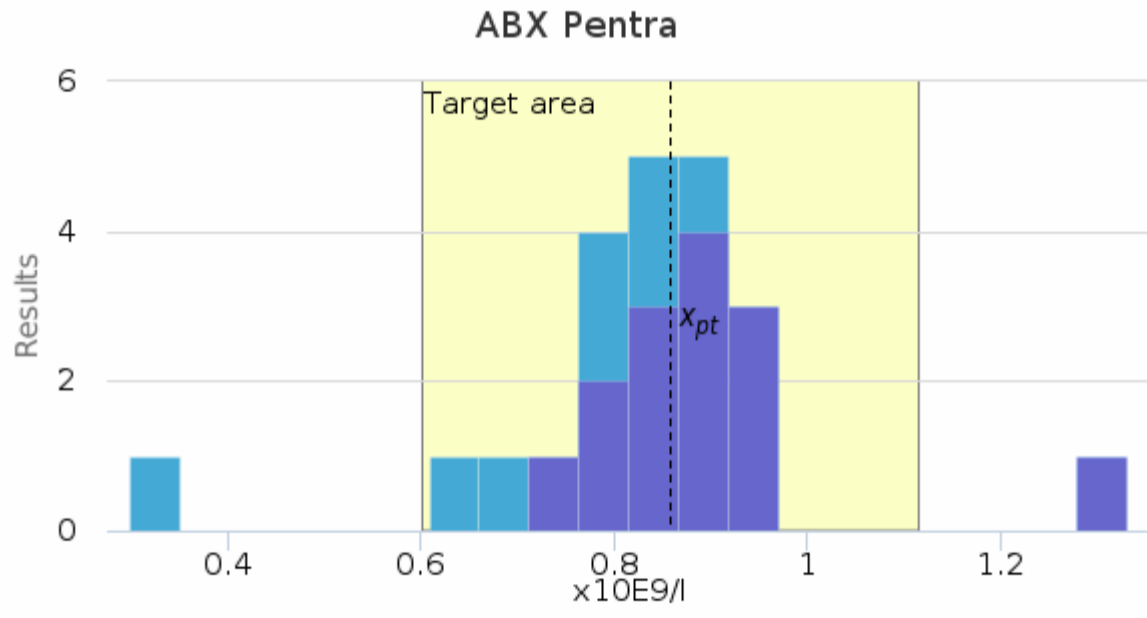
■ All method groups ■ ABX Pentra ( $x_{pt}$ : 12.97 | Target area: 11.67-14.27 | Target:  $\pm 10\%$ )

■ All method groups ■ Yumizen ( $x_{pt}$ : 12.65 | Target area: 11.39-13.92 | Target:  $\pm 10\%$ )

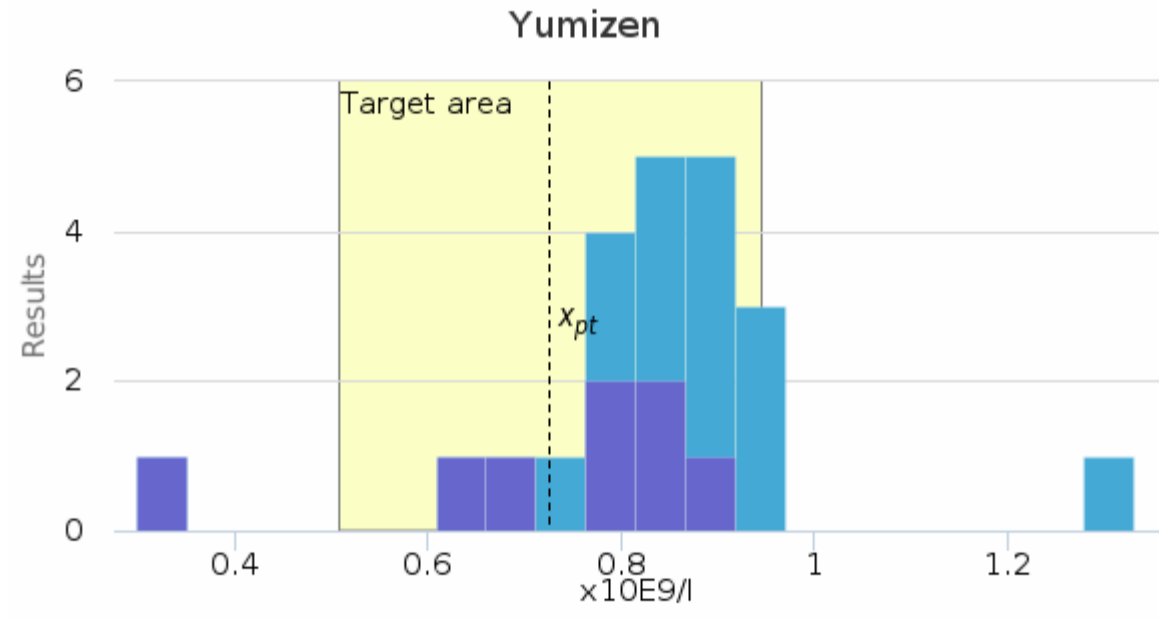
Sample S005 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	0.86	0.87	0.06	6.5	0.02	0.76	0.94	1	14
Yumizen	0.73	0.80	0.19	25.9	0.07	0.30	0.87	-	8
<b>All</b>	<b>0.86</b>	<b>0.86</b>	<b>0.13</b>	<b>15.1</b>	<b>0.03</b>	<b>0.66</b>	<b>1.33</b>	<b>1</b>	<b>22</b>

Sample S005 | B -Eos, x10E9/l| histogram summaries in LabScala



■ All method groups ■ ABX Pentra ( $x_{pt}$ : 0.86 | Target area: 0.60-1.12 | Target:  $\pm 30\%$ )

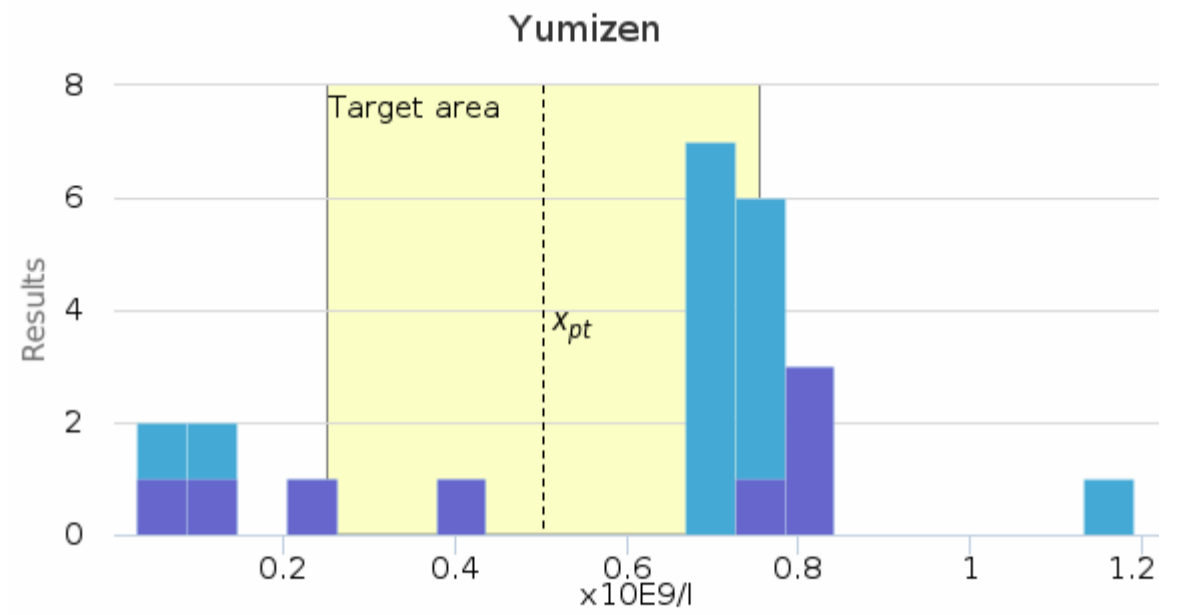
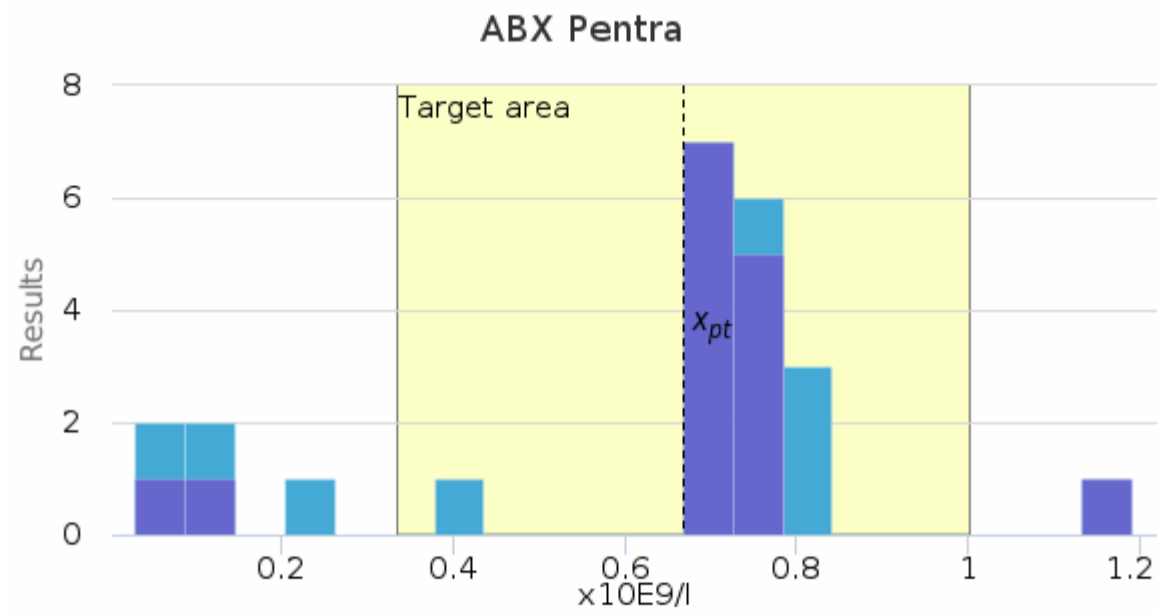


■ All method groups ■ Yumizen ( $x_{pt}$ : 0.73 | Target area: 0.51-0.94 | Target:  $\pm 30\%$ )

Sample S005 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
ABX Pentra	0.669	0.720	0.267	40.0	0.069	0.030	1.190	-	15
Yumizen	0.503	0.570	0.334	66.5	0.118	0.070	0.840	-	8
<b>All</b>	<b>0.611</b>	<b>0.720</b>	<b>0.296</b>	<b>48.4</b>	<b>0.062</b>	<b>0.030</b>	<b>1.190</b>	-	<b>23</b>

Sample S005 | B -Baso, x10E9/l | histogram summaries in LabScala



■ All method groups ■ ABX Pentra ( $x_{pt}$ : 0.669 | Target area: 0.334-1.003 | Target:  $\pm 50\%$ )

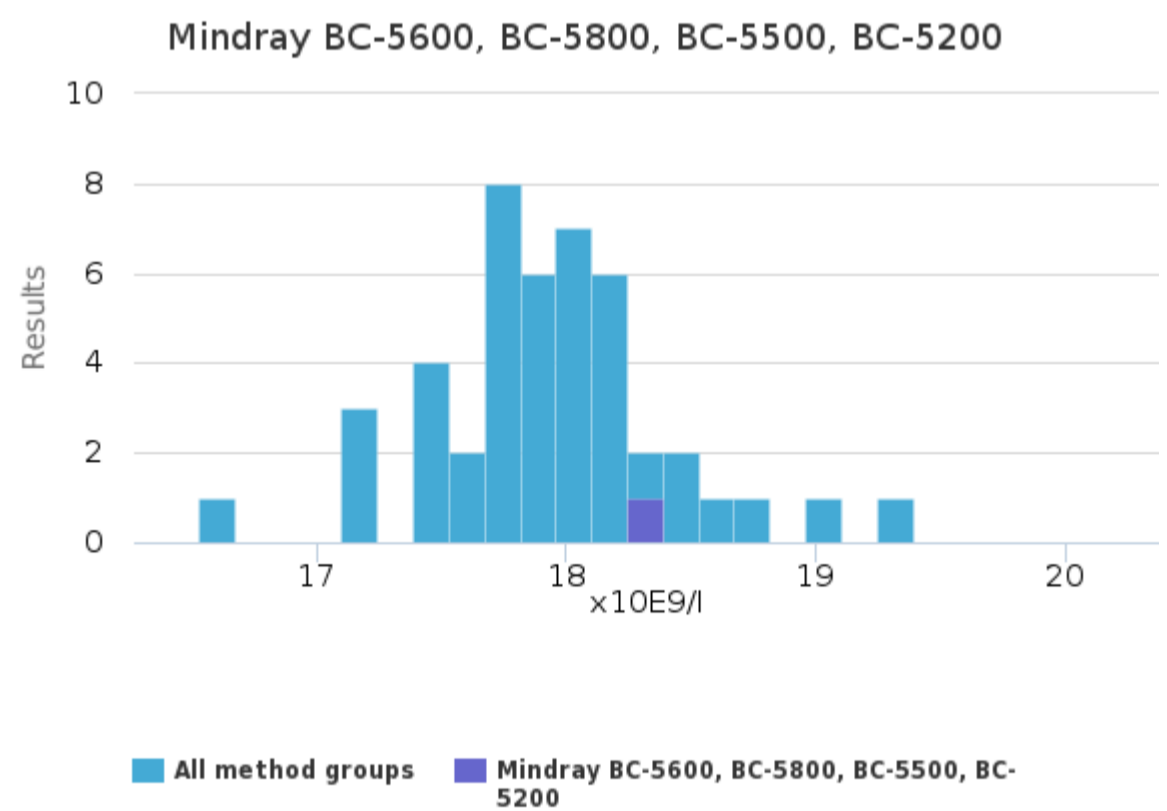
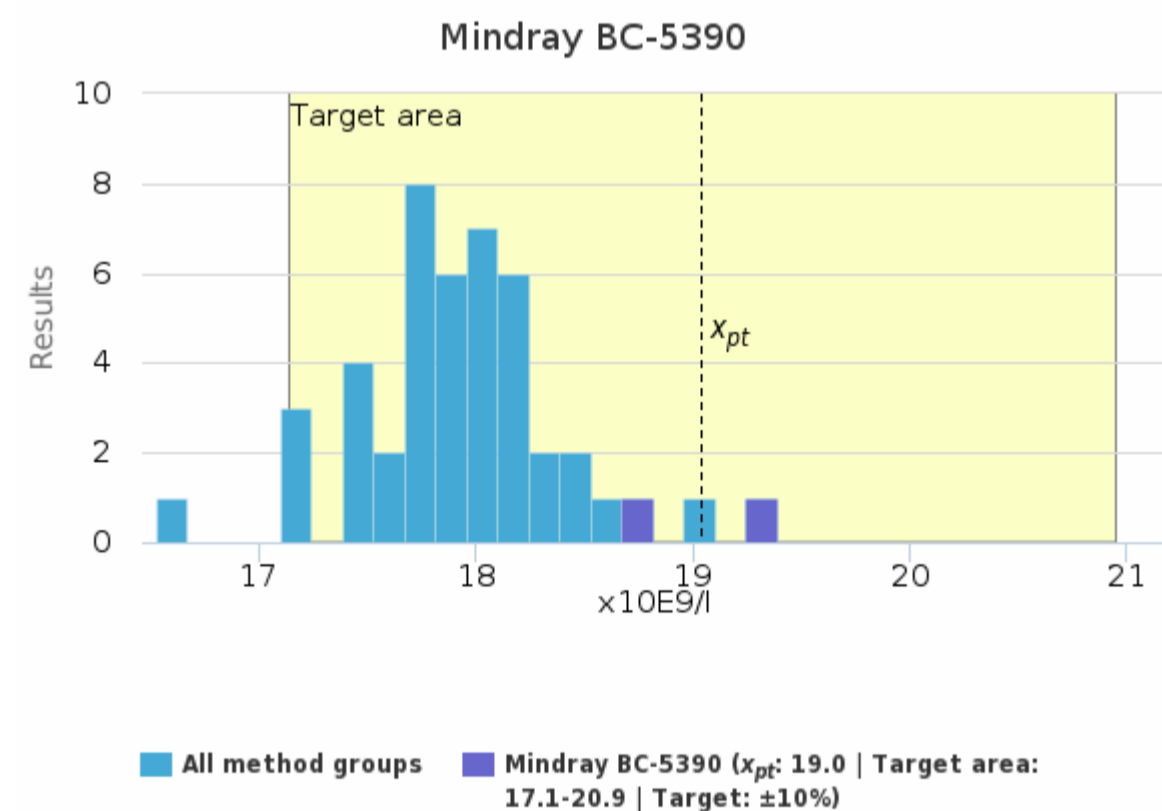
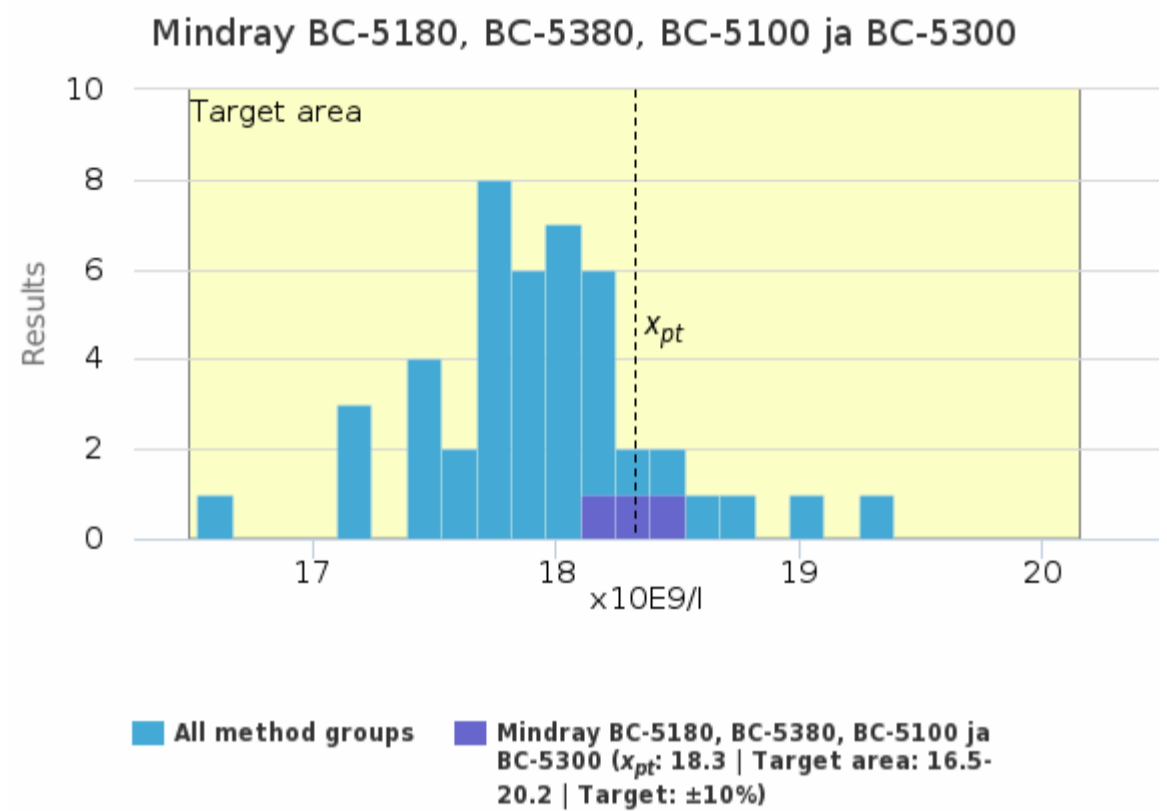
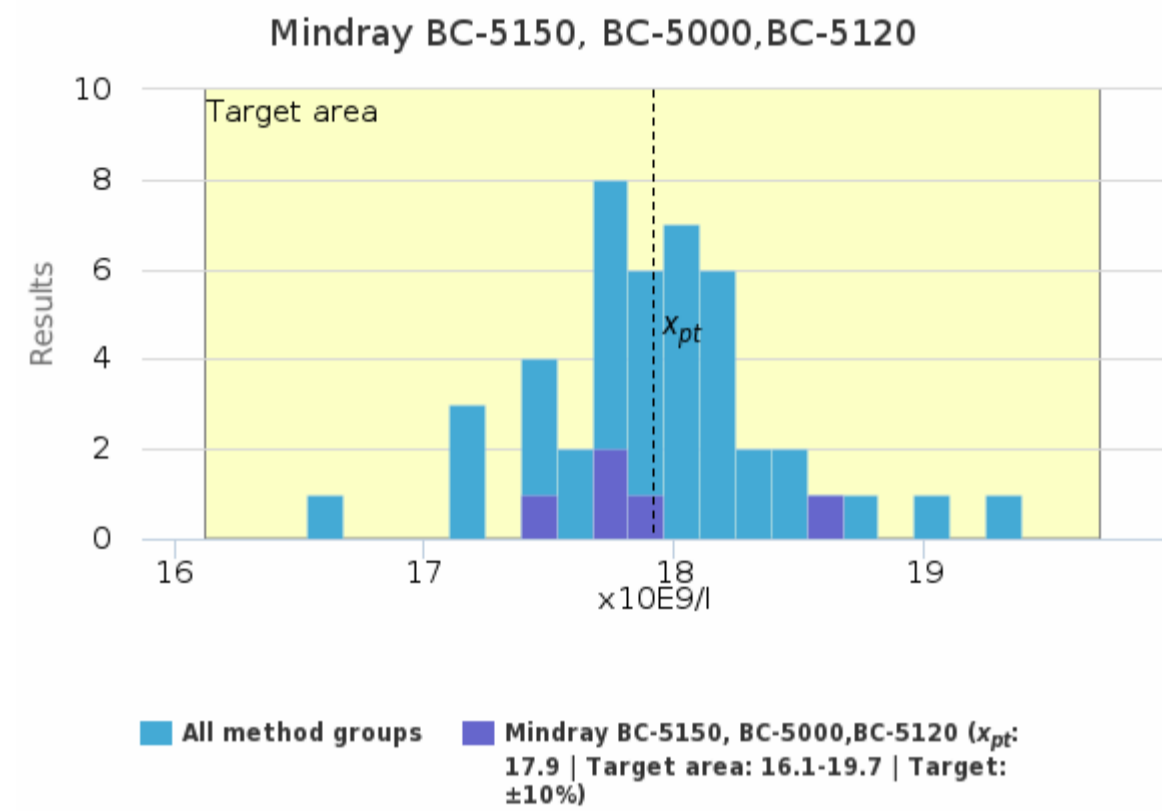
■ All method groups ■ Yumizen ( $x_{pt}$ : 0.503 | Target area: 0.252-0.755 | Target:  $\pm 50\%$ )

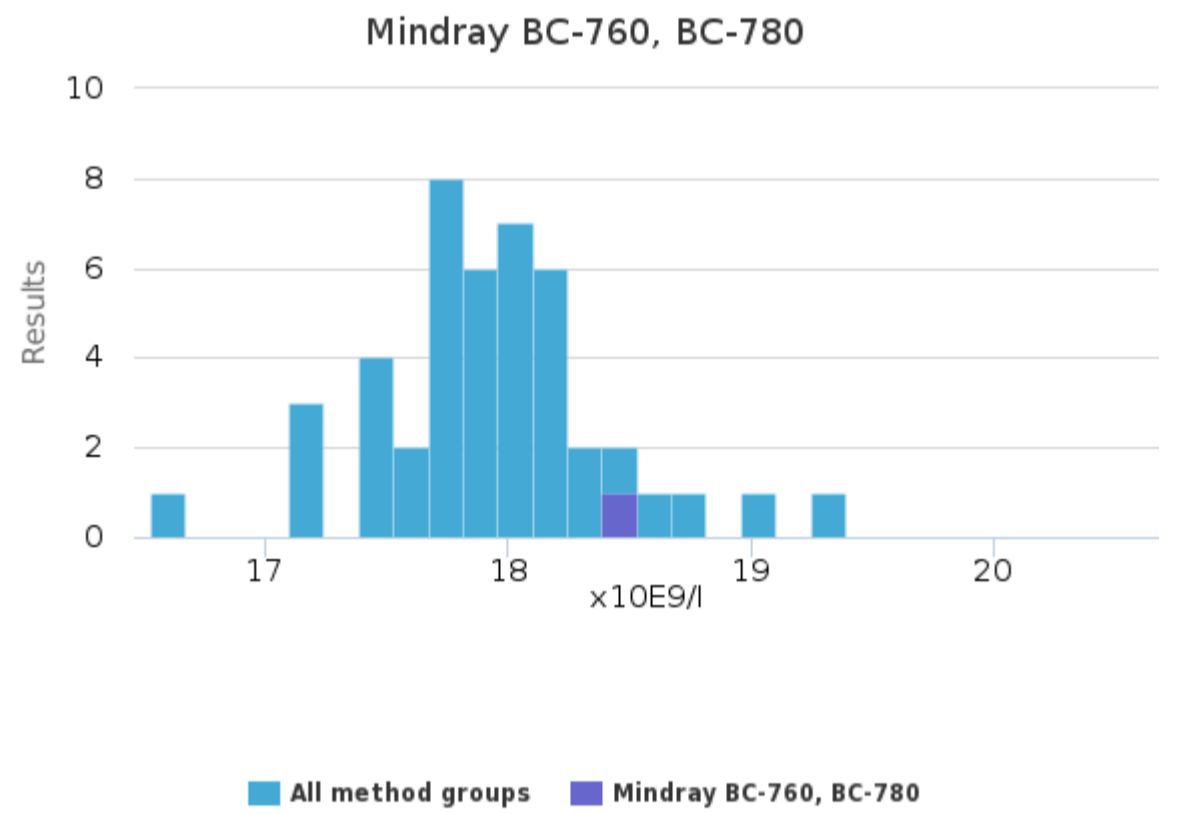
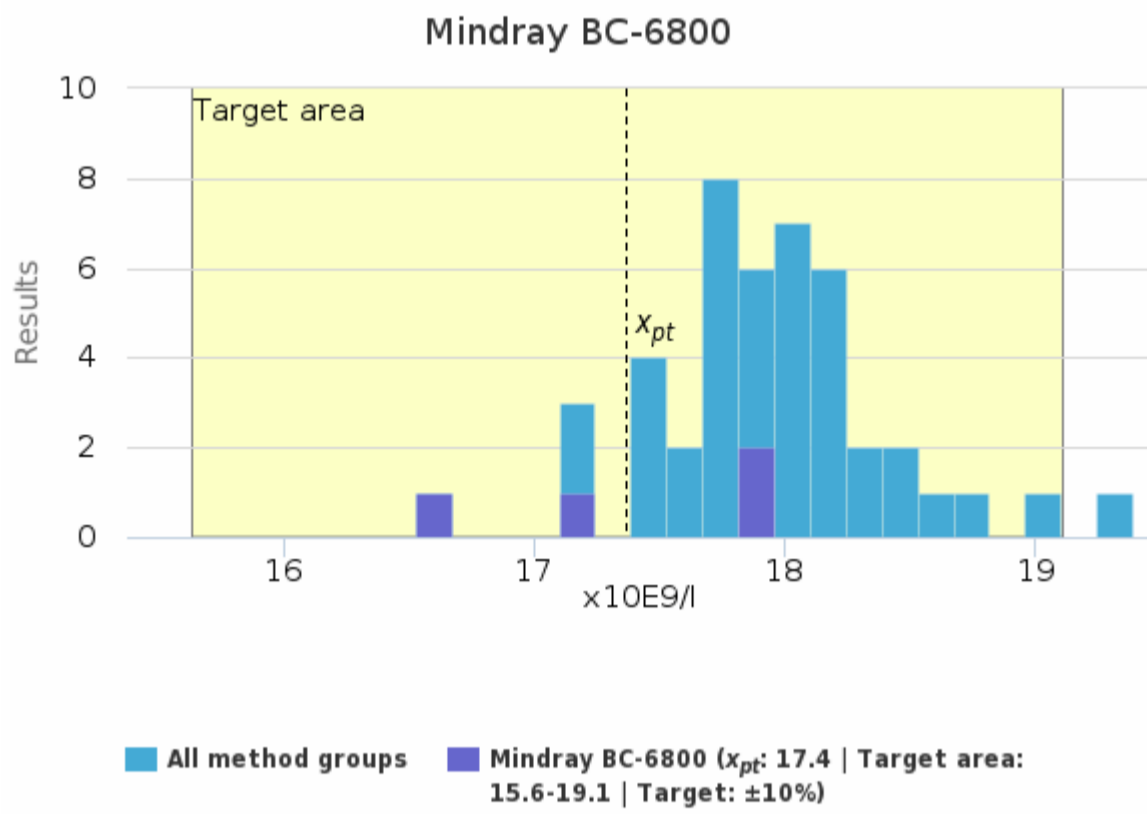
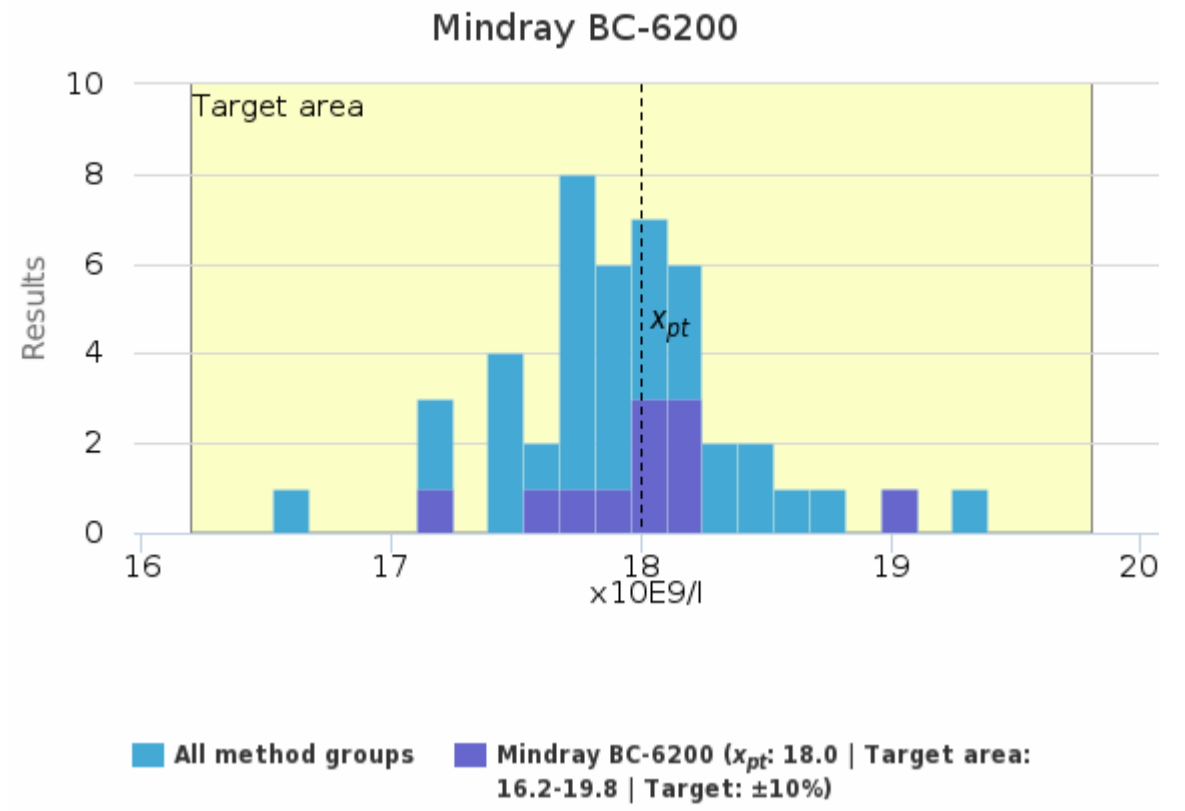
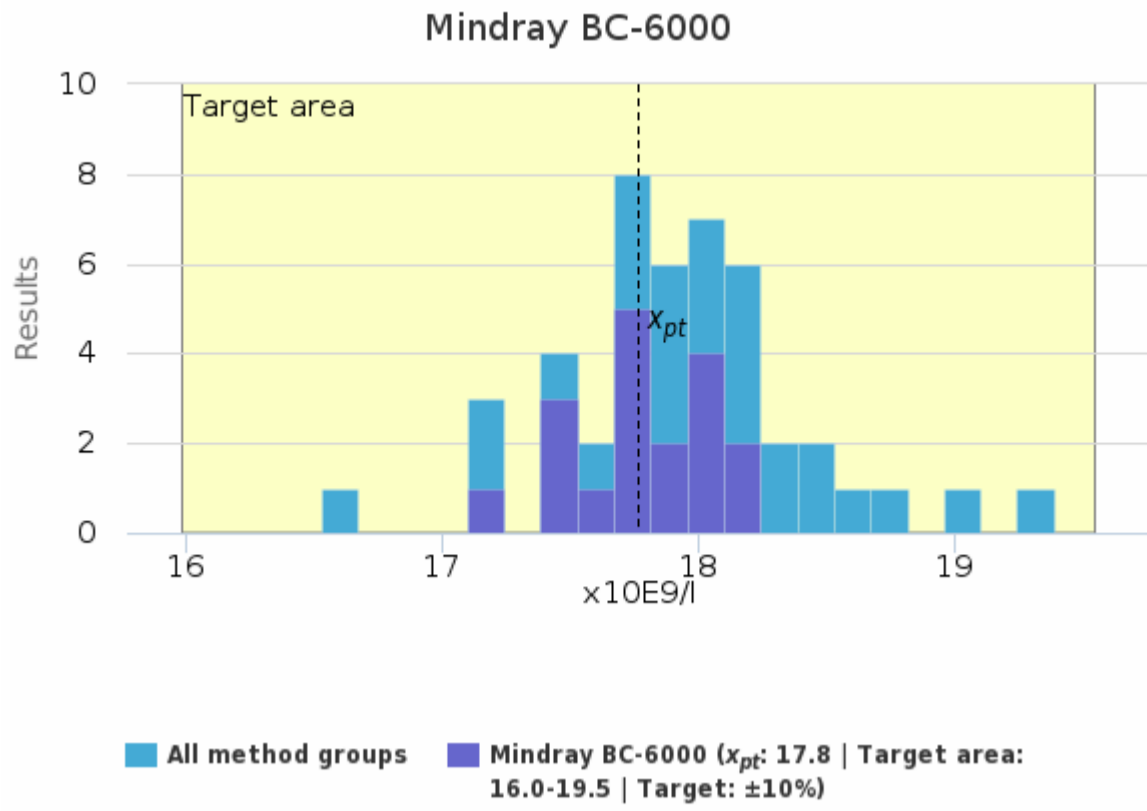


### Sample S006 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	17.9	17.8	0.4	2.4	0.2	17.5	18.6	-	5
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	18.3	18.3	0.1	0.7	<0.1	18.2	18.4	-	3
Mindray BC-5390	19.0	19.0	0.5	2.6	0.3	18.7	19.4	-	2
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	18.3	18.3	-	1
Mindray BC-6000	17.8	17.7	0.3	1.5	<0.1	17.2	18.2	-	18
Mindray BC-6200	18.0	18.0	0.4	2.5	0.1	17.2	19.0	-	11
Mindray BC-6800	17.4	17.5	0.6	3.7	0.3	16.5	17.9	-	4
Mindray BC-760, BC-780	-	-	-	-	-	18.5	18.5	-	1
<b>All</b>	<b>17.9</b>	<b>17.9</b>	<b>0.4</b>	<b>2.5</b>	<b>&lt;0.1</b>	<b>16.5</b>	<b>19.0</b>	<b>1</b>	<b>45</b>

### Sample S006 | B -Leuk, x10E9/l | histogram summaries in LabScala

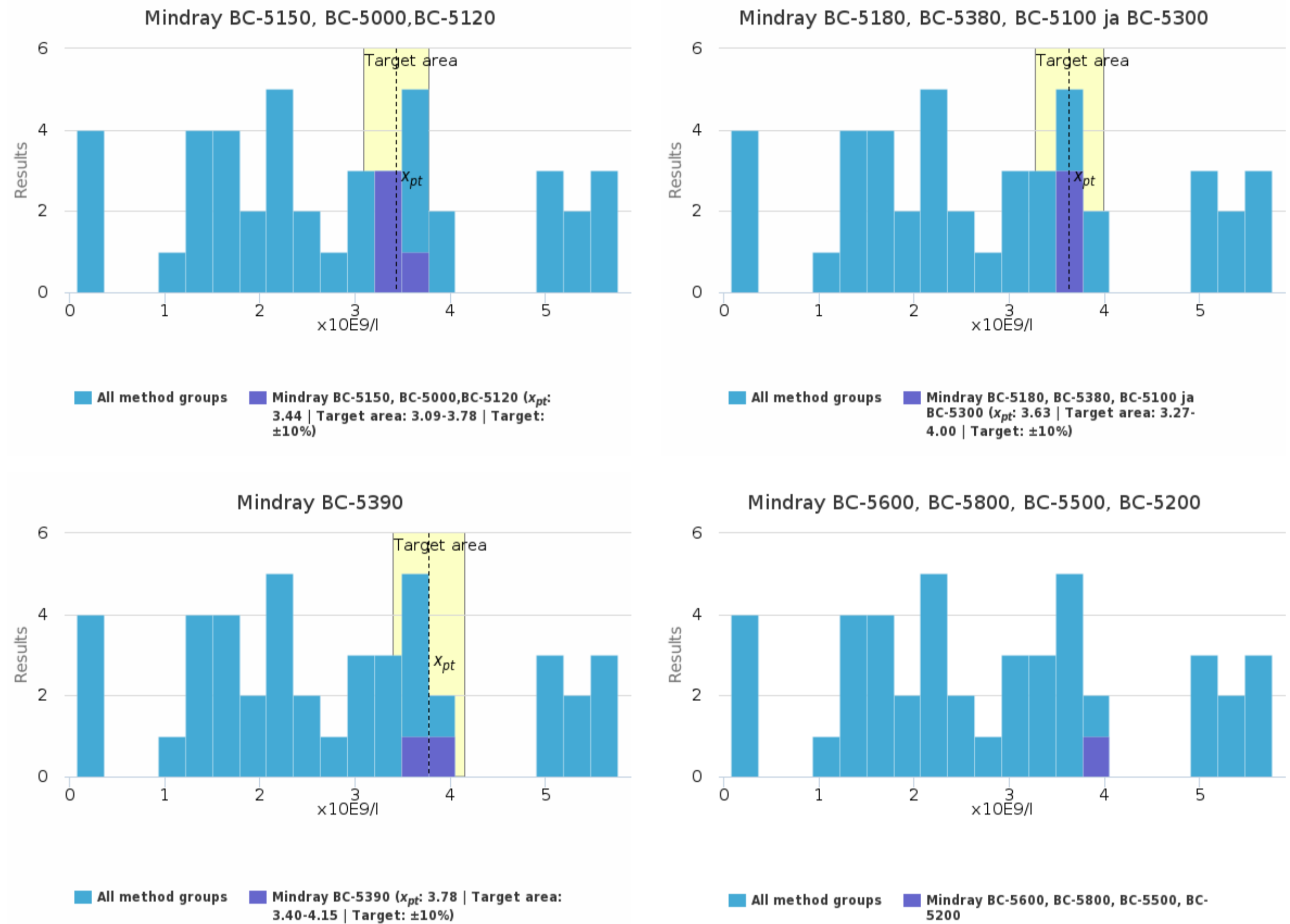


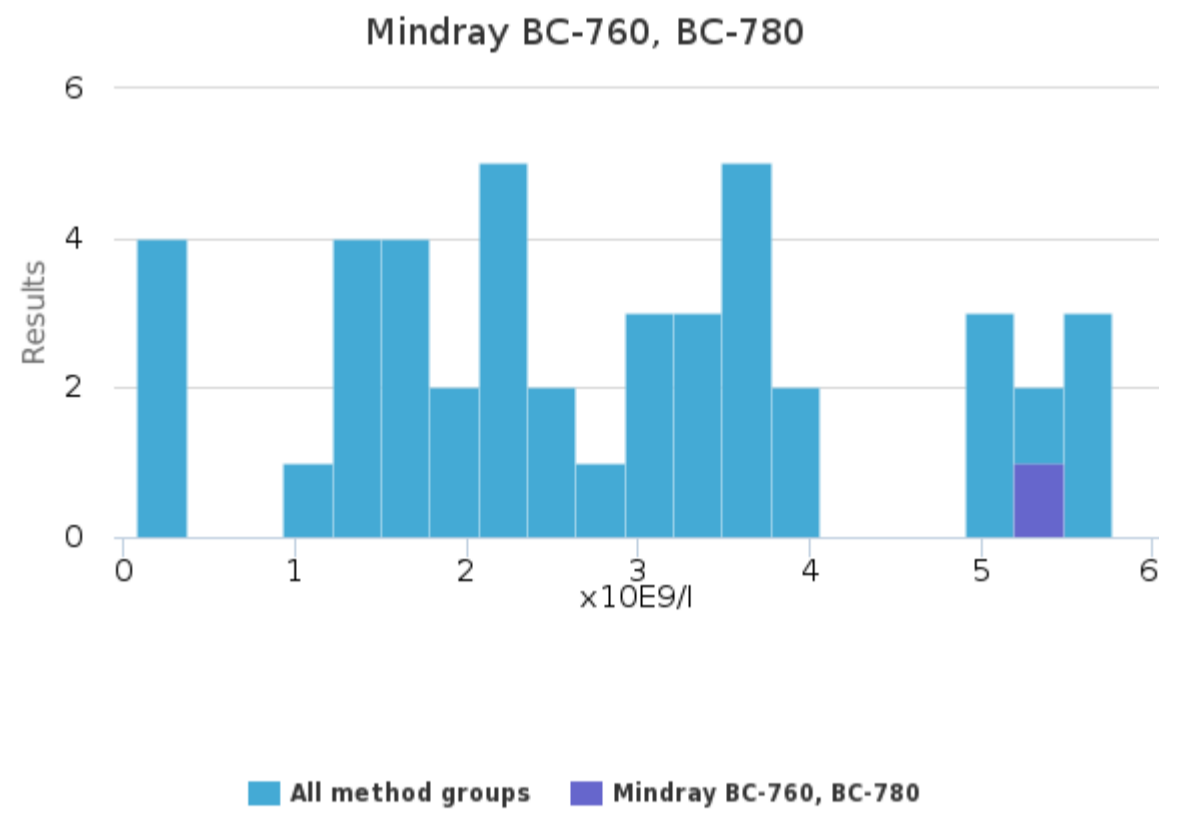
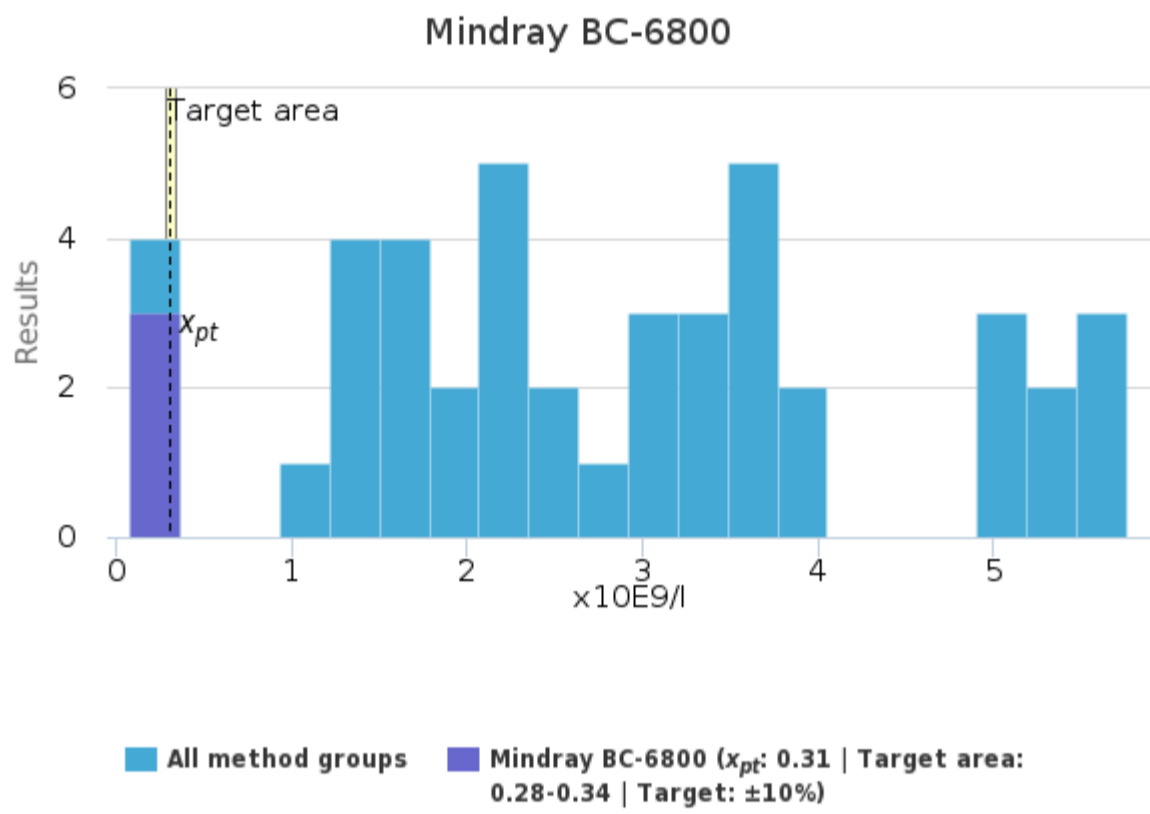
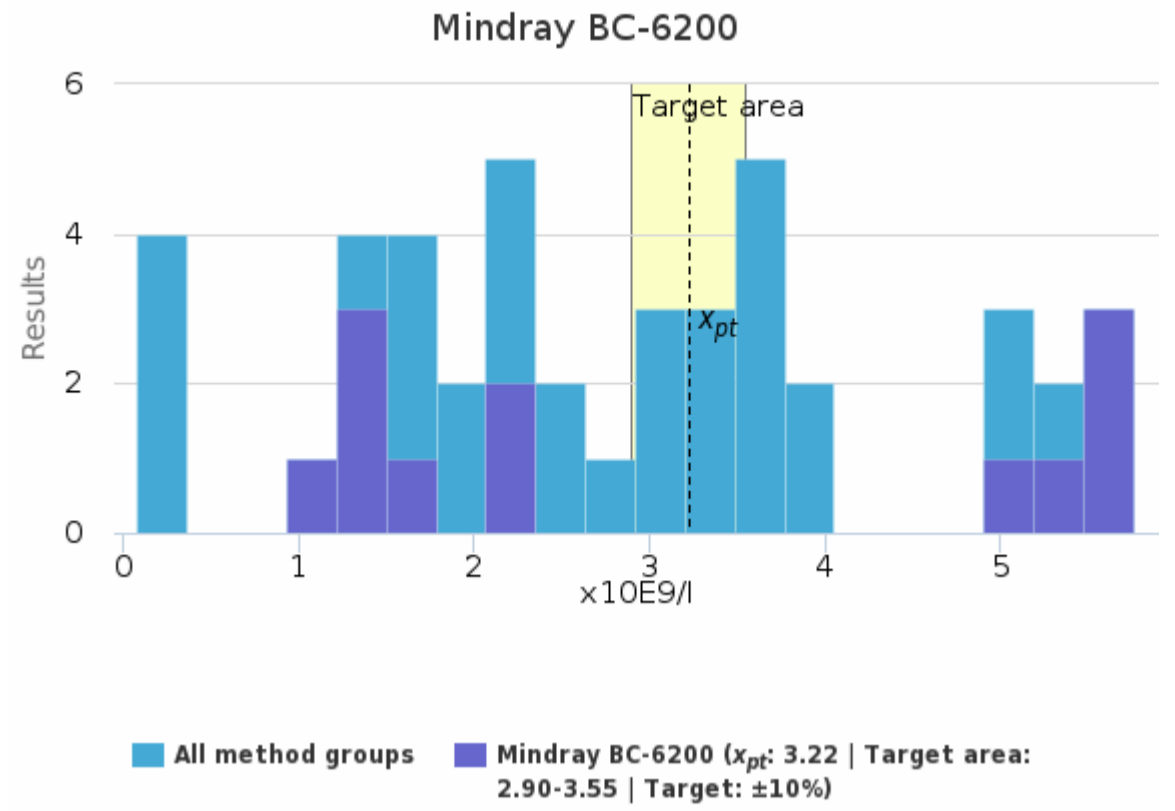
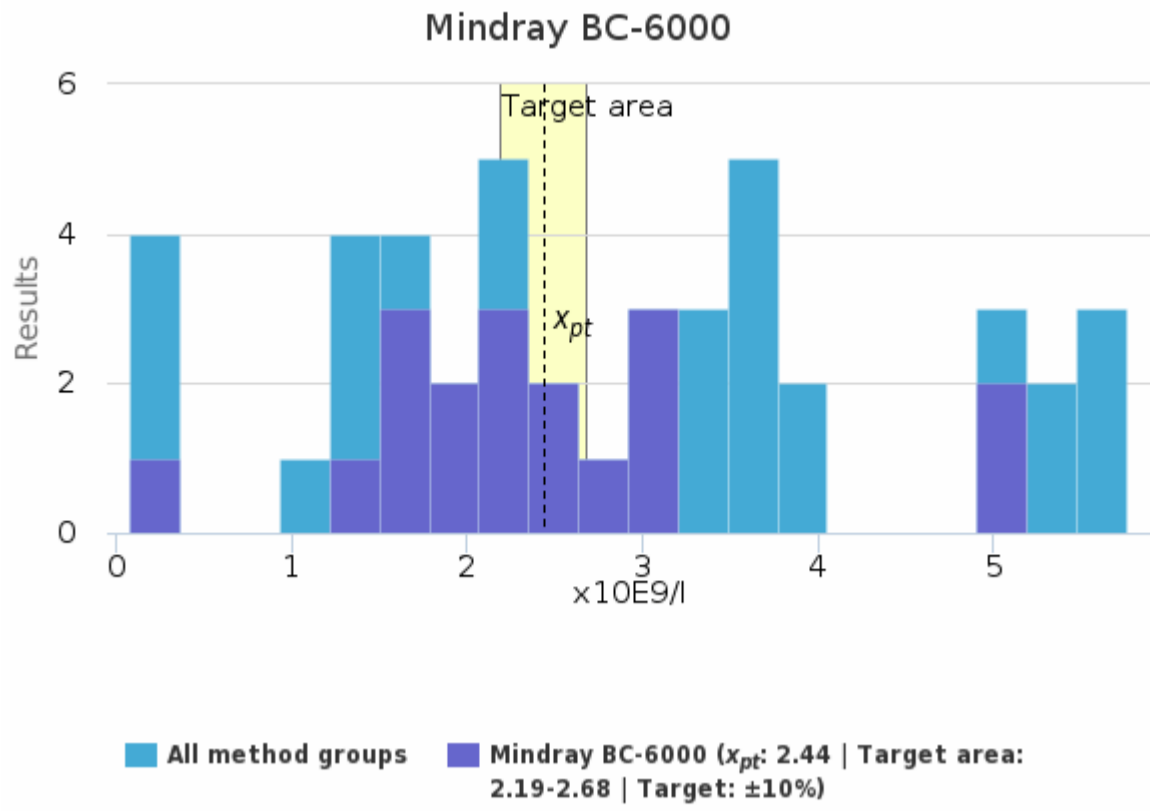


### Sample S006 | B-Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	3.44	3.37	0.19	5.5	0.10	3.29	3.71	-	4
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	3.63	3.63	0.05	1.2	0.03	3.59	3.68	-	3
Mindray BC-5390	3.78	3.78	0.16	4.3	0.12	3.66	3.89	-	2
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	3.86	3.86	-	1
Mindray BC-6000	2.44	2.22	1.16	47.7	0.27	0.08	4.96	-	18
Mindray BC-6200	3.22	2.21	2.03	62.9	0.59	1.16	5.76	-	12
Mindray BC-6800	0.31	0.30	0.03	10.0	0.02	0.28	0.34	-	3
Mindray BC-760, BC-780	-	-	-	-	-	5.30	5.30	-	1
<b>All</b>	<b>2.84</b>	<b>2.62</b>	<b>1.56</b>	<b>54.9</b>	<b>0.23</b>	<b>0.08</b>	<b>5.76</b>	-	<b>44</b>

### Sample S006 | B-Lym, x10E9/l| histogram summaries in LabScala

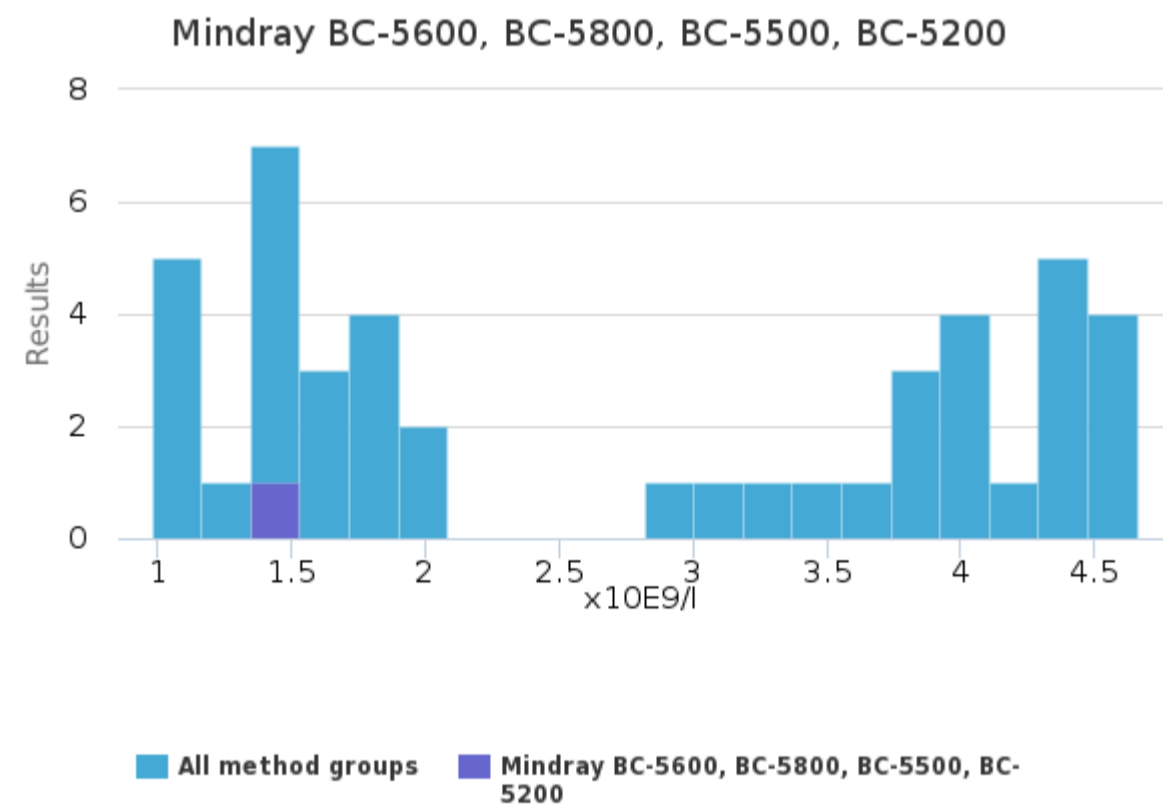
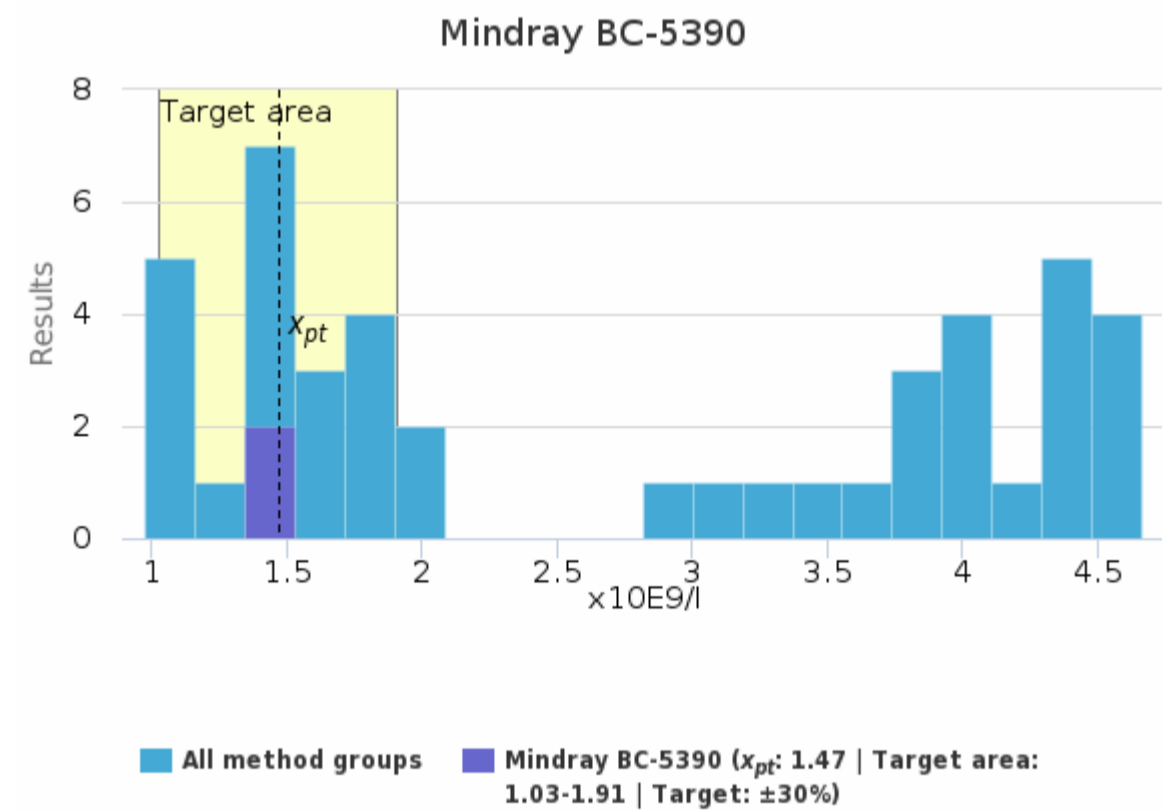
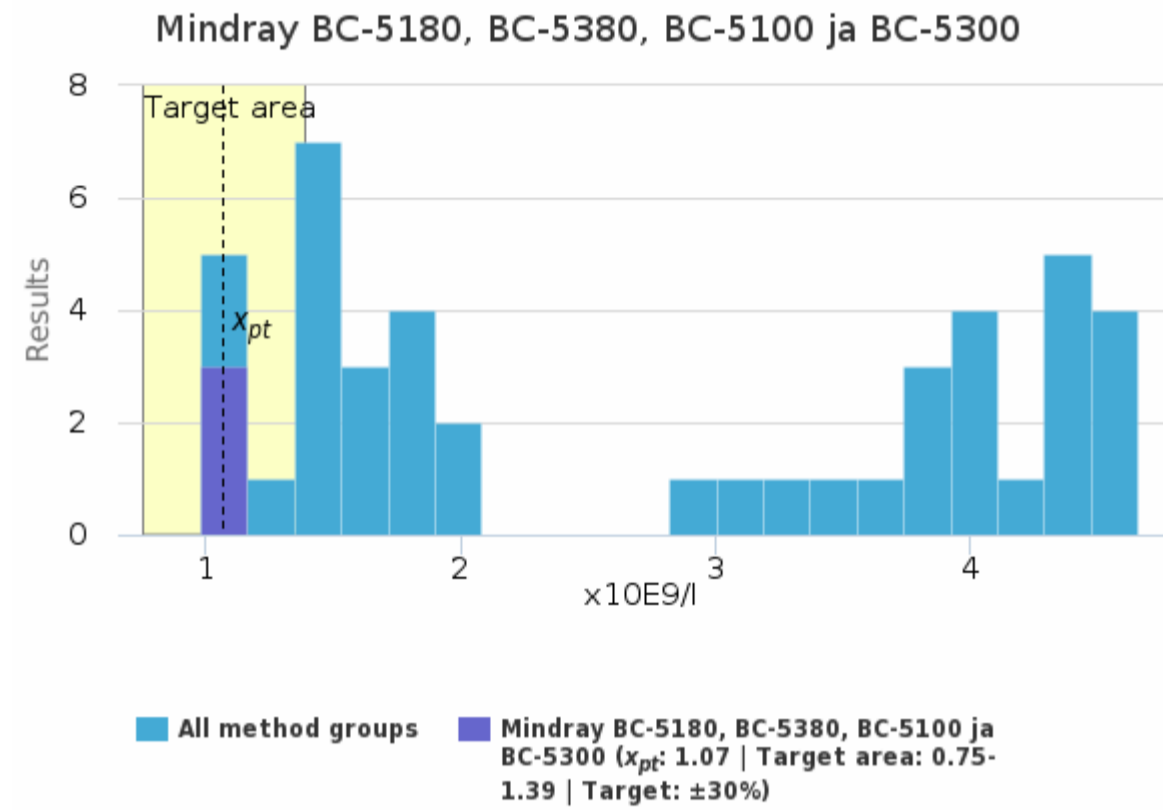
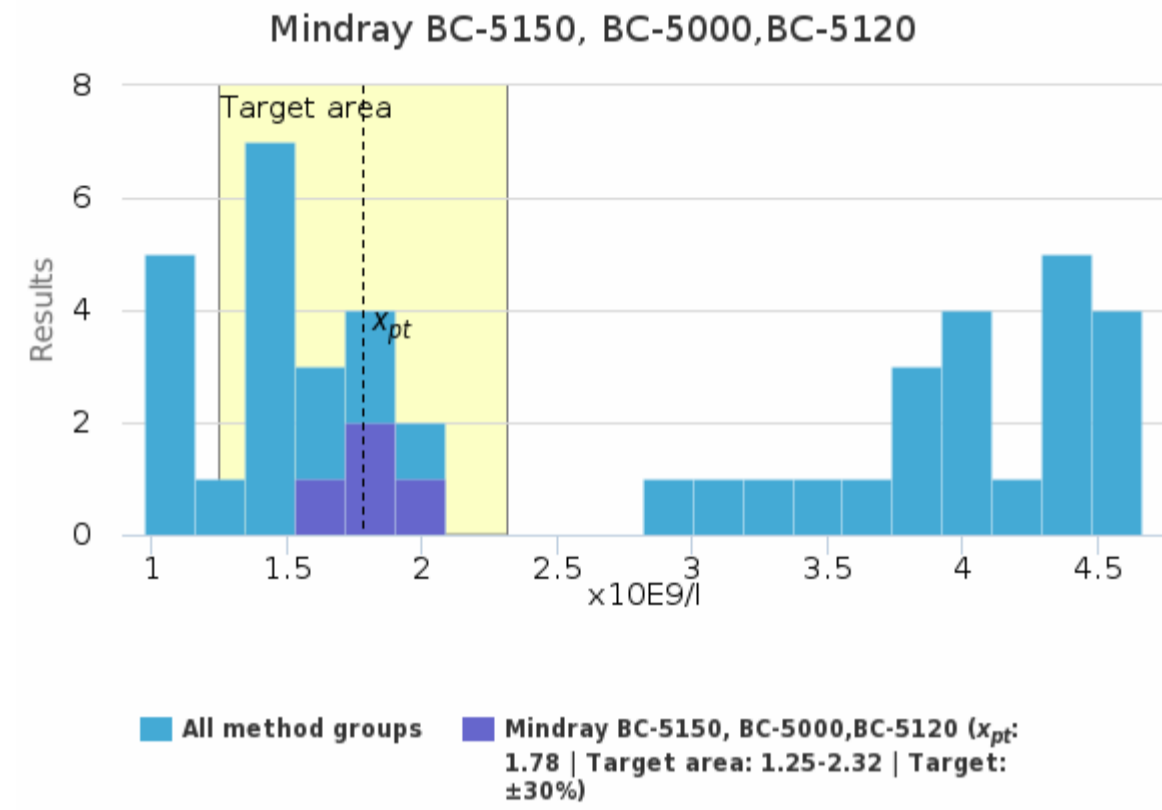


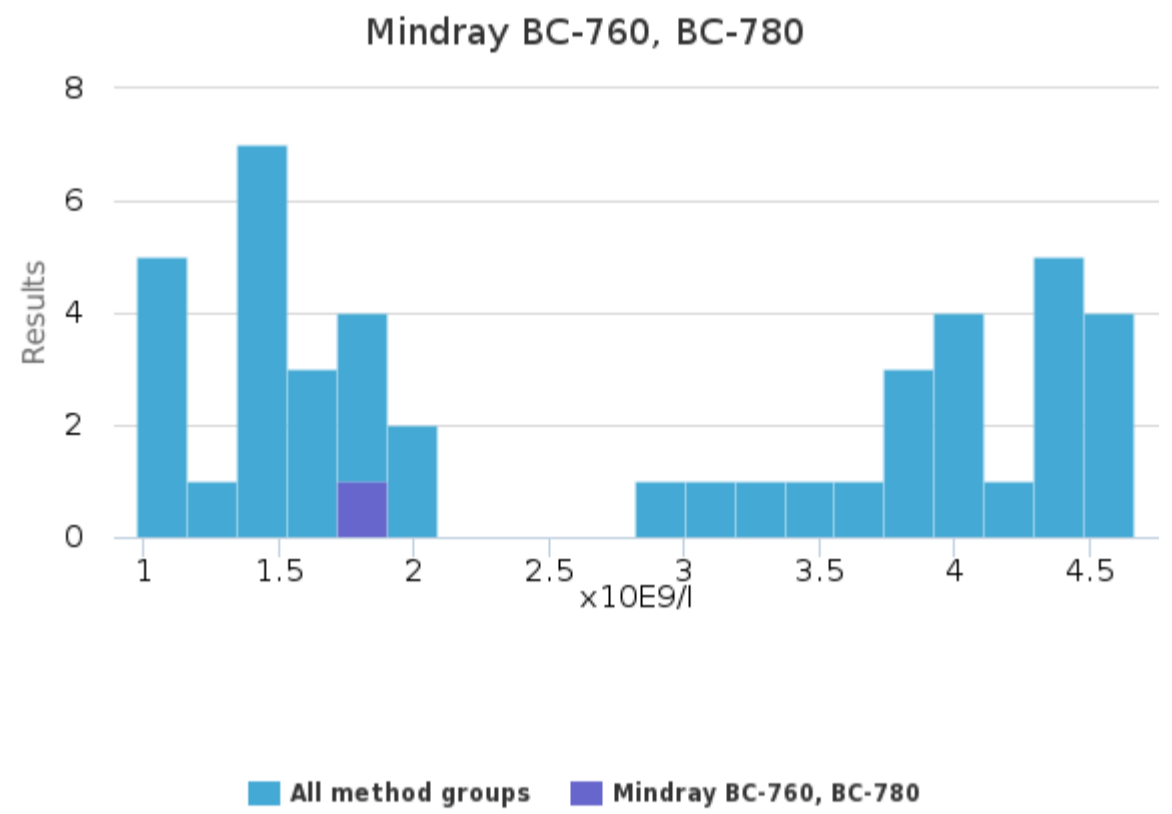
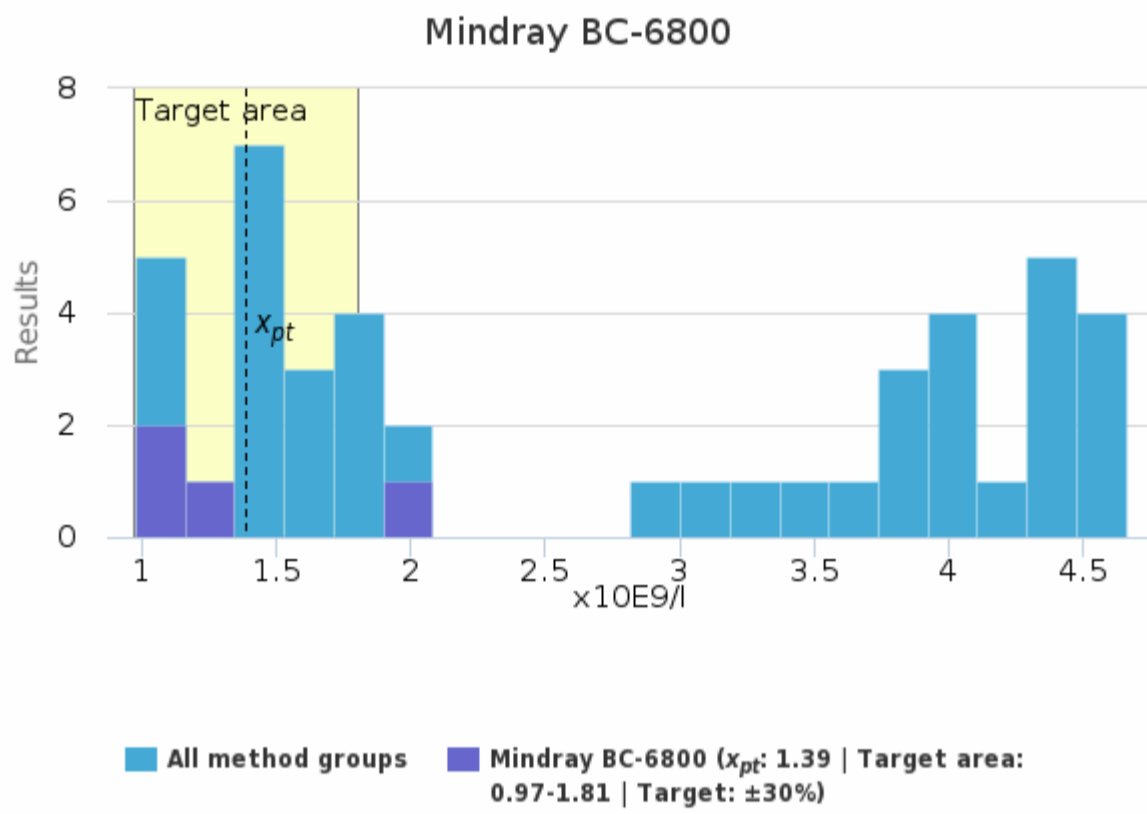
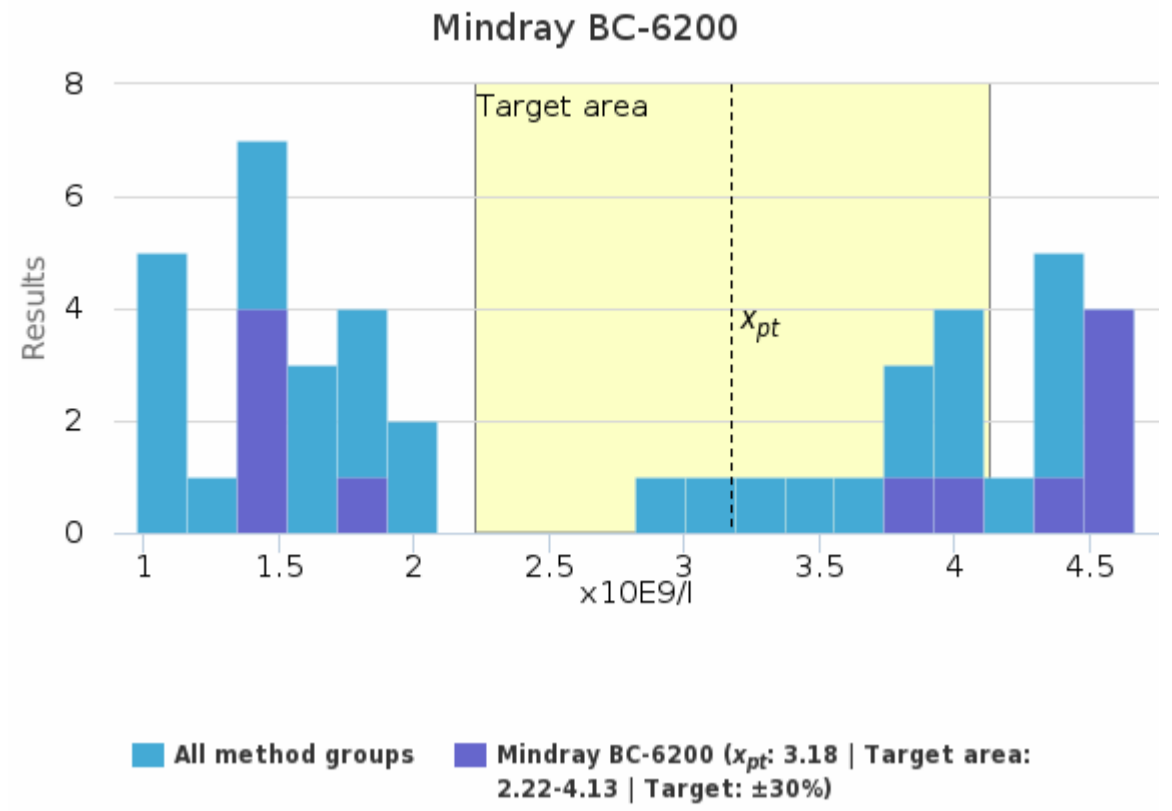
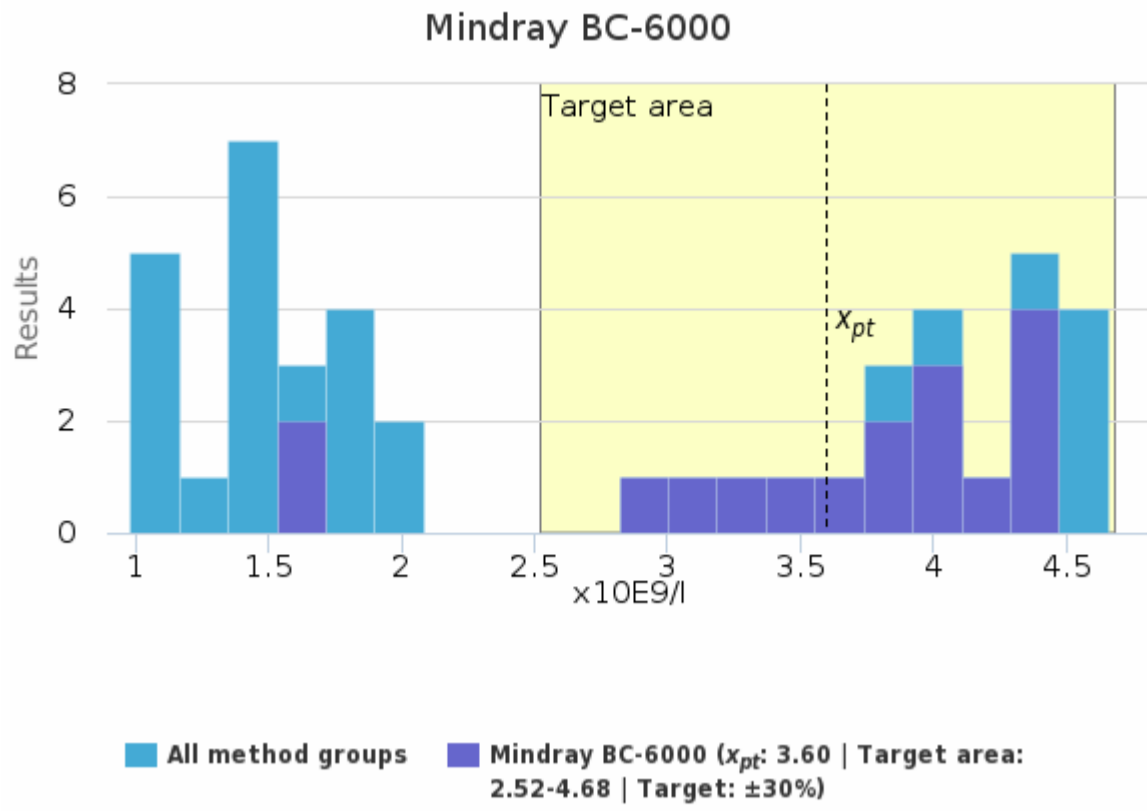


### Sample S006 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	1.78	1.78	0.09	5.2	0.05	1.68	1.90	-	4
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	1.07	1.11	0.08	7.3	0.05	0.98	1.12	-	3
Mindray BC-5390	1.47	1.47	0.04	2.9	0.03	1.44	1.50	-	2
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	1.35	1.35	-	1
Mindray BC-6000	3.60	3.88	0.88	24.3	0.21	1.59	4.47	-	17
Mindray BC-6200	3.18	3.89	1.48	46.5	0.43	1.44	4.66	-	12
Mindray BC-6800	1.39	1.17	0.46	33.1	0.23	1.15	2.08	-	4
Mindray BC-760, BC-780	-	-	-	-	-	1.80	1.80	-	1
<b>All</b>	<b>2.76</b>	<b>2.48</b>	<b>1.34</b>	<b>48.6</b>	<b>0.20</b>	<b>0.98</b>	<b>4.66</b>	-	<b>44</b>

### Sample S006 | B -Mon, x10E9/l| histogram summaries in LabScala

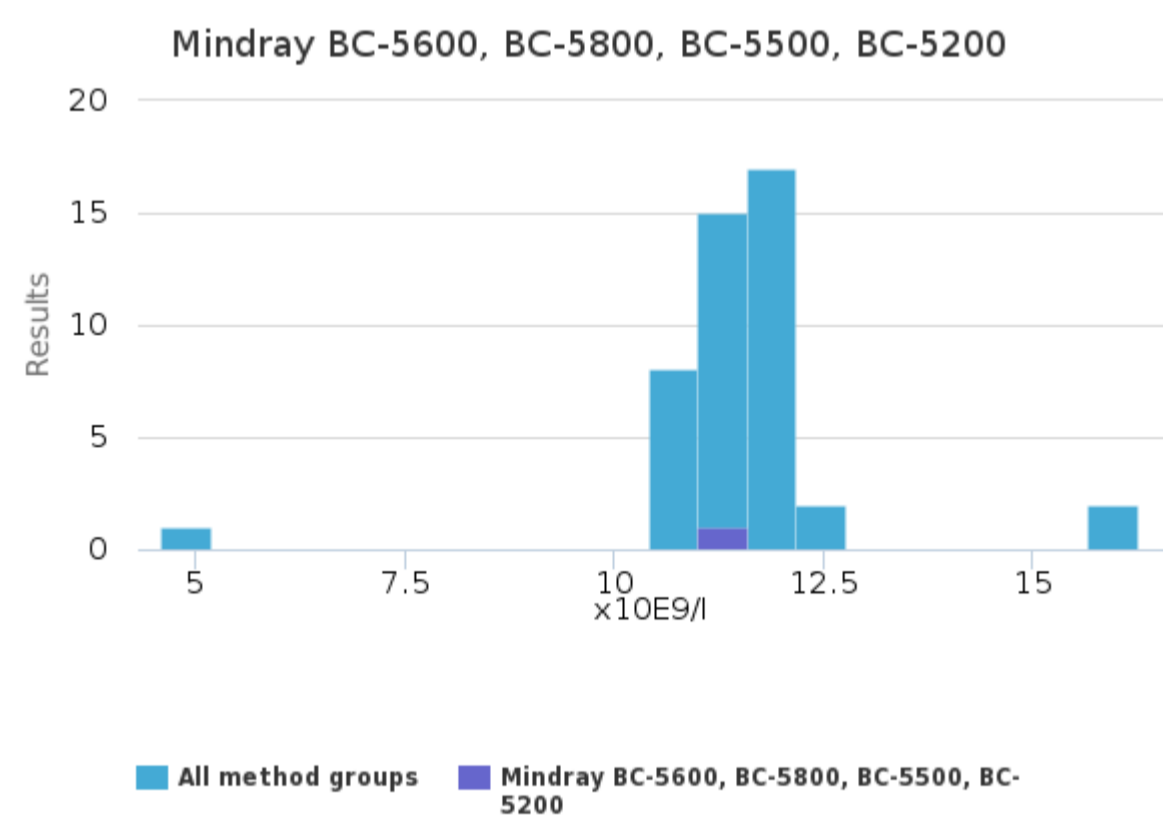
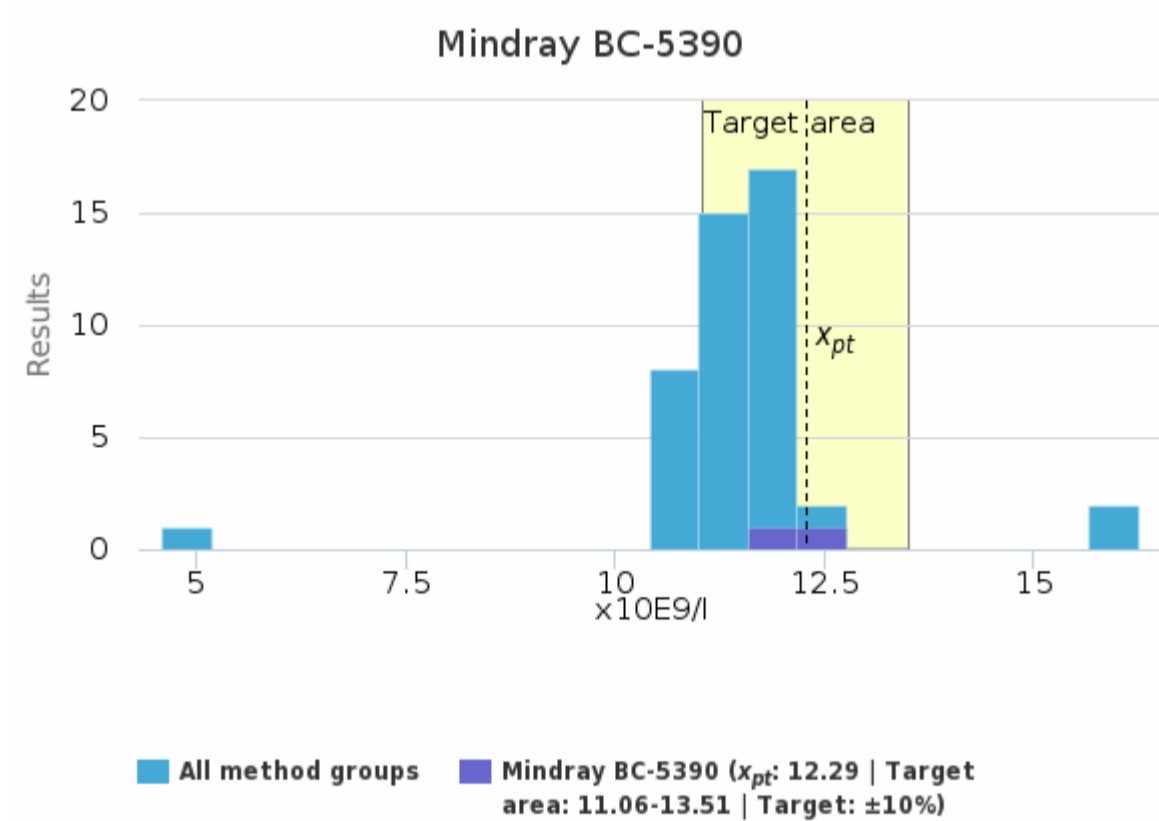
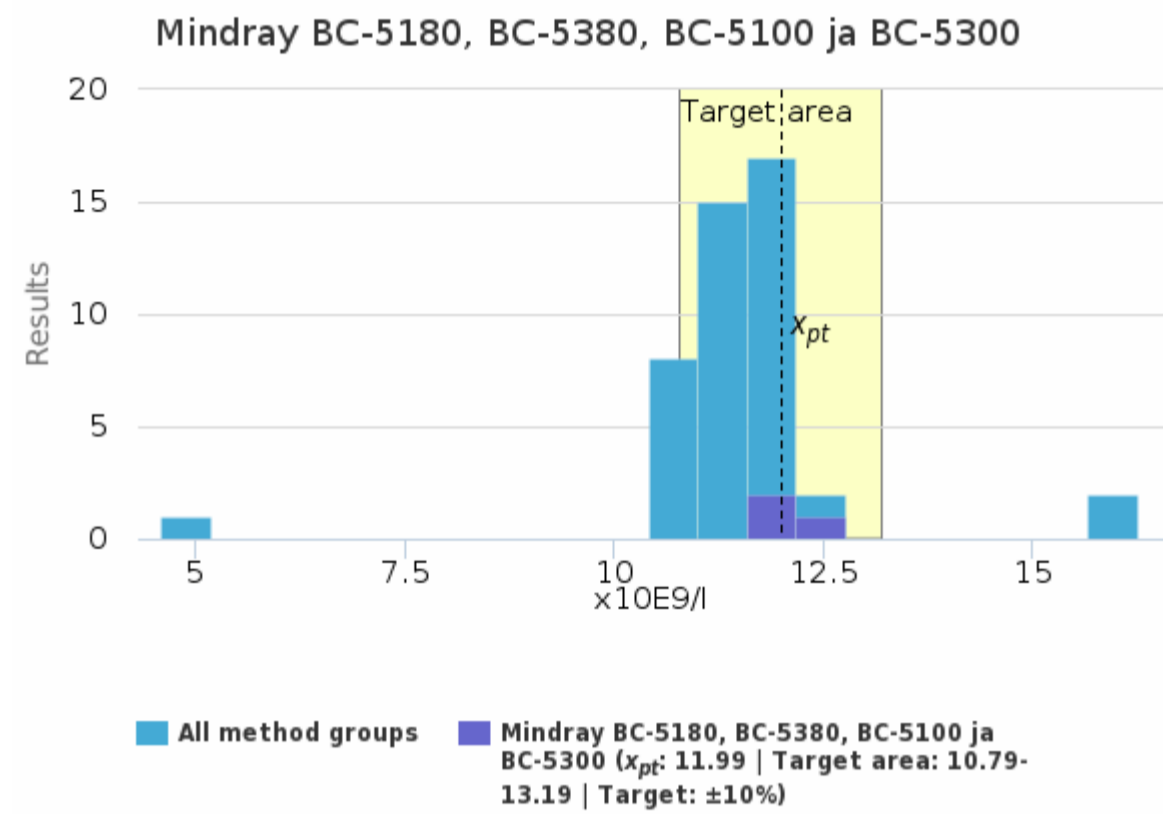
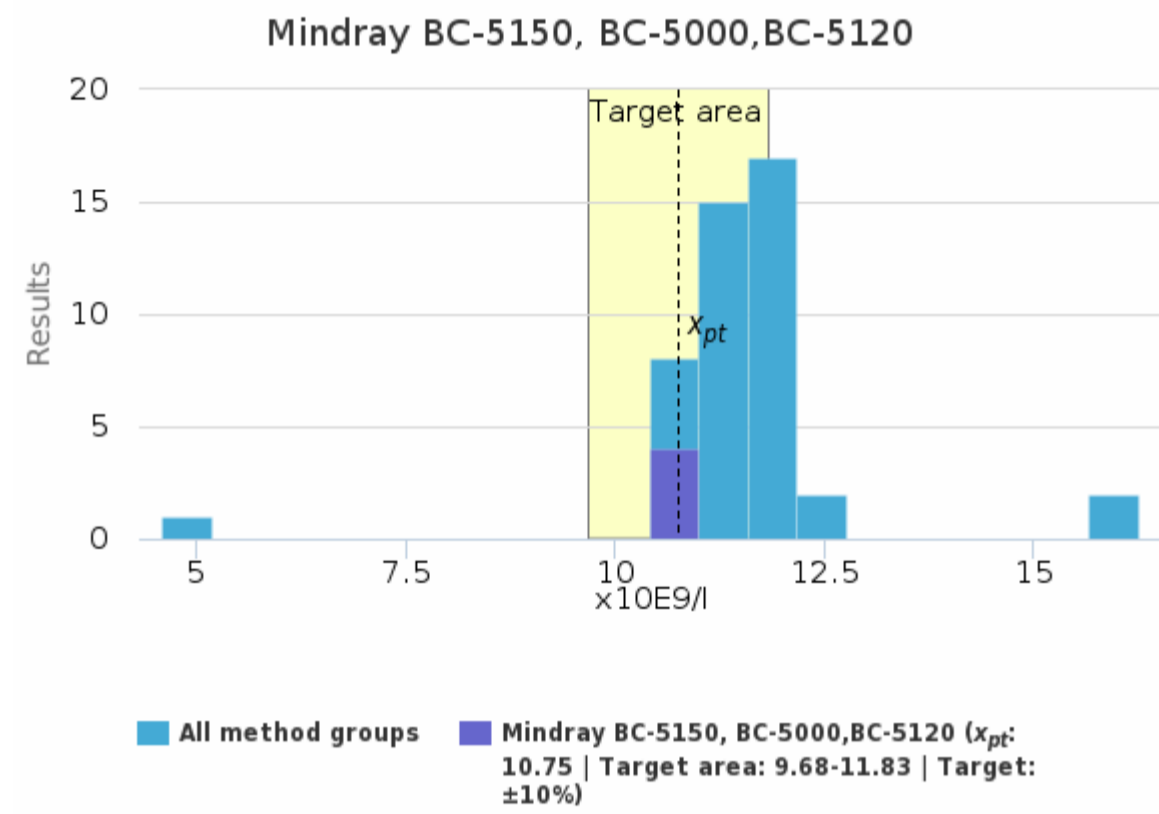


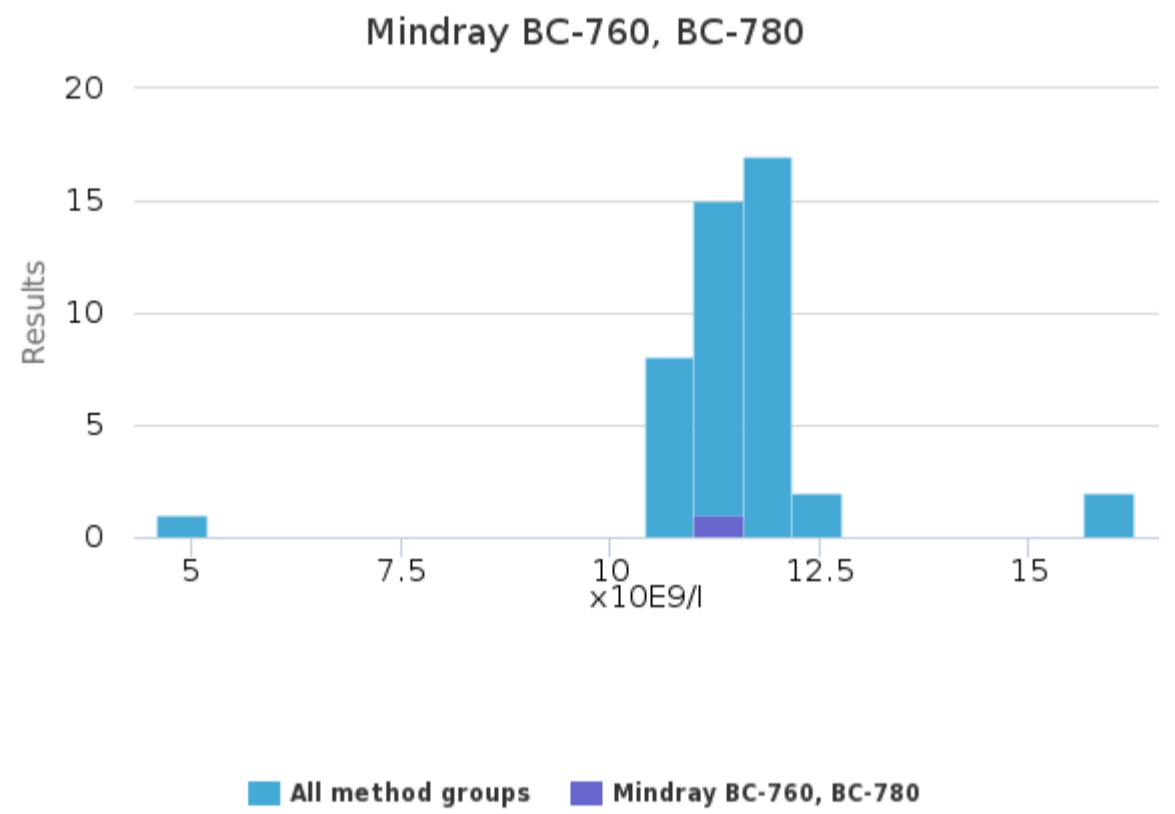
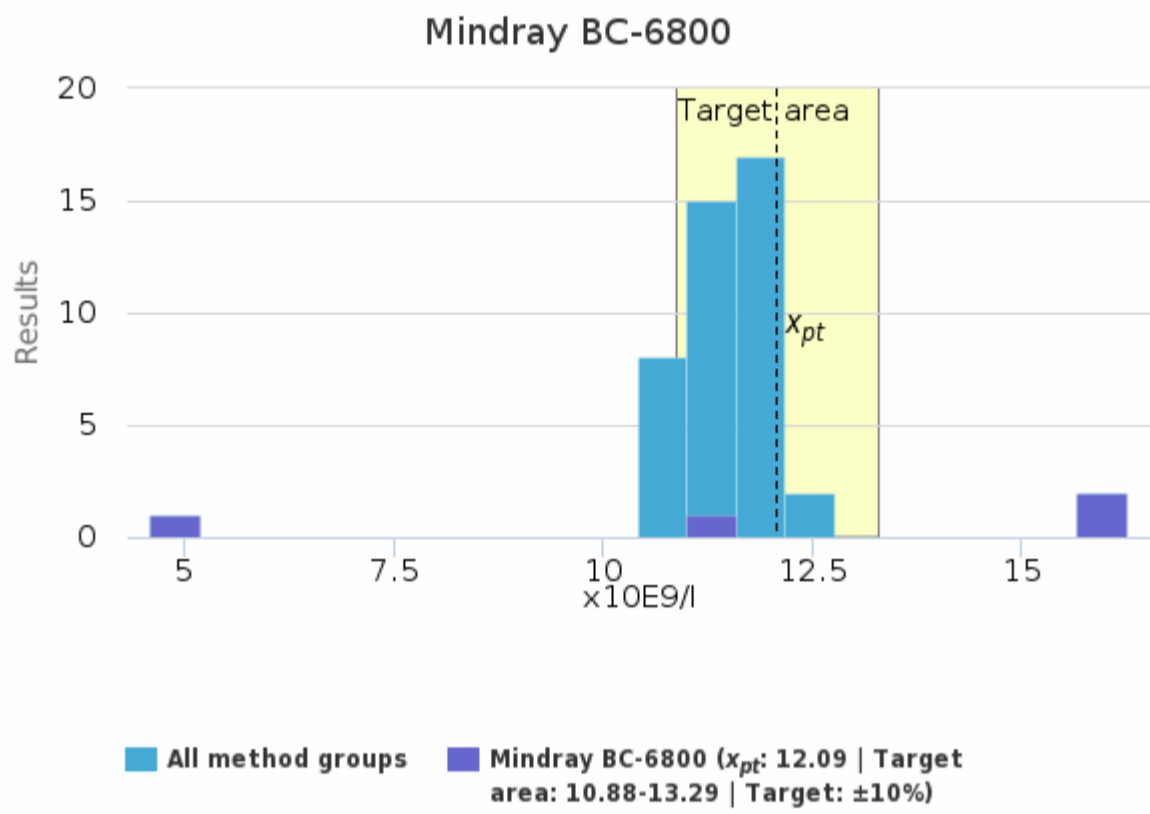
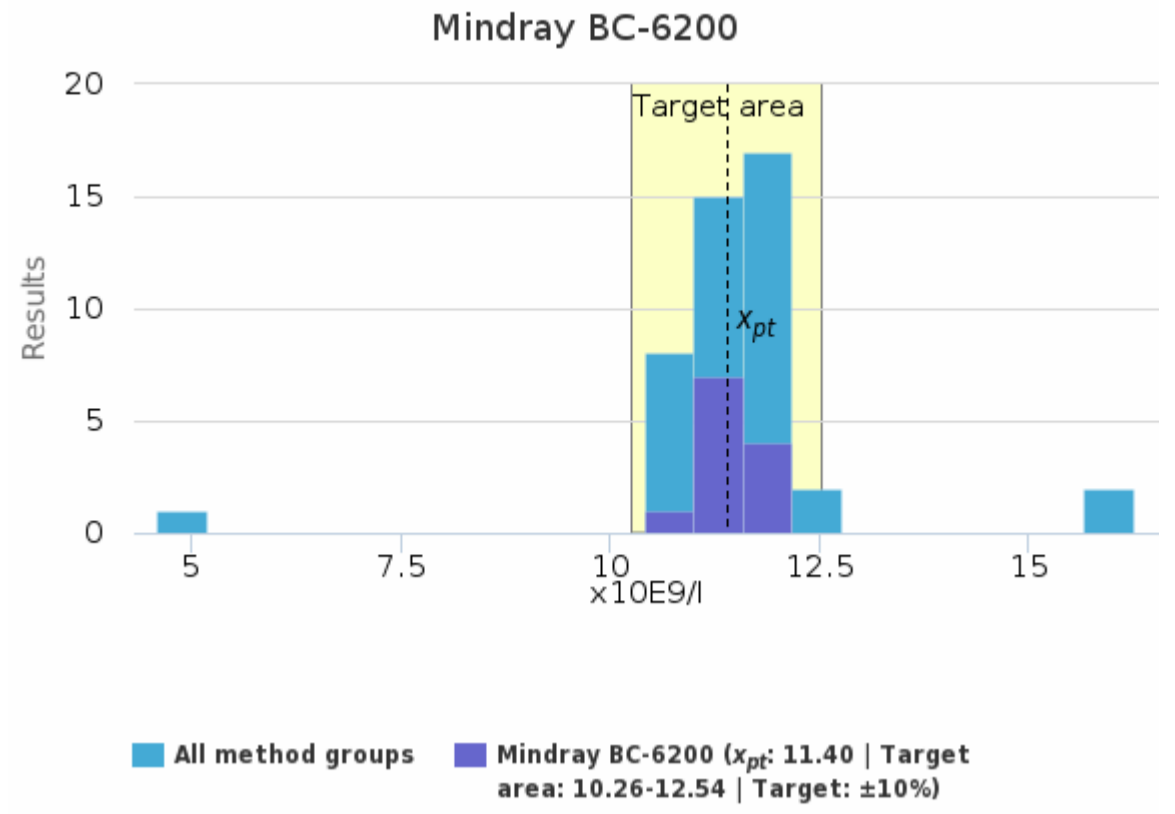
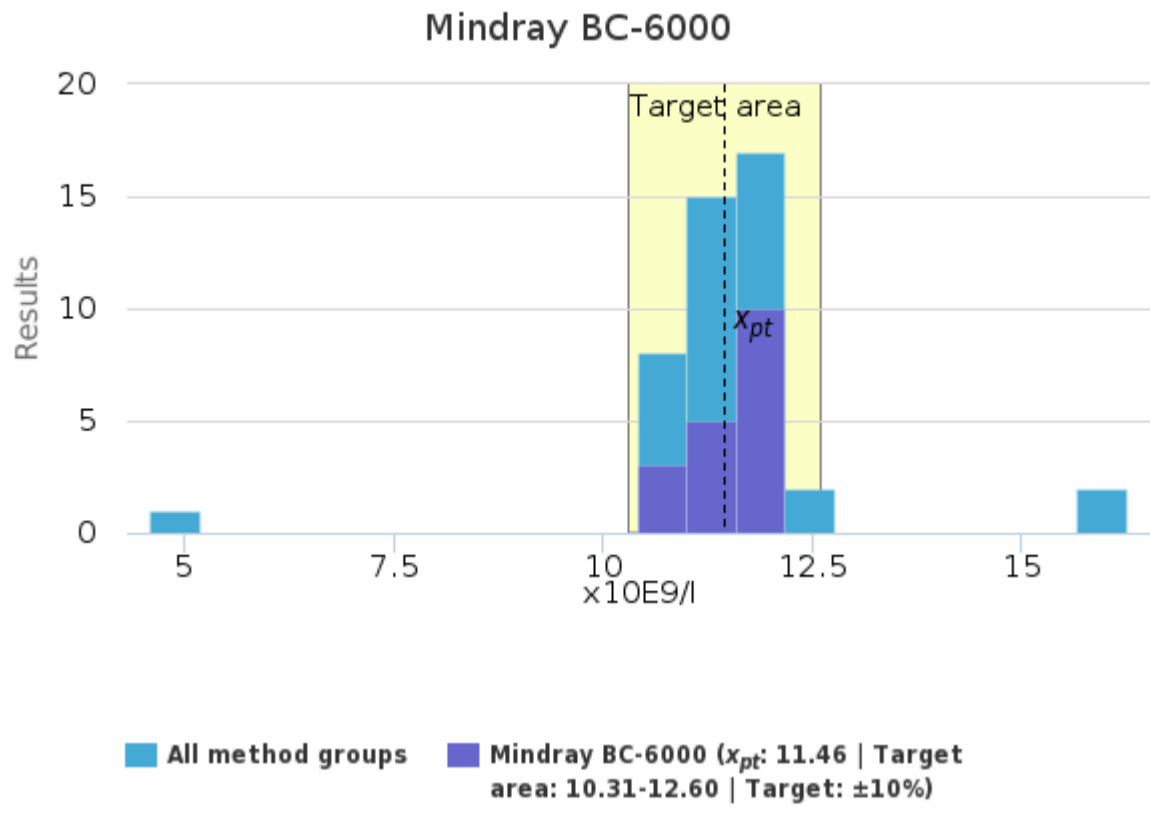


### Sample S006 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	10.75	10.78	0.11	1.0	0.06	10.60	10.85	-	4
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	11.99	11.92	0.22	1.9	0.13	11.81	12.24	-	3
Mindray BC-5390	12.29	12.29	0.32	2.6	0.23	12.06	12.51	-	2
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	11.39	11.39	-	1
Mindray BC-6000	11.46	11.61	0.36	3.1	0.09	10.69	11.87	-	18
Mindray BC-6200	11.40	11.32	0.38	3.4	0.11	10.71	12.00	-	12
Mindray BC-6800	12.09	13.75	5.49	45.4	2.75	4.60	16.25	-	4
Mindray BC-760, BC-780	-	-	-	-	-	11.29	11.29	-	1
<b>All</b>	<b>11.44</b>	<b>11.51</b>	<b>0.45</b>	<b>3.9</b>	<b>0.07</b>	<b>10.60</b>	<b>12.51</b>	<b>3</b>	<b>45</b>

### Sample S006 | B -Neutr, x10E9/l| histogram summaries in LabScala



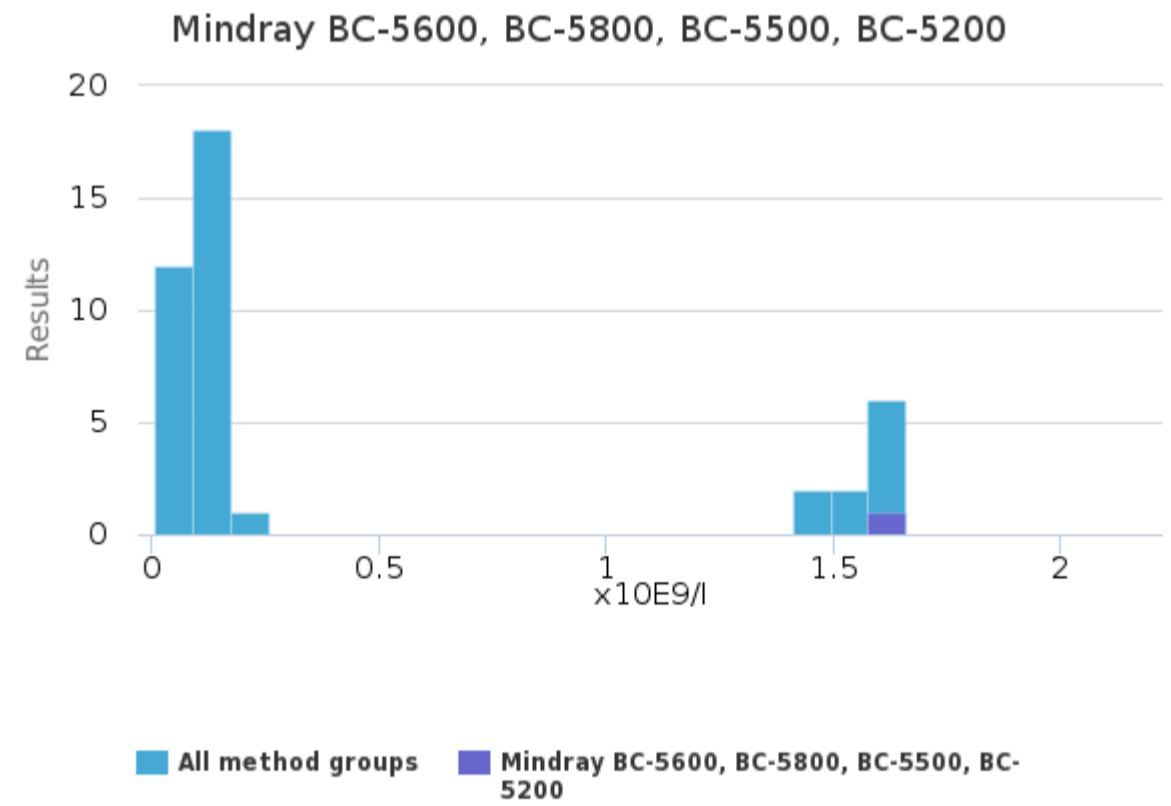
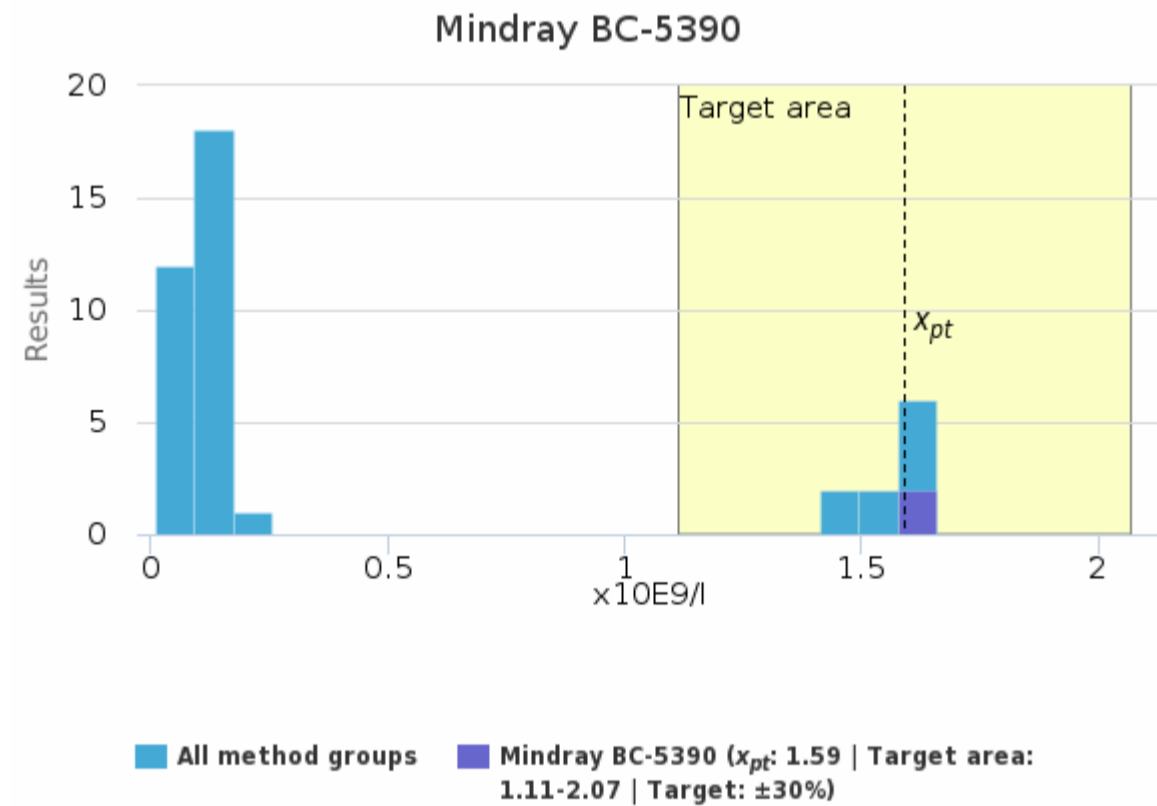
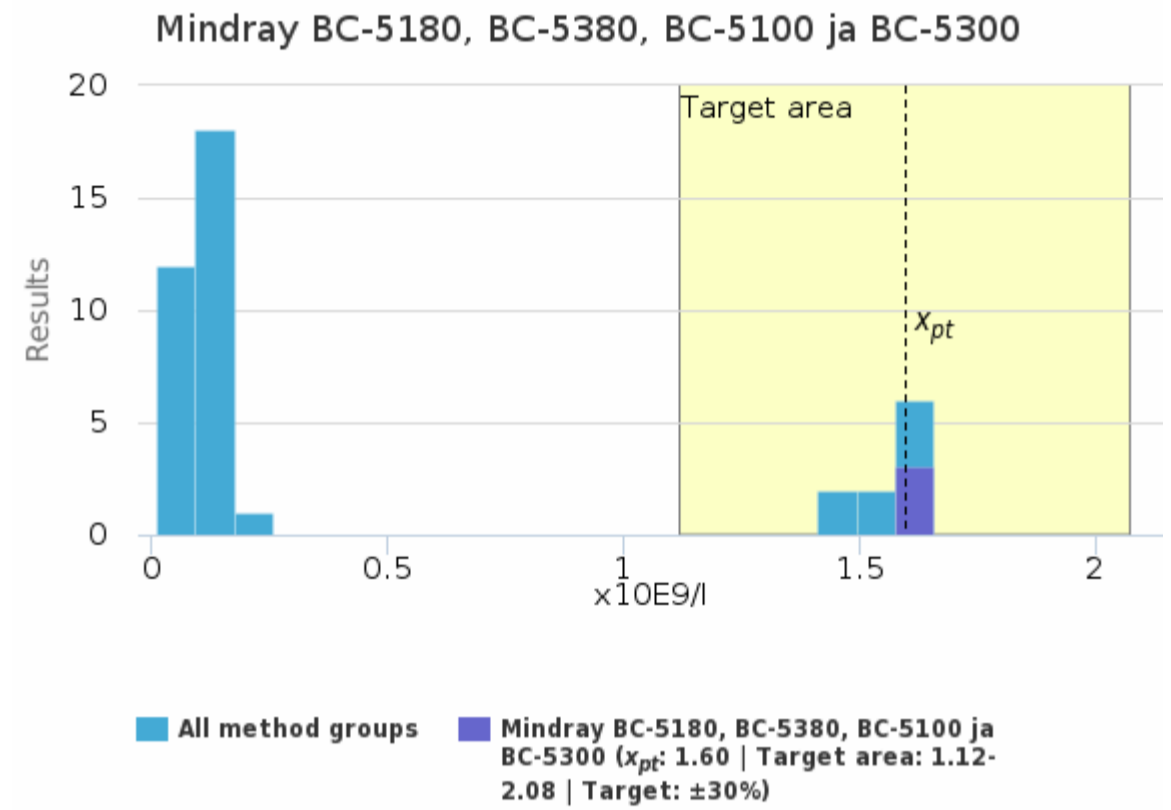
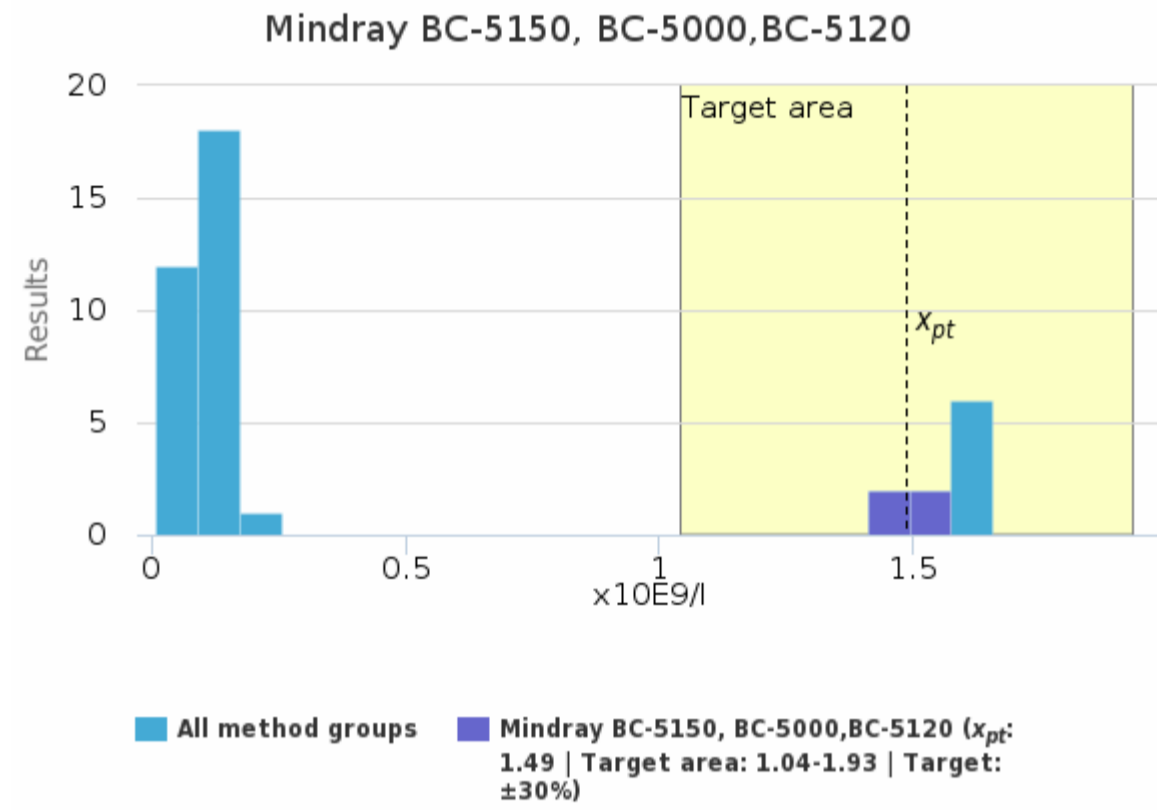


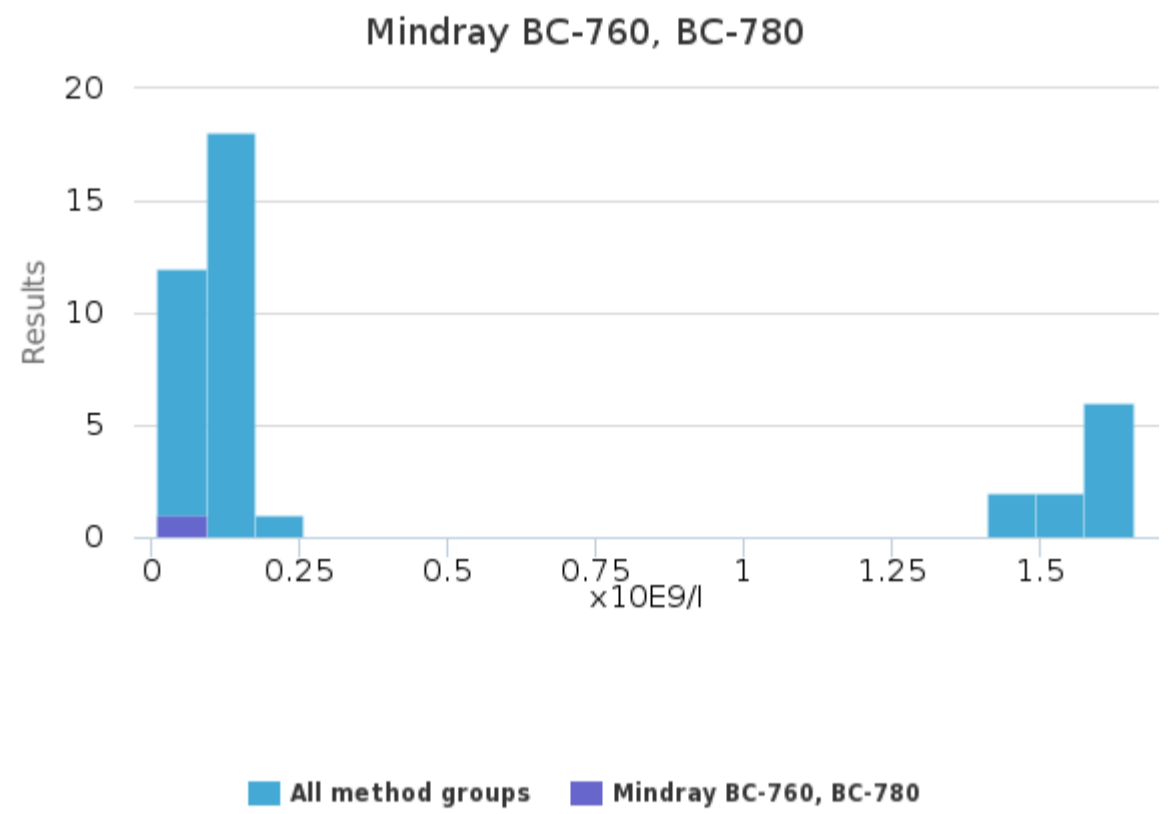
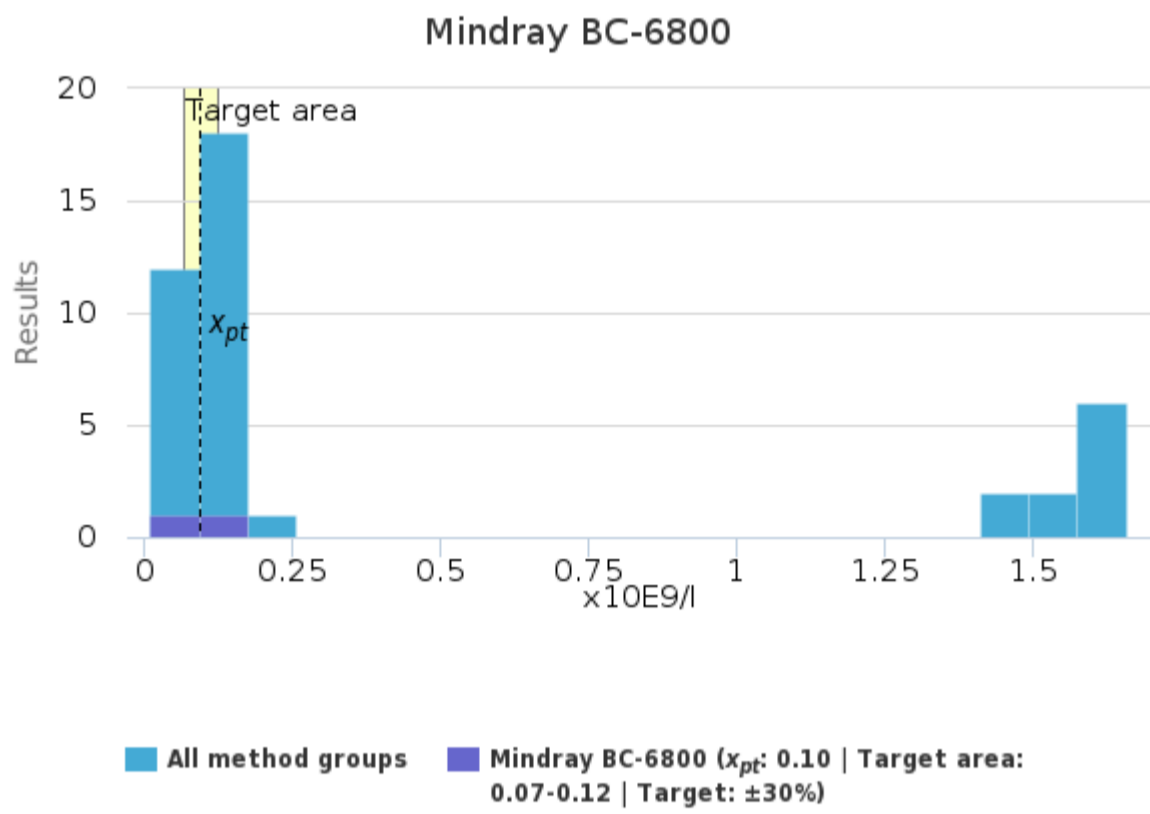
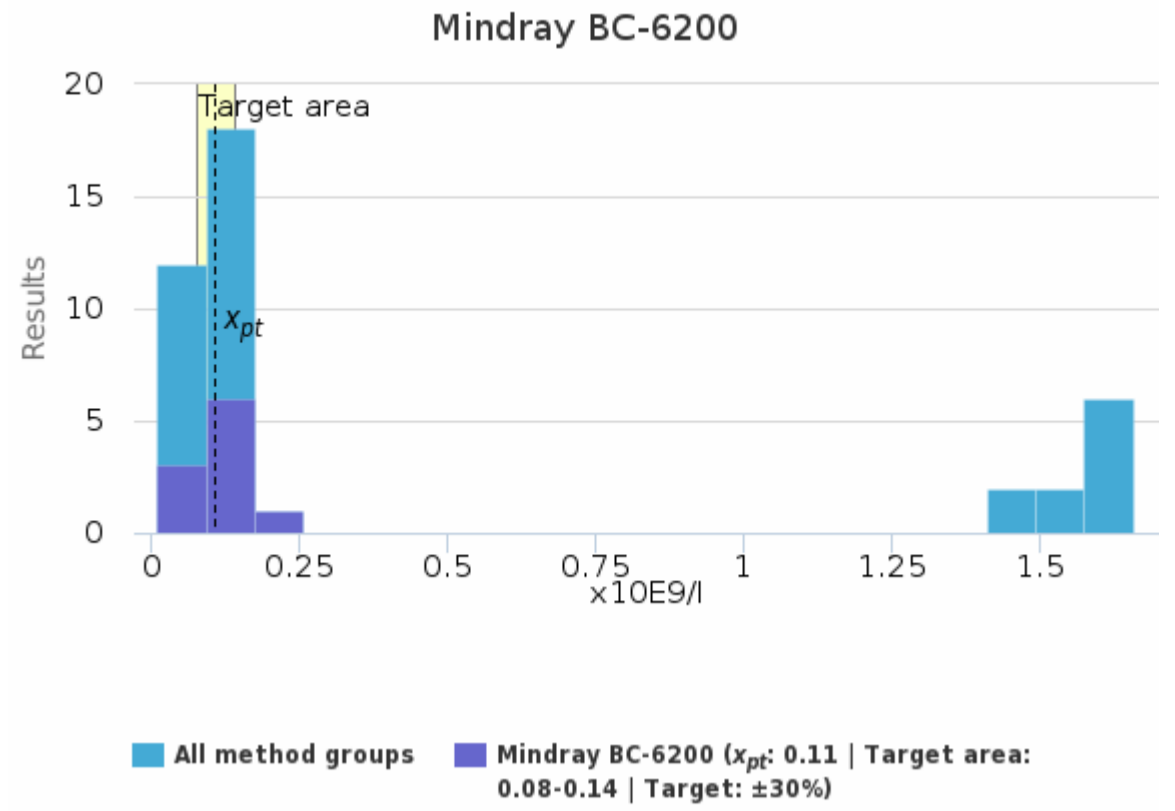
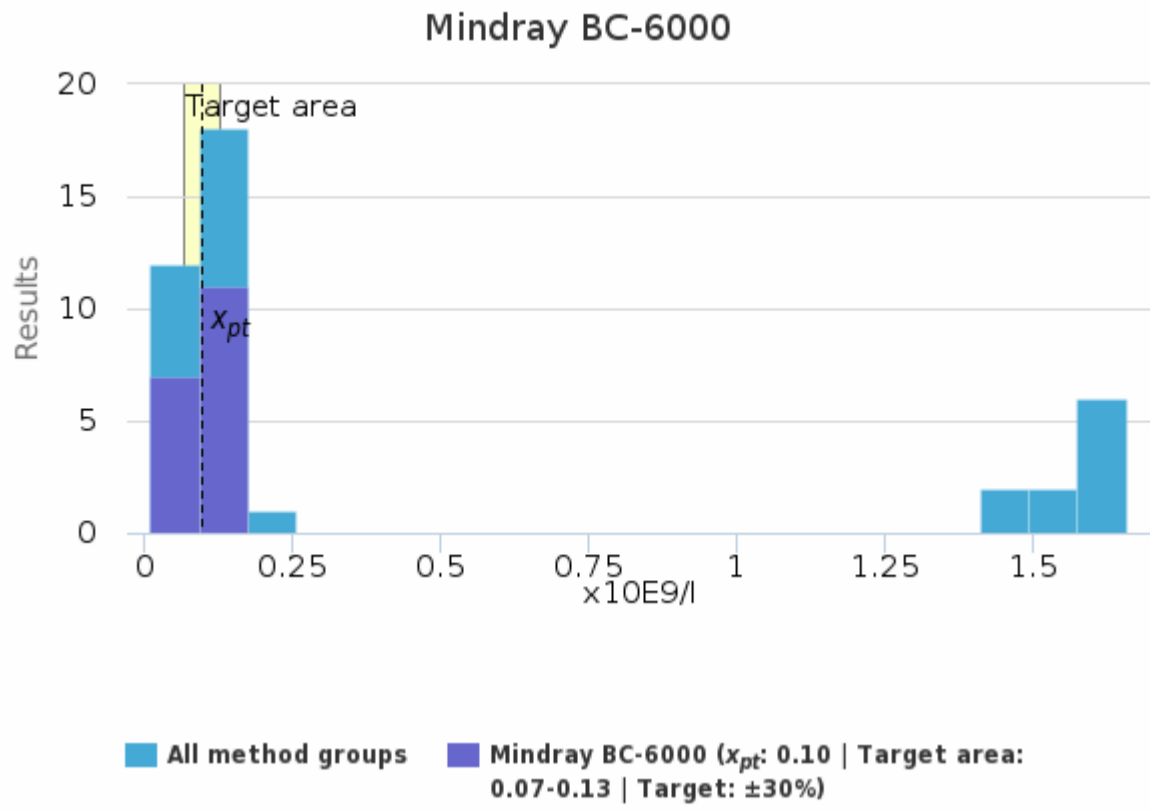


### Sample S006 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	1.49	1.49	0.05	3.4	0.03	1.43	1.55	-	4
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	1.60	1.59	0.01	0.7	<0.01	1.59	1.61	-	3
Mindray BC-5390	1.59	1.59	0.01	0.9	0.01	1.58	1.60	-	2
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	1.66	1.66	-	1
Mindray BC-6000	0.10	0.11	0.05	49.6	0.01	0.01	0.17	-	18
Mindray BC-6200	0.11	0.10	0.07	60.0	0.02	0.01	0.23	-	10
Mindray BC-6800	0.10	0.10	<0.01	7.4	<0.01	0.09	0.10	-	2
Mindray BC-760, BC-780	-	-	-	-	-	0.07	0.07	-	1
<b>All</b>	<b>0.46</b>	<b>0.12</b>	<b>0.64</b>	<b>139.7</b>	<b>0.10</b>	<b>0.01</b>	<b>1.66</b>	-	<b>41</b>

### Sample S006 | B -Eos, x10E9/l| histogram summaries in LabScala

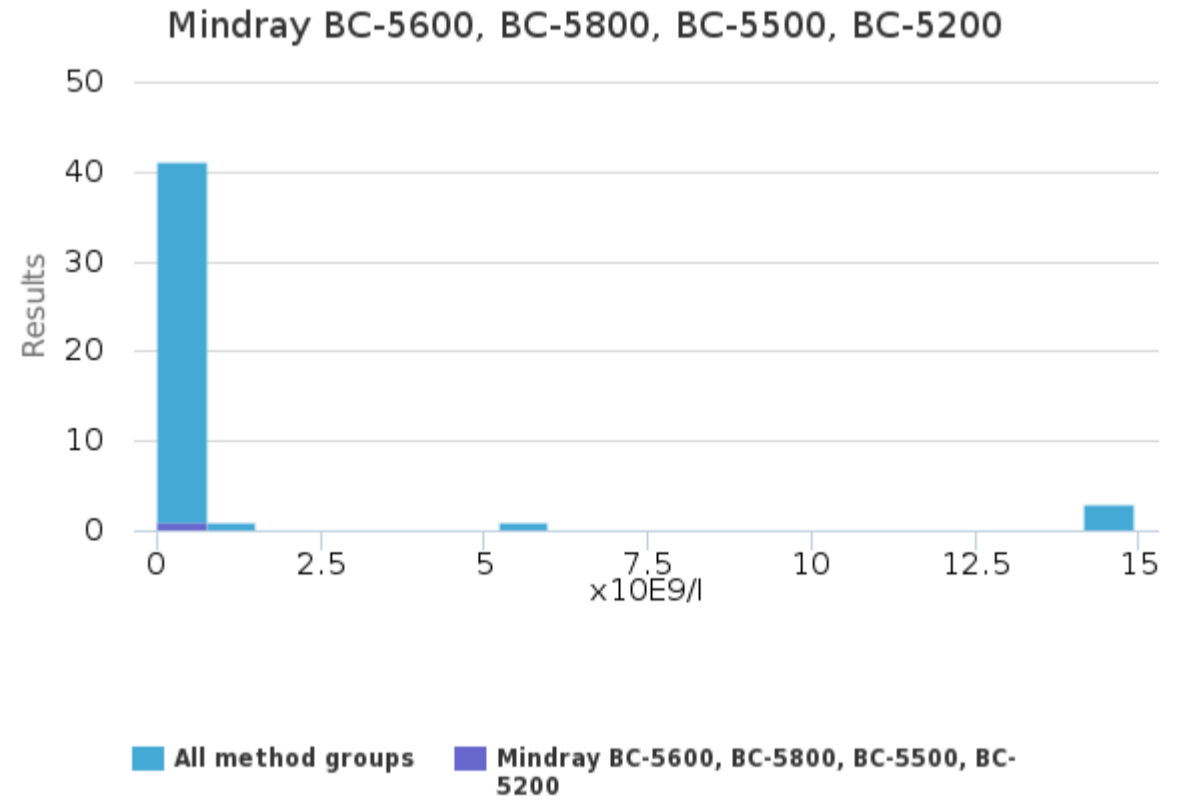
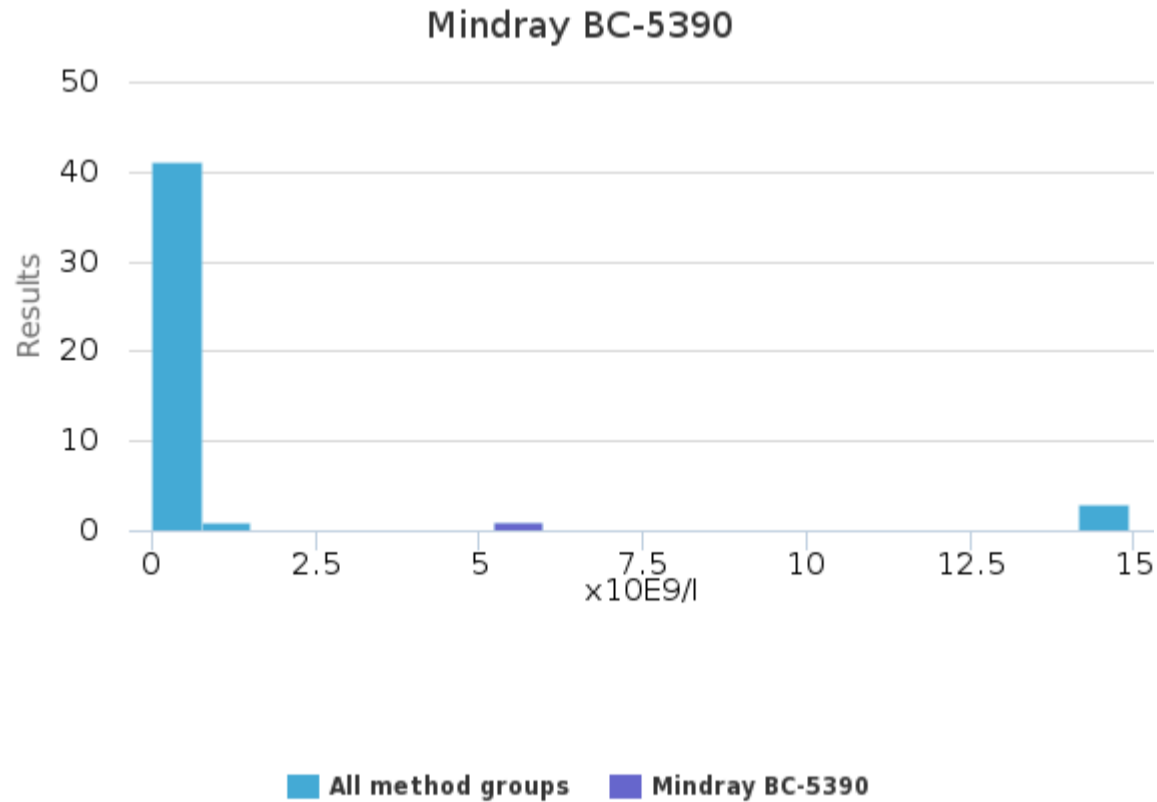
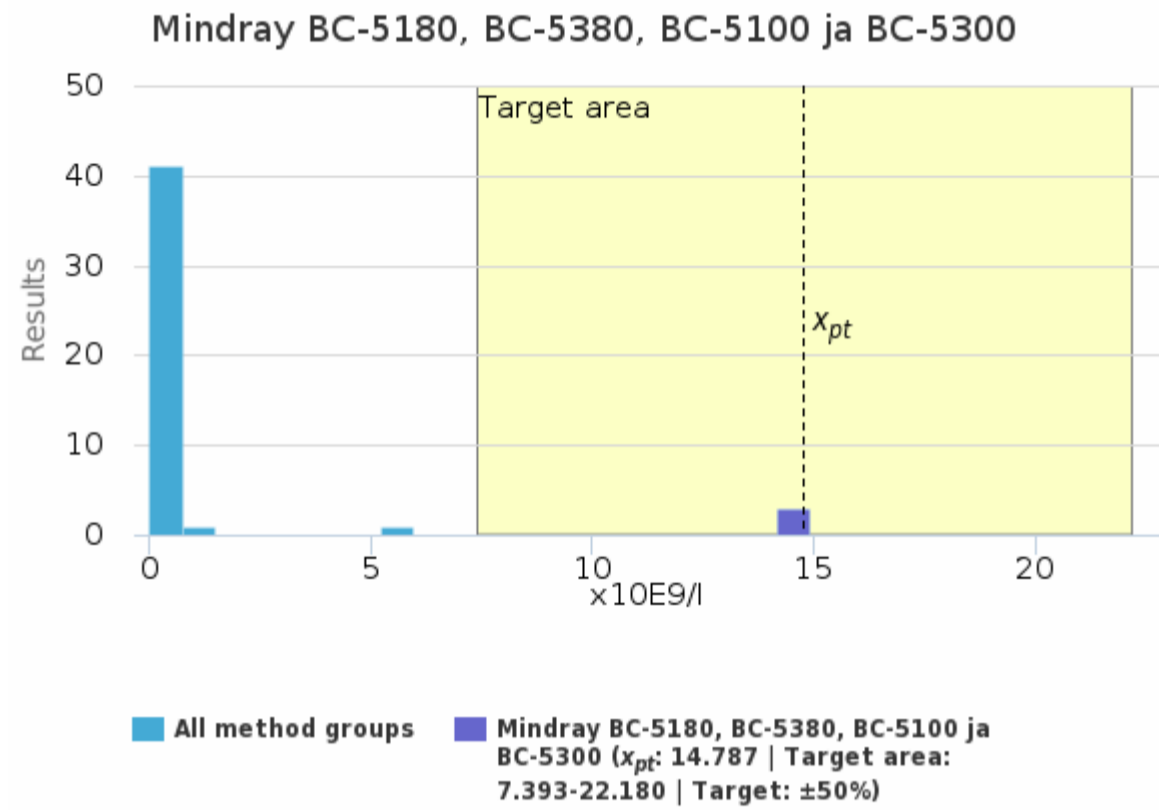
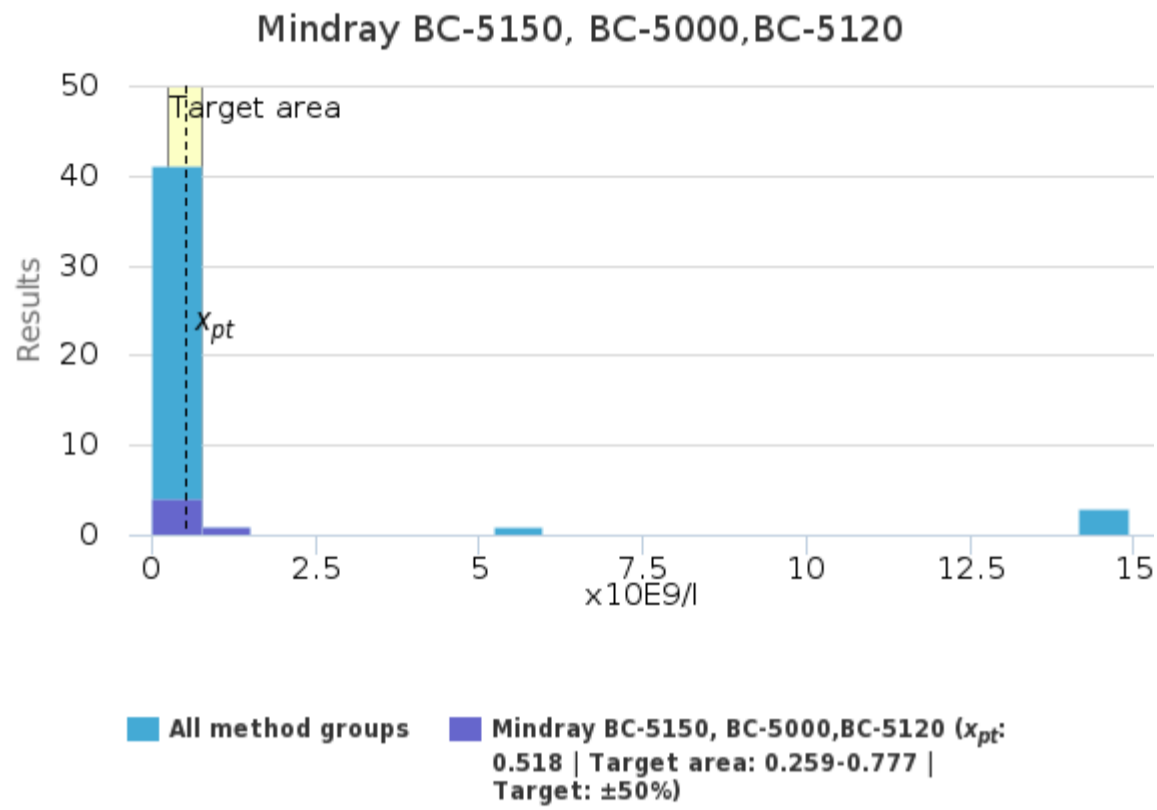


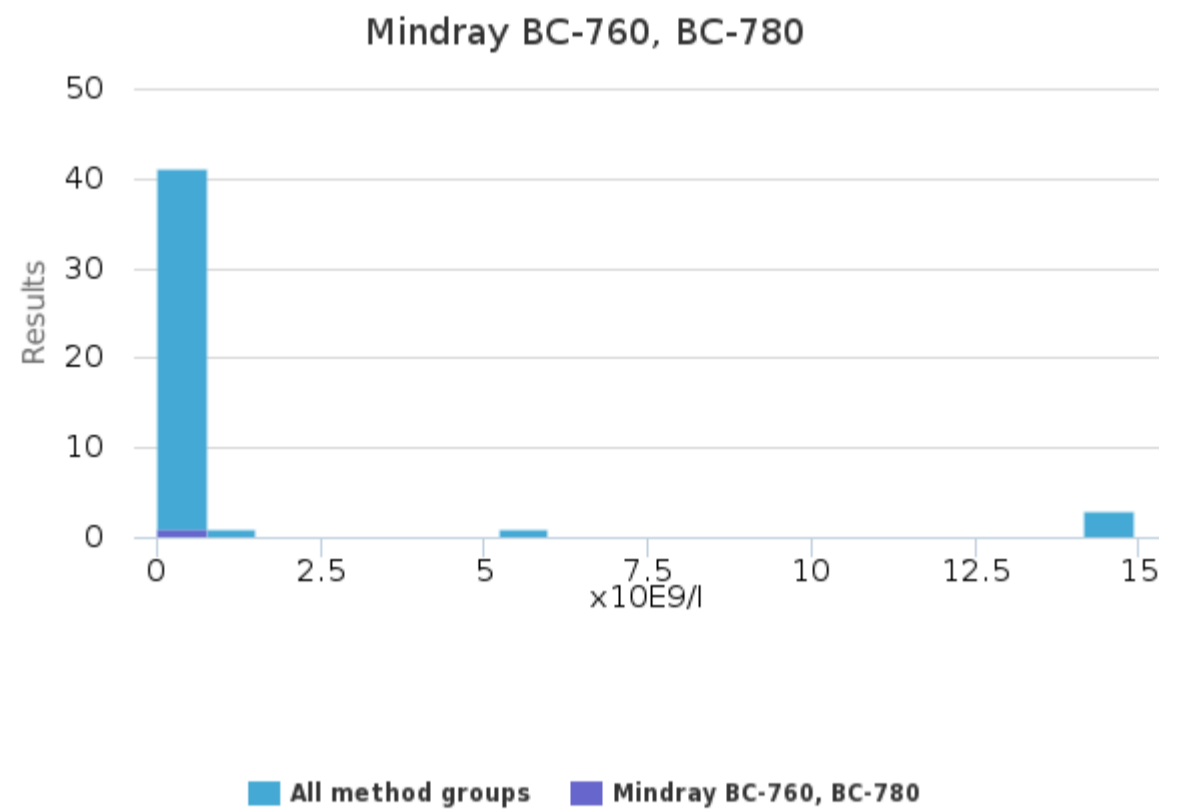
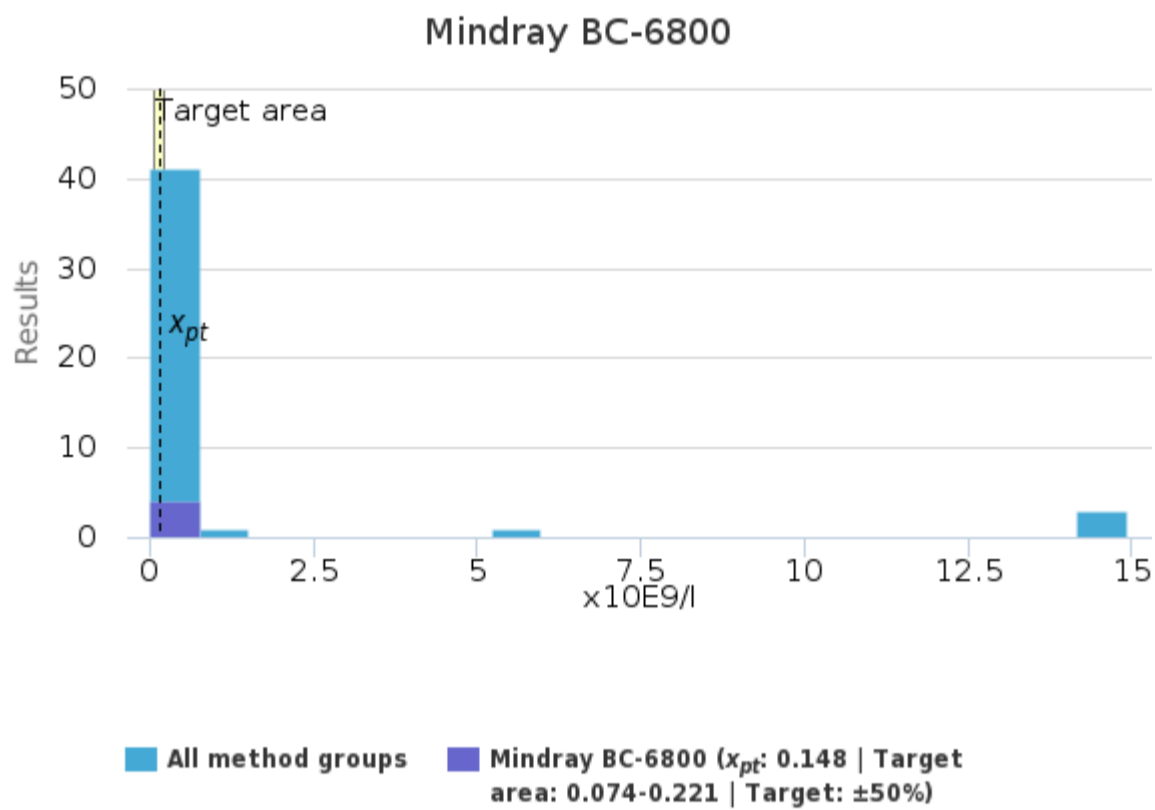
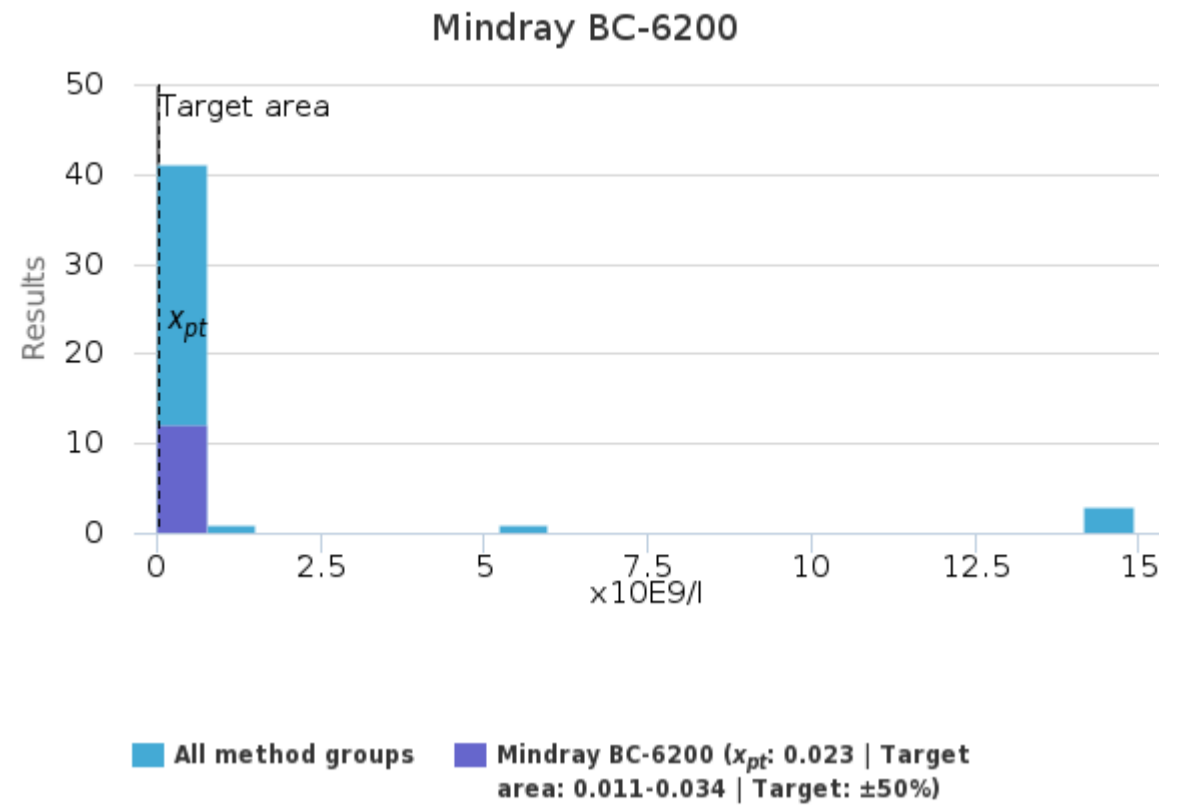
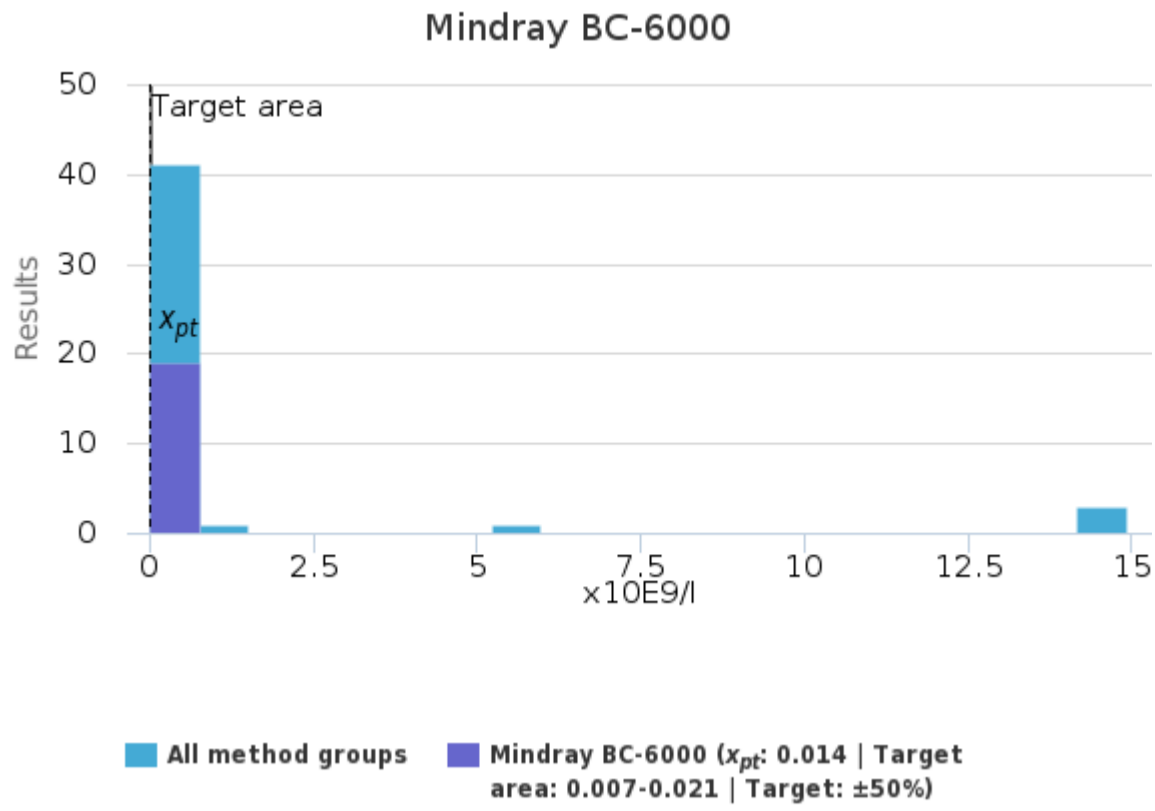


### Sample S006 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mindray BC-5150, BC-5000,BC-5120	0.518	0.270	0.549	106.0	0.246	0.260	1.500	-	5
Mindray BC-5180, BC-5380, BC-5100 ja BC-5300	14.787	14.840	0.167	1.1	0.096	14.600	14.920	-	3
Mindray BC-5390	-	-	-	-	-	5.800	5.800	-	1
Mindray BC-5600, BC-5800, BC-5500, BC-5200	-	-	-	-	-	0.020	0.020	-	1
Mindray BC-6000	0.014	0.010	0.005	36.1	0.001	0.010	0.020	1	19
Mindray BC-6200	0.023	0.020	0.016	71.2	0.005	0.010	0.060	-	12
Mindray BC-6800	0.148	0.130	0.049	33.4	0.025	0.110	0.220	-	4
Mindray BC-760, BC-780	-	-	-	-	-	0.070	0.070	-	1
<b>All</b>	<b>0.225</b>	<b>0.020</b>	<b>0.902</b>	<b>401.3</b>	<b>0.137</b>	<b>0.010</b>	<b>5.800</b>	<b>3</b>	<b>46</b>

### Sample S006 | B -Baso, x10E9/l | histogram summaries in LabScala

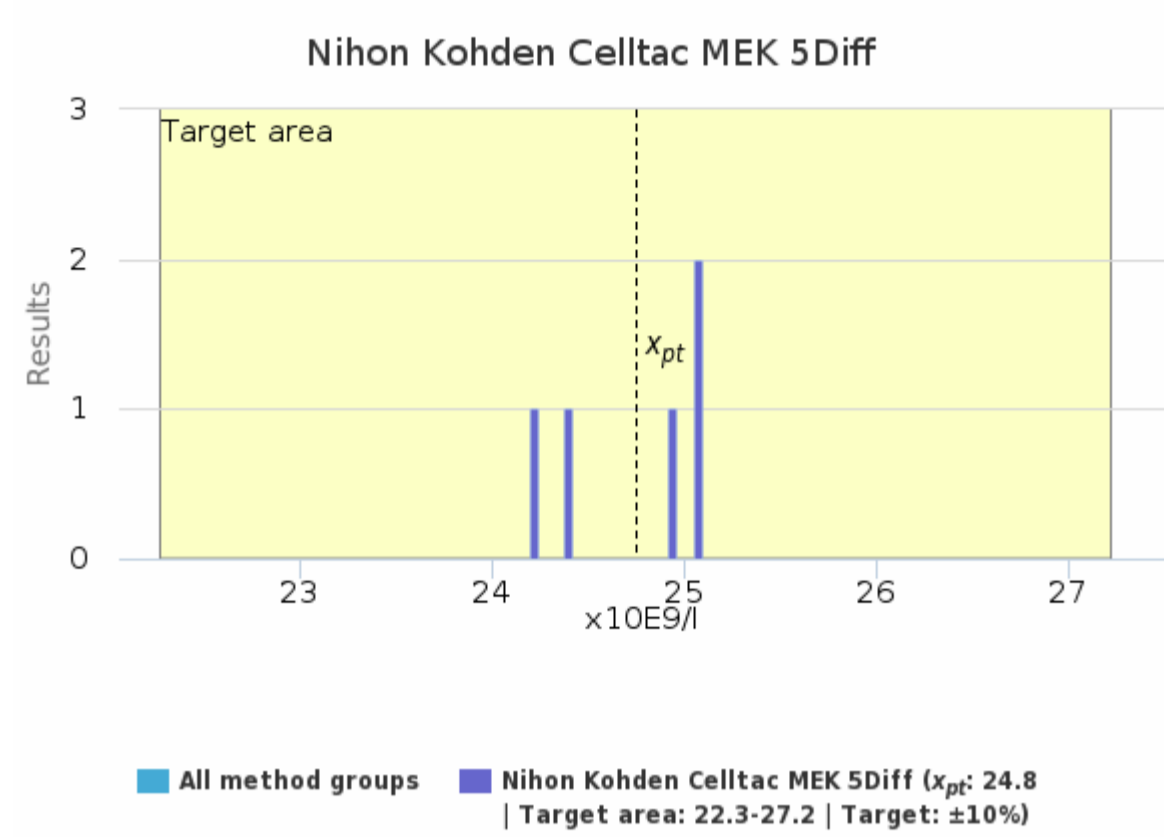




Sample S007 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	24.8	24.9	0.4	1.7	0.2	24.2	25.1	-	5
<b>All</b>	<b>24.8</b>	<b>24.9</b>	<b>0.4</b>	<b>1.7</b>	<b>0.2</b>	<b>24.2</b>	<b>25.1</b>	-	<b>5</b>

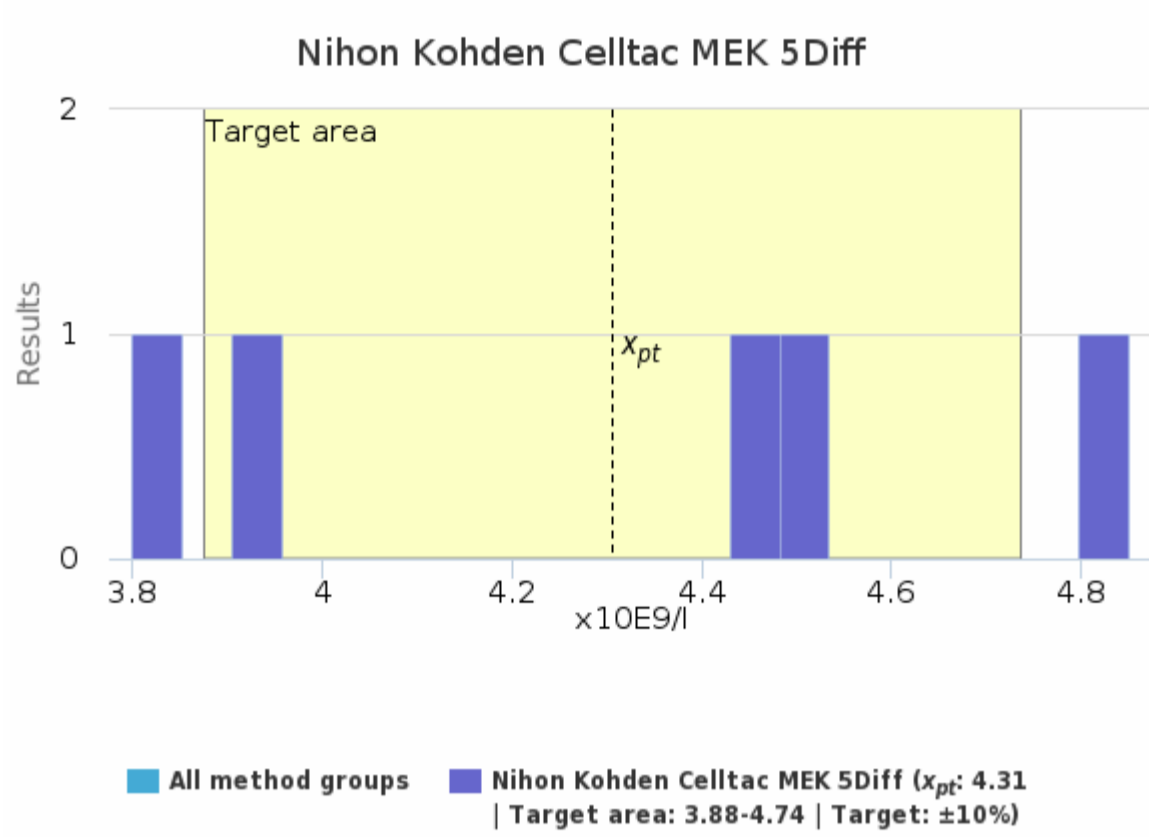
Sample S007 | B -Leuk, x10E9/l| histogram summaries in LabScala



Sample S007 | B -Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	4.31	4.44	0.43	9.9	0.19	3.80	4.85	-	5
<b>All</b>	<b>4.31</b>	<b>4.44</b>	<b>0.43</b>	<b>9.9</b>	<b>0.19</b>	<b>3.80</b>	<b>4.85</b>	-	<b>5</b>

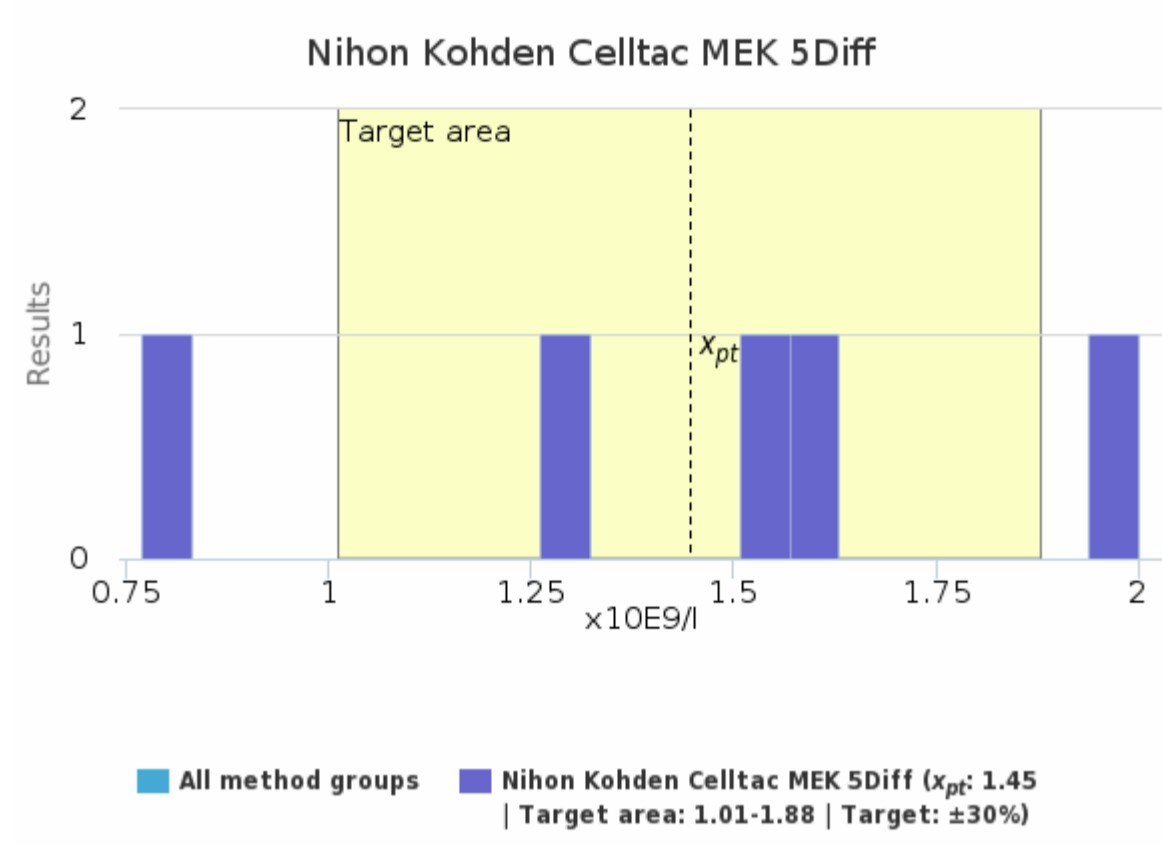
Sample S007 | B -Lym, x10E9/l| histogram summaries in LabScala



Sample S007 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	1.45	1.55	0.45	31.4	0.20	0.77	2.00	-	5
<b>All</b>	<b>1.45</b>	<b>1.55</b>	<b>0.45</b>	<b>31.4</b>	<b>0.20</b>	<b>0.77</b>	<b>2.00</b>	-	<b>5</b>

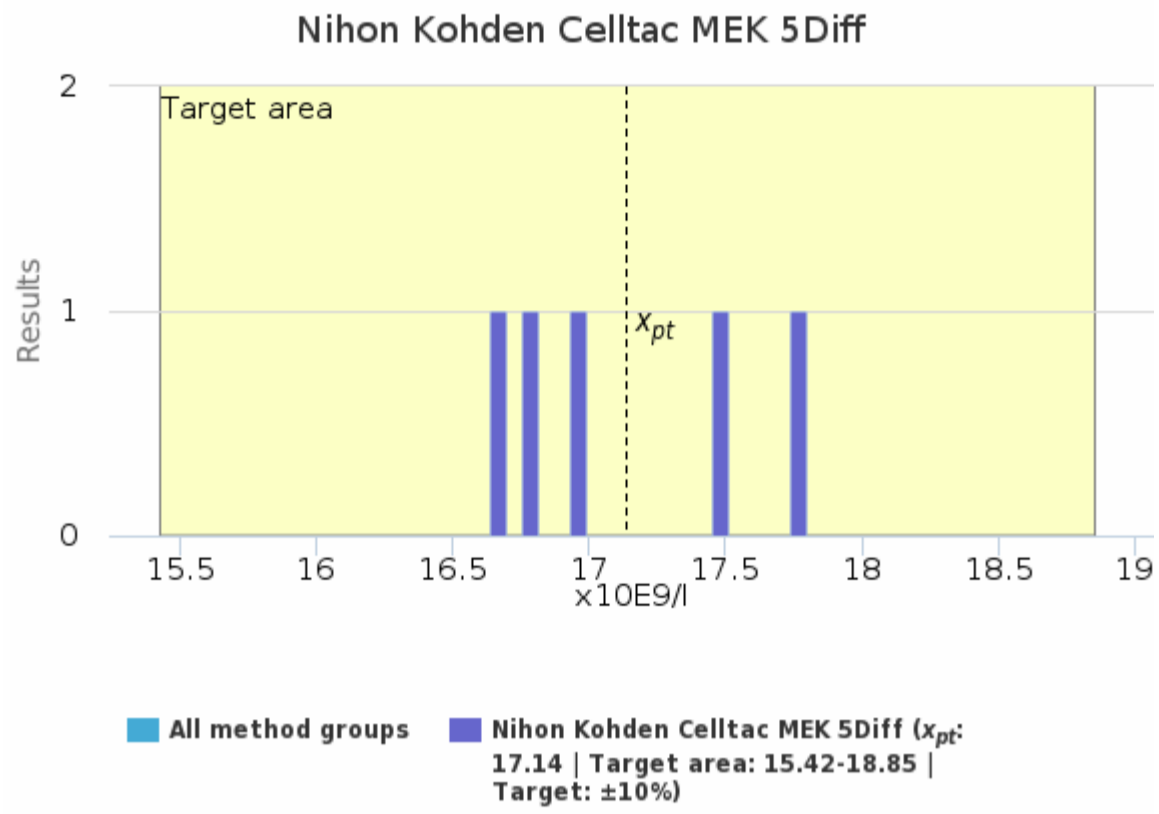
Sample S007 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S007 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	17.14	16.96	0.49	2.9	0.22	16.64	17.80	-	5
<b>All</b>	<b>17.14</b>	<b>16.96</b>	<b>0.49</b>	<b>2.9</b>	<b>0.22</b>	<b>16.64</b>	<b>17.80</b>	-	<b>5</b>

Sample S007 | B -Neutr, x10E9/l| histogram summaries in LabScala

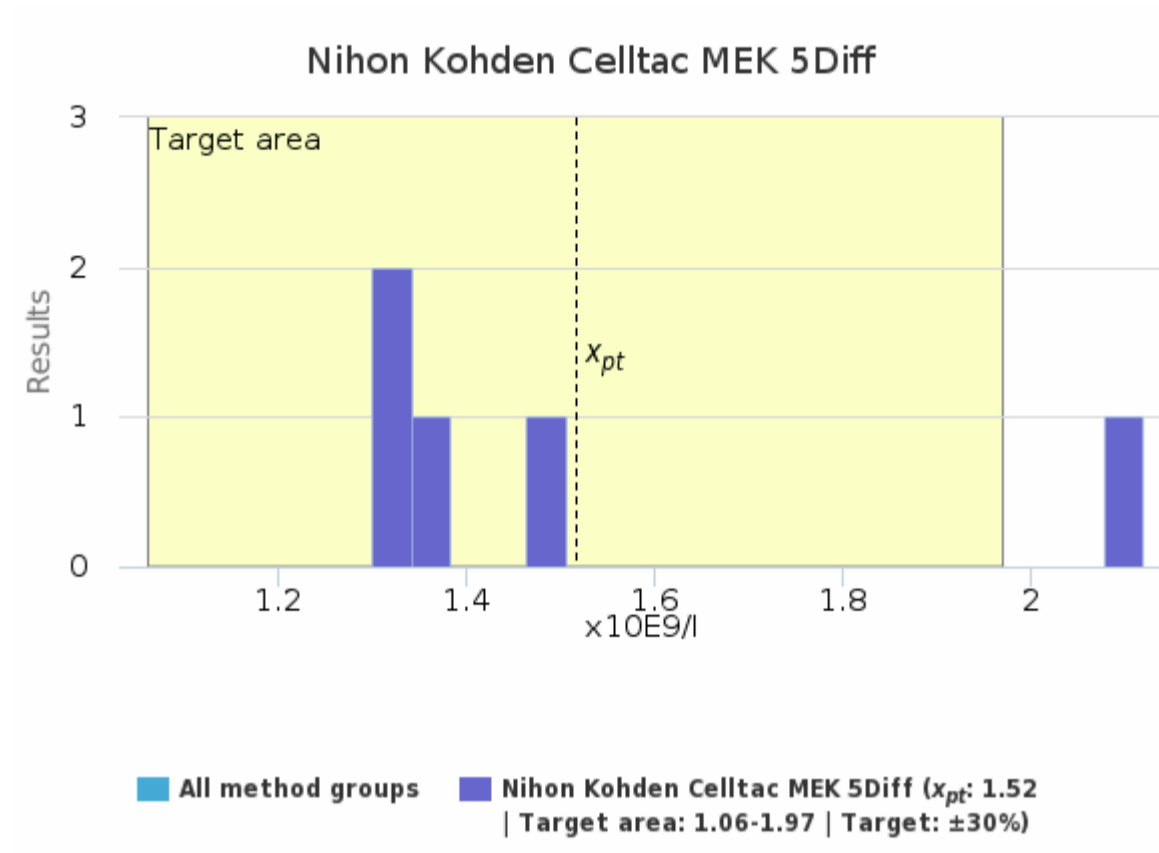




Sample S007 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	1.52	1.35	0.34	22.7	0.15	1.30	2.12	-	5
<b>All</b>	<b>1.52</b>	<b>1.35</b>	<b>0.34</b>	<b>22.7</b>	<b>0.15</b>	<b>1.30</b>	<b>2.12</b>	-	<b>5</b>

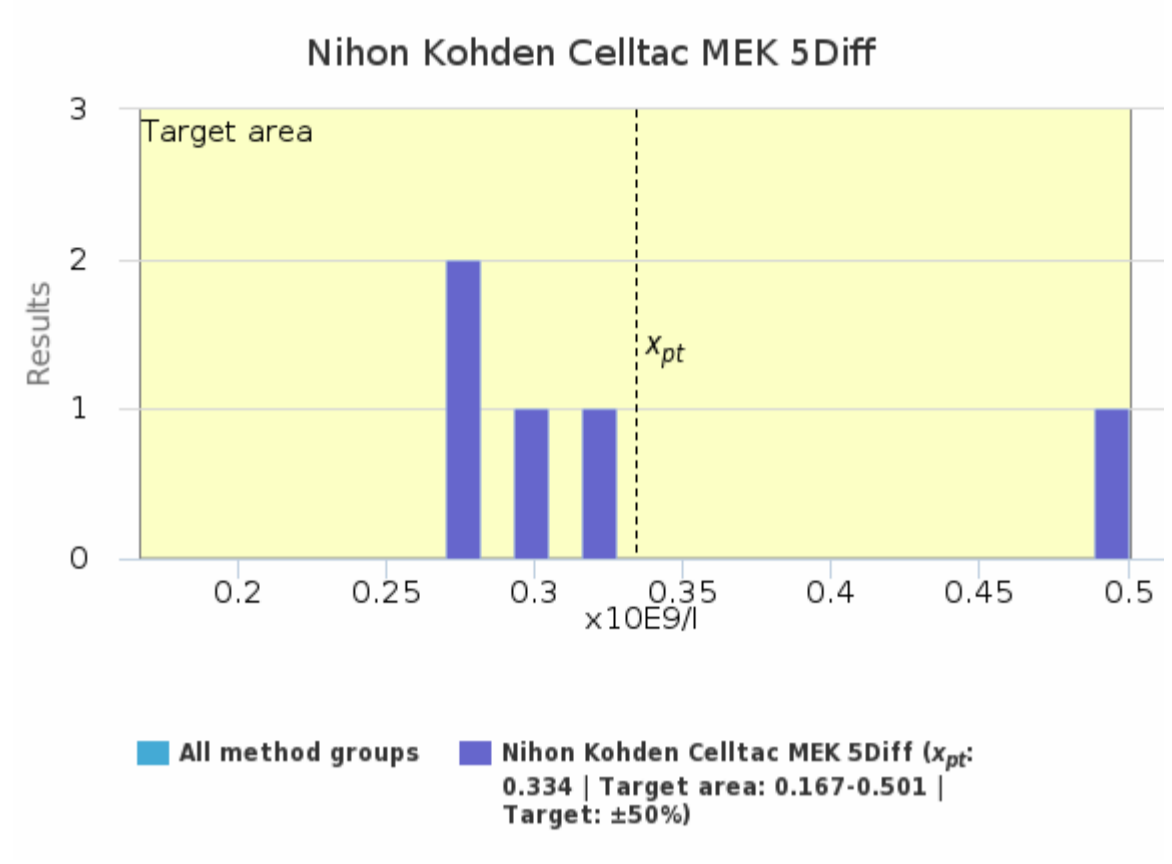
Sample S007 | B -Eos, x10E9/l| histogram summaries in LabScala



Sample S007 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Nihon Kohden Celltac MEK 5Diff	0.334	0.300	0.095	28.4	0.042	0.270	0.500	-	5
<b>All</b>	<b>0.334</b>	<b>0.300</b>	<b>0.095</b>	<b>28.4</b>	<b>0.042</b>	<b>0.270</b>	<b>0.500</b>	-	<b>5</b>

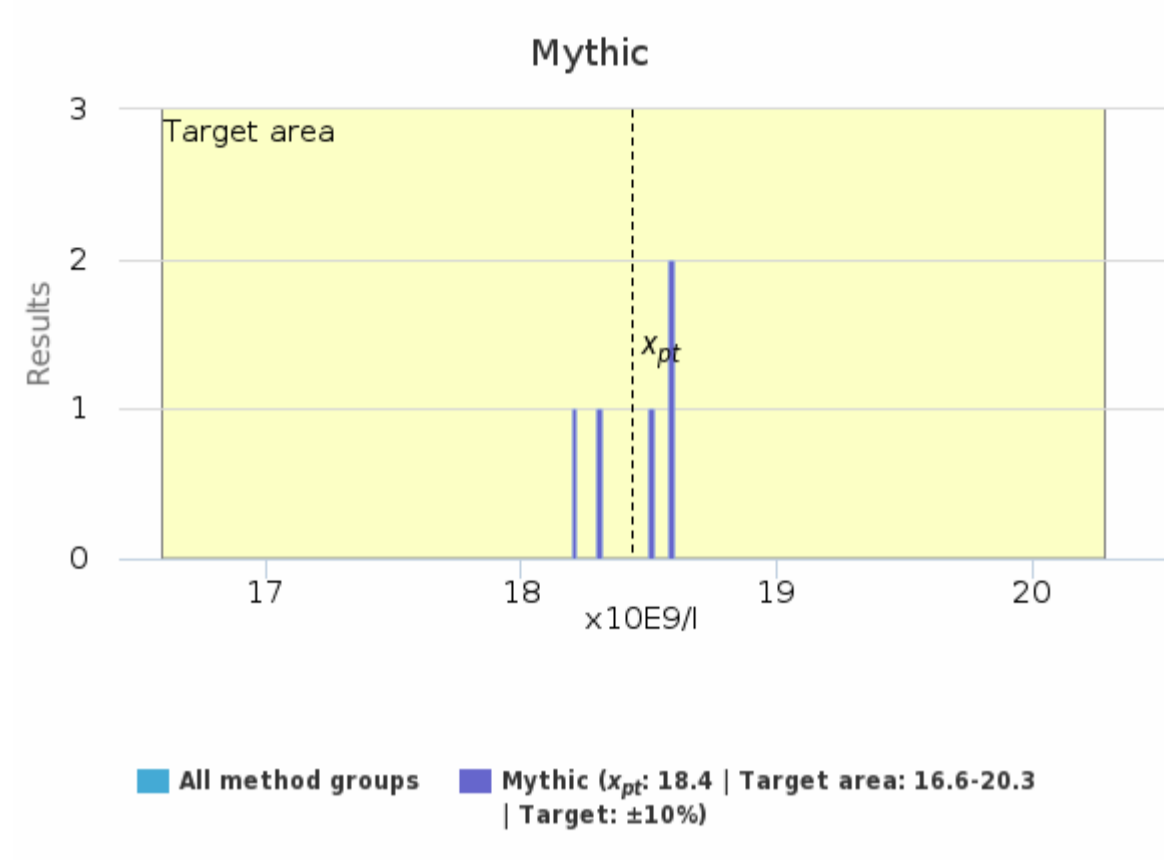
Sample S007 | B -Baso, x10E9/l | histogram summaries in LabScala



Sample S009 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	18.4	18.5	0.2	1.0	<0.1	18.2	18.6	-	5
<b>All</b>	<b>18.4</b>	<b>18.5</b>	<b>0.2</b>	<b>1.0</b>	<b>&lt;0.1</b>	<b>18.2</b>	<b>18.6</b>	-	<b>5</b>

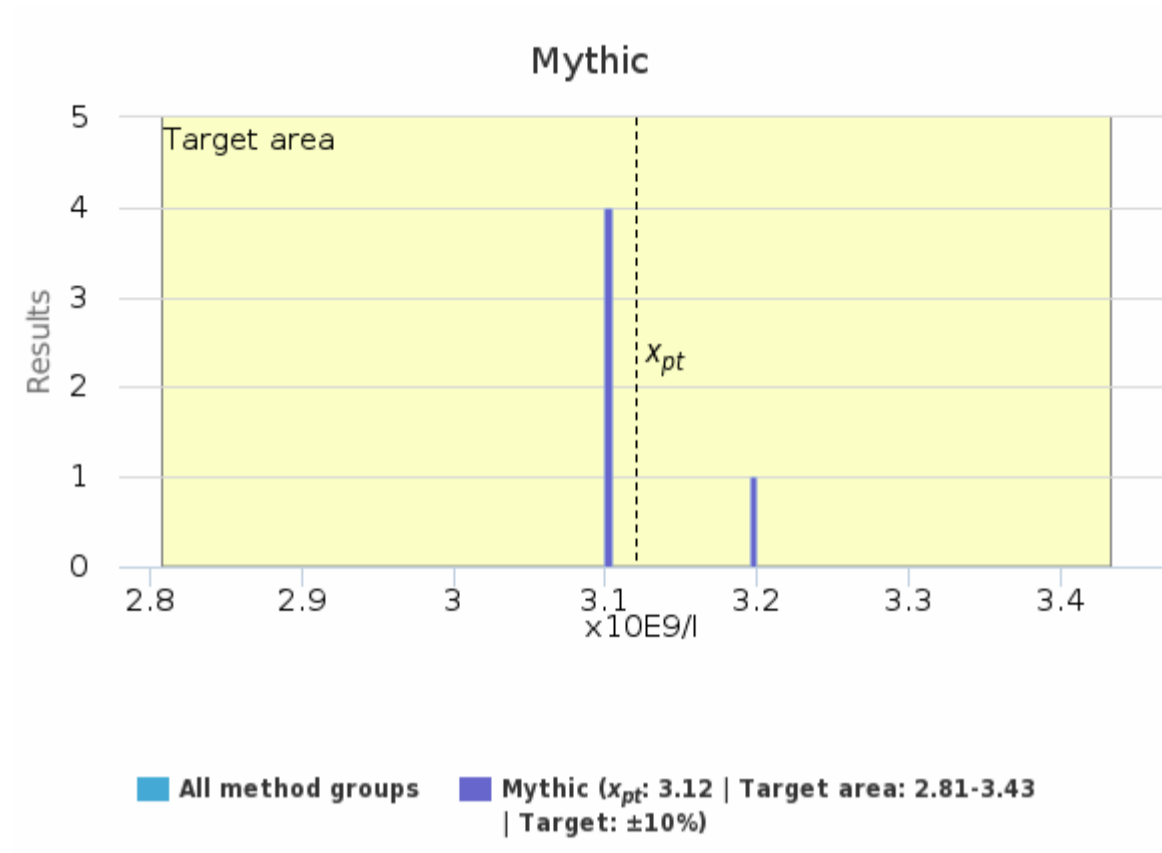
Sample S009 | B -Leuk, x10E9/l| histogram summaries in LabScala



Sample S009 | B -Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	3.12	3.10	0.04	1.4	0.02	3.10	3.20	-	5
<b>All</b>	<b>3.12</b>	<b>3.10</b>	<b>0.04</b>	<b>1.4</b>	<b>0.02</b>	<b>3.10</b>	<b>3.20</b>	-	<b>5</b>

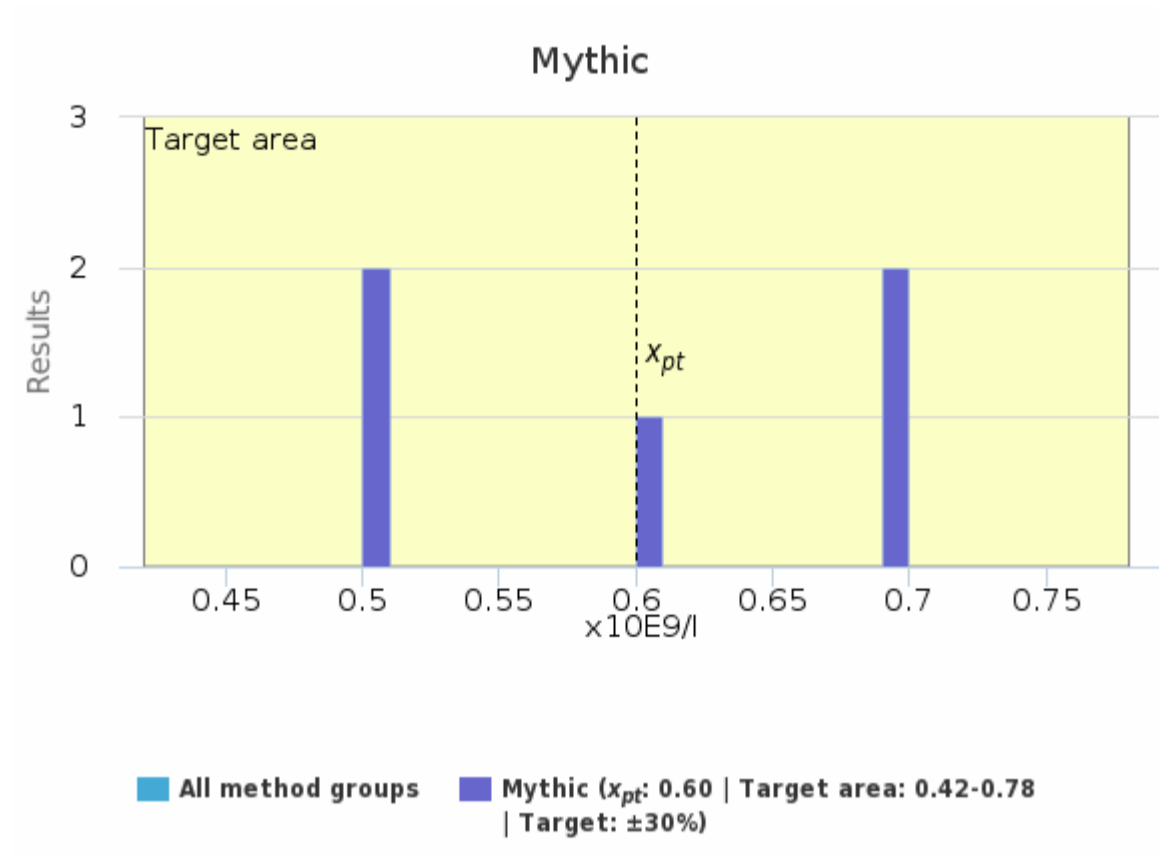
Sample S009 | B -Lym, x10E9/l| histogram summaries in LabScala



Sample S009 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	0.60	0.60	0.10	16.7	0.04	0.50	0.70	-	5
<b>All</b>	<b>0.60</b>	<b>0.60</b>	<b>0.10</b>	<b>16.7</b>	<b>0.04</b>	<b>0.50</b>	<b>0.70</b>	-	<b>5</b>

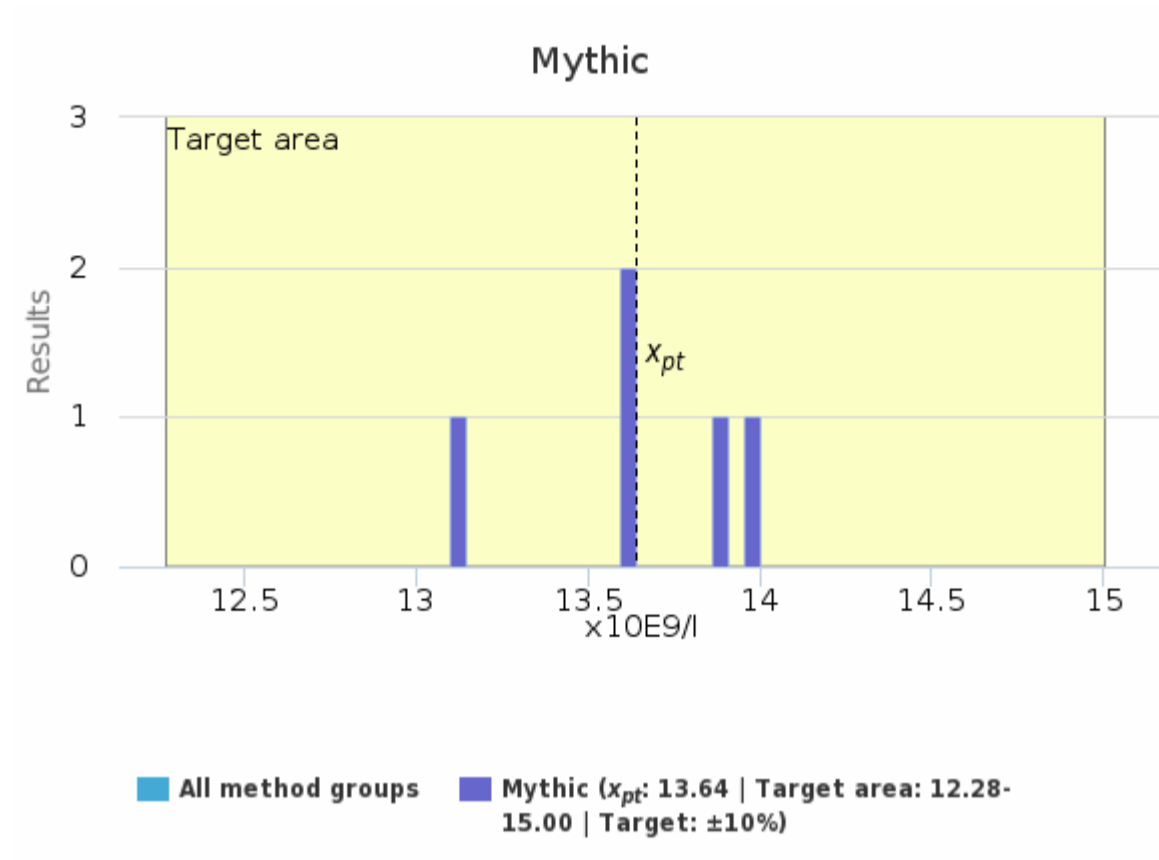
Sample S009 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S009 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	13.64	13.60	0.35	2.6	0.16	13.10	14.00	-	5
<b>All</b>	<b>13.64</b>	<b>13.60</b>	<b>0.35</b>	<b>2.6</b>	<b>0.16</b>	<b>13.10</b>	<b>14.00</b>	-	<b>5</b>

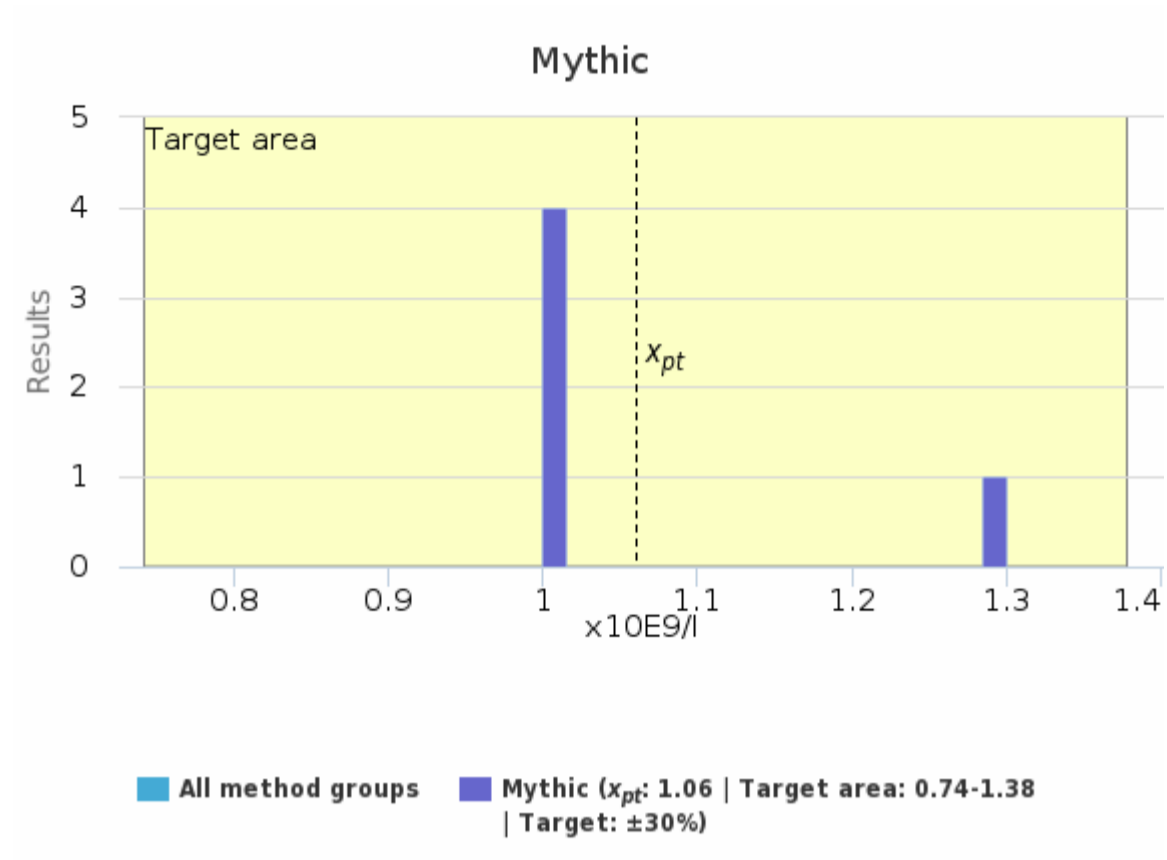
Sample S009 | B -Neutr, x10E9/l | histogram summaries in LabScala



Sample S009 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	1.06	1.00	0.13	12.7	0.06	1.00	1.30	-	5
<b>All</b>	<b>1.06</b>	<b>1.00</b>	<b>0.13</b>	<b>12.7</b>	<b>0.06</b>	<b>1.00</b>	<b>1.30</b>	-	<b>5</b>

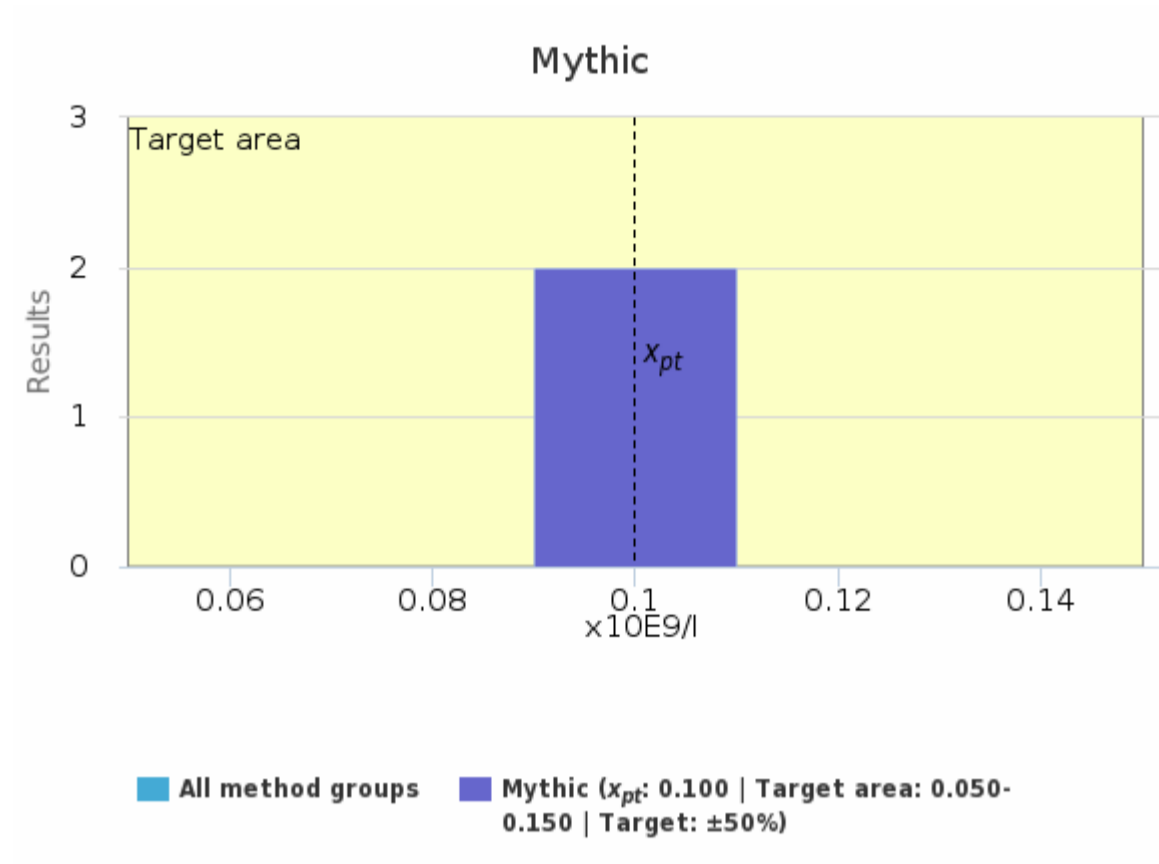
Sample S009 | B -Eos, x10E9/l| histogram summaries in LabScala



Sample S009 | B -Baso, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Mythic	0.100	0.100	<0.001	<0.1	<0.001	0.100	0.100	-	2
<b>All</b>	<b>0.100</b>	<b>0.100</b>	<b>&lt;0.001</b>	<b>&lt;0.1</b>	<b>&lt;0.001</b>	<b>0.100</b>	<b>0.100</b>	-	<b>2</b>

Sample S009 | B -Baso, x10E9/l | histogram summaries in LabScala

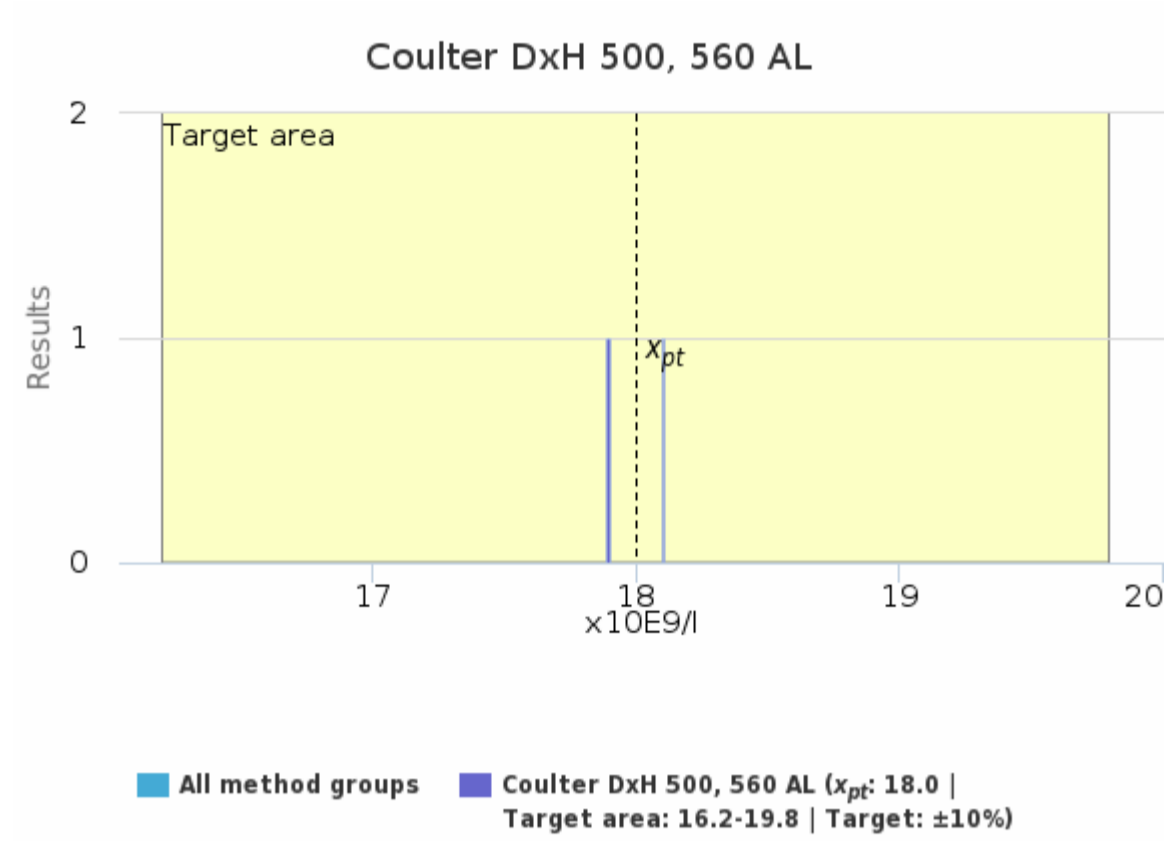




Sample S010 | B -Leuk, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	18.0	18.0	0.2	0.9	0.1	17.9	18.1	-	2
<b>All</b>	<b>18.0</b>	<b>18.0</b>	<b>0.2</b>	<b>0.9</b>	<b>0.1</b>	<b>17.9</b>	<b>18.1</b>	-	<b>2</b>

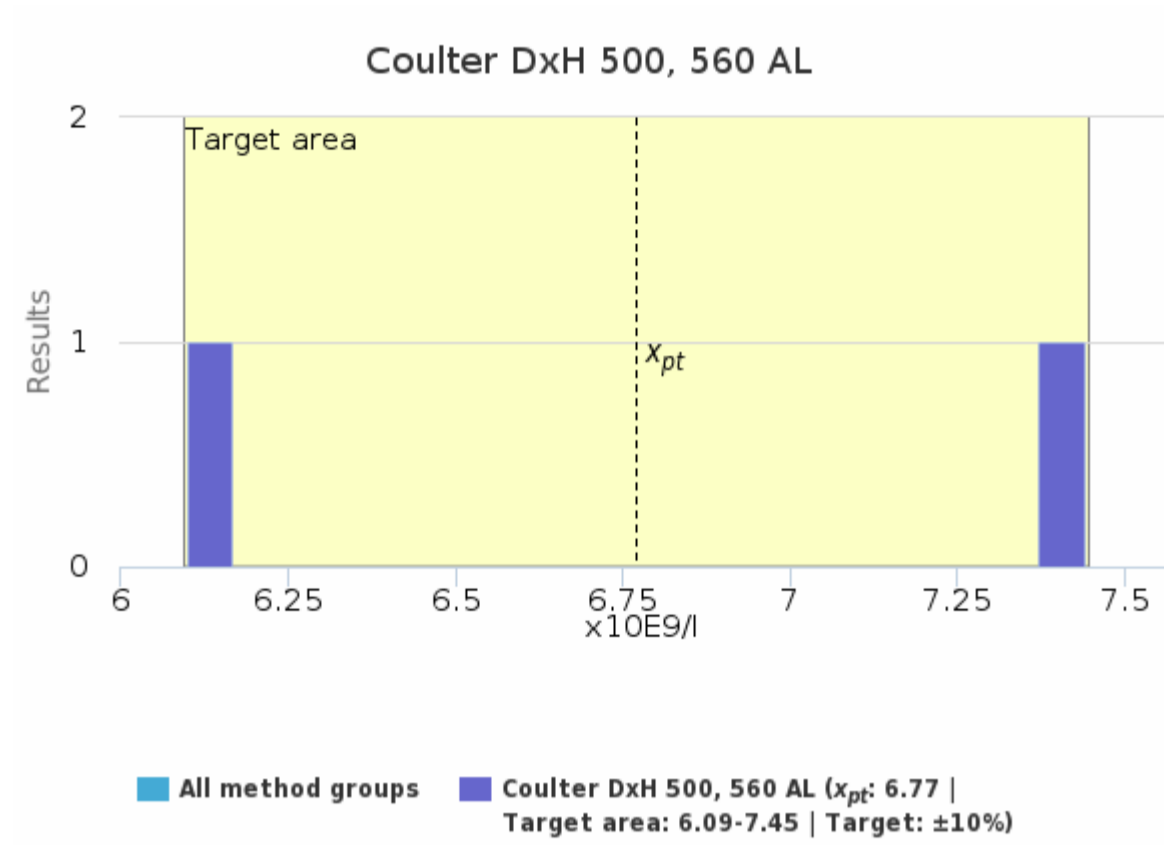
Sample S010 | B -Leuk, x10E9/l | histogram summaries in LabScala



Sample S010 | B-Lym, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	6.77	6.77	0.95	14.0	0.67	6.10	7.44	-	2
<b>All</b>	<b>6.77</b>	<b>6.77</b>	<b>0.95</b>	<b>14.0</b>	<b>0.67</b>	<b>6.10</b>	<b>7.44</b>	-	<b>2</b>

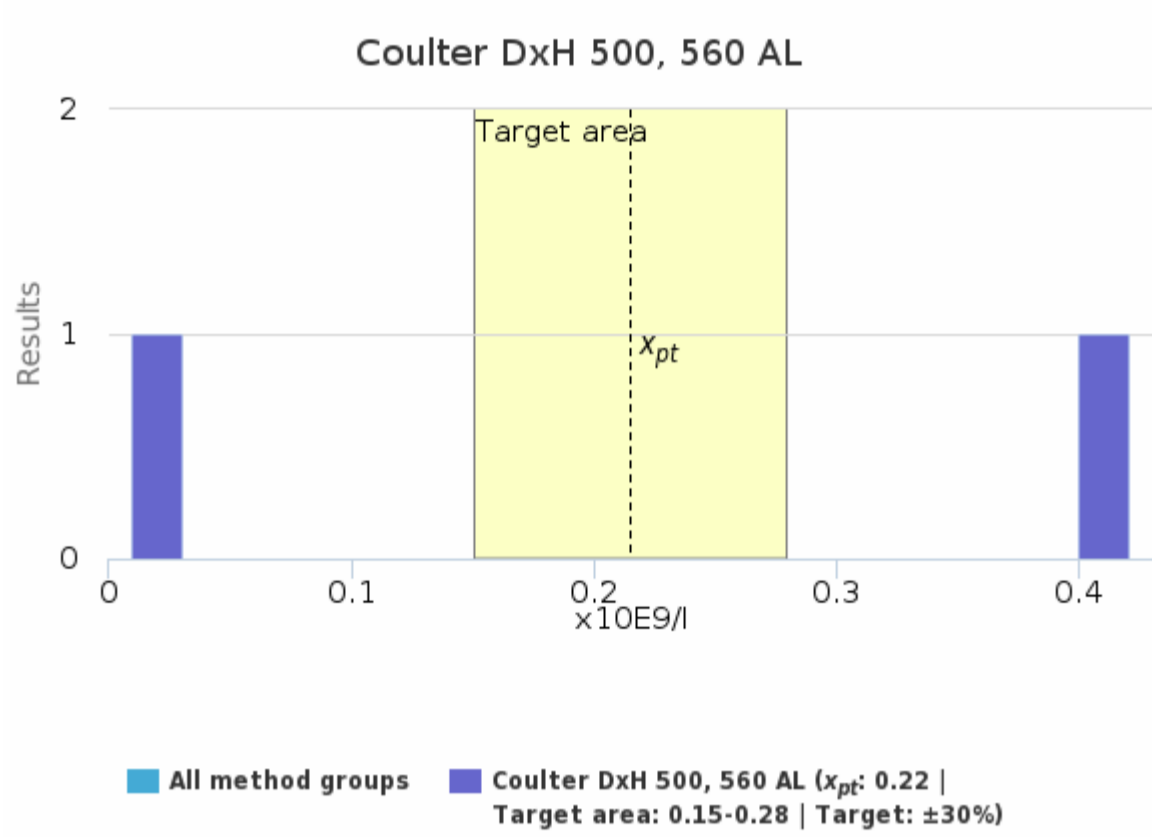
Sample S010 | B-Lym, x10E9/l| histogram summaries in LabScala



Sample S010 | B -Mon, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	0.22	0.22	0.29	134.8	0.21	0.01	0.42	-	2
<b>All</b>	<b>0.22</b>	<b>0.22</b>	<b>0.29</b>	<b>134.8</b>	<b>0.21</b>	<b>0.01</b>	<b>0.42</b>	-	<b>2</b>

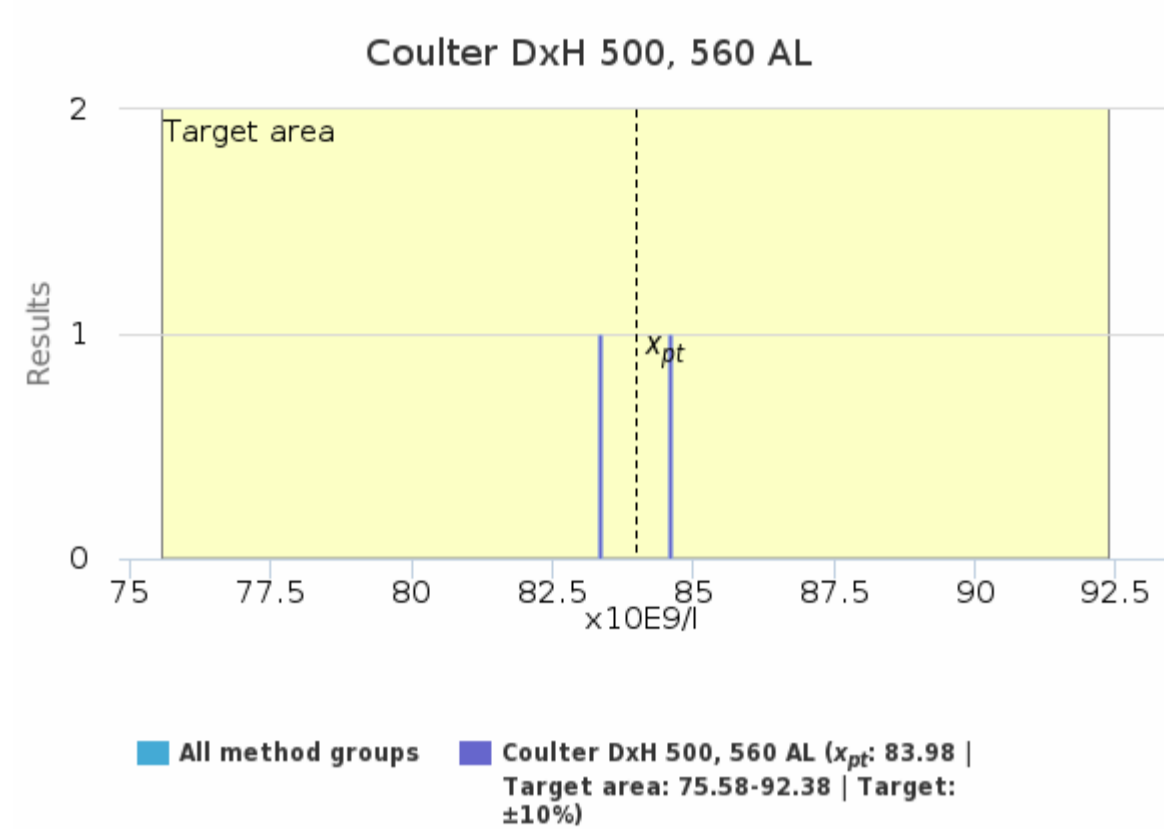
Sample S010 | B -Mon, x10E9/l| histogram summaries in LabScala



Sample S010 | B -Neutr, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	83.98	83.98	0.93	1.1	0.66	83.32	84.64	-	2
<b>All</b>	<b>83.98</b>	<b>83.98</b>	<b>0.93</b>	<b>1.1</b>	<b>0.66</b>	<b>83.32</b>	<b>84.64</b>	-	<b>2</b>

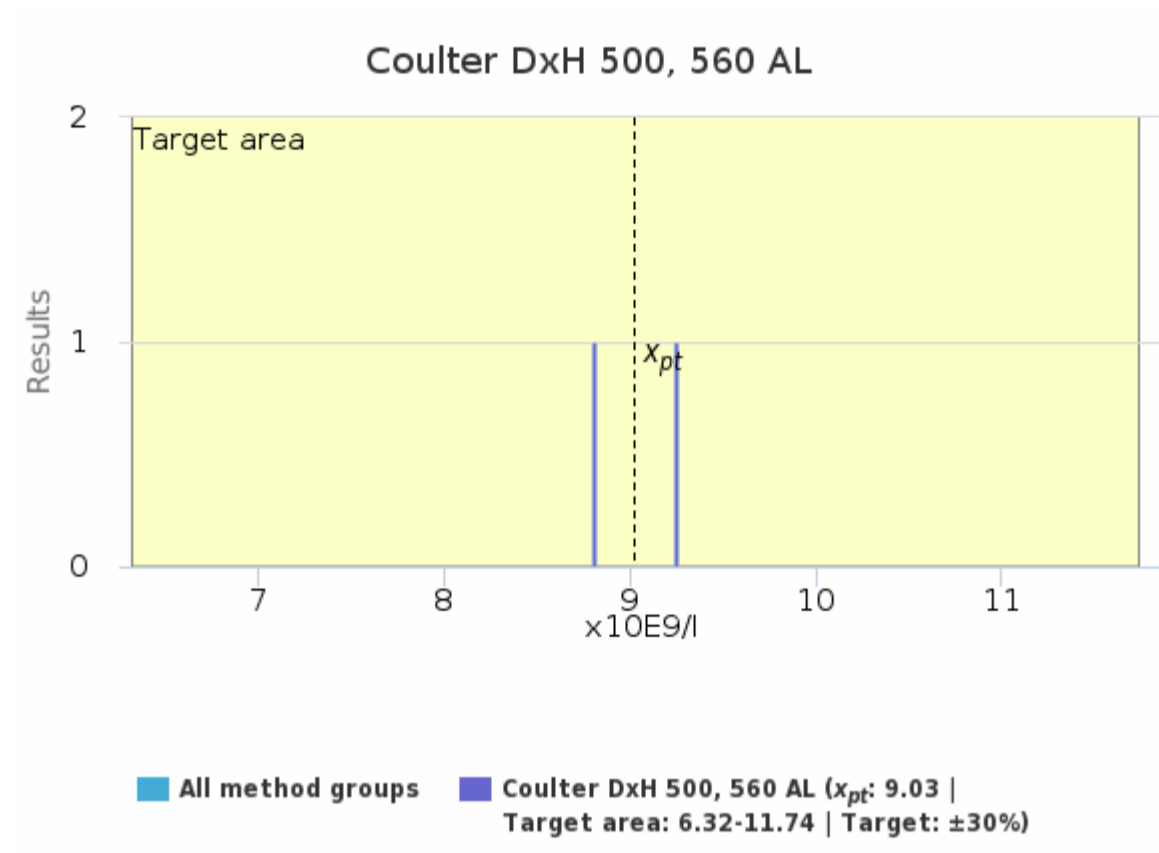
Sample S010 | B -Neutr, x10E9/l | histogram summaries in LabScala



Sample S010 | B -Eos, x10E9/l

Methodics	$x_{pt}$	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	9.03	9.03	0.33	3.6	0.23	8.80	9.26	-	2
<b>All</b>	<b>9.03</b>	<b>9.03</b>	<b>0.33</b>	<b>3.6</b>	<b>0.23</b>	<b>8.80</b>	<b>9.26</b>	-	<b>2</b>

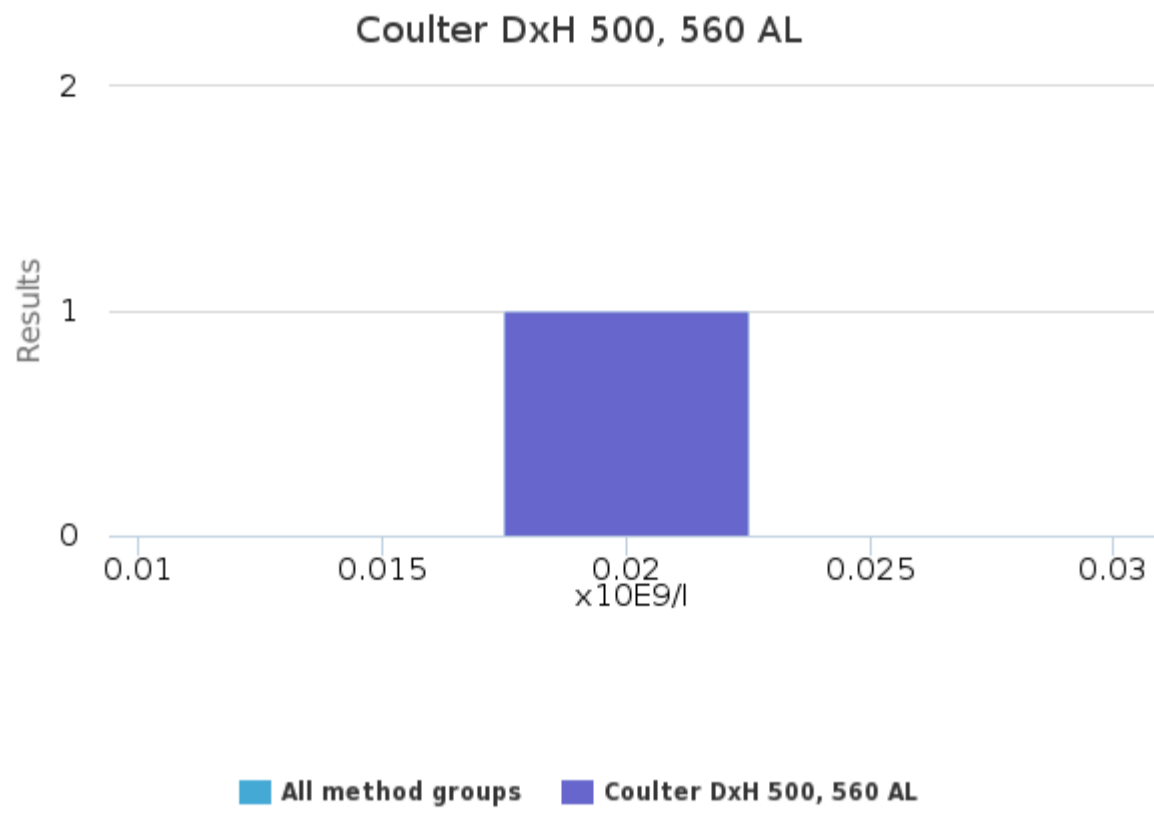
Sample S010 | B -Eos, x10E9/l| histogram summaries in LabScala



Sample S010 | B -Baso, x10E9/l

Methodics	<i>x<sub>pt</sub></i>	Median	sd	CV%	SEM	min	max	Outliers	n
Coulter DxH 500, 560 AL	-	-	-	-	-	0.020	0.020	-	1
<b>All</b>	-	-	-	-	-	<b>0.020</b>	<b>0.020</b>	-	<b>1</b>

Sample S010 | B -Baso, x10E9/l | histogram summaries in LabScala



**Report info****Participants**

300 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  $\pm 3$  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

## 5-part Leucocyte Differential Count, Round 1, 2023

### Specimens

Sample S001 (LQ711823011) was blood cell suspension for Coulter analysers (not for AcT 5 diff). Sample S002 (LQ711823012) was blood cell suspension for Cell-Dyn analysers. Sample S003 (LQ711823013) was blood cell suspension for Advia analysers. Sample S004 (LQ711823014) was blood cell suspension for Sysmex analysers. Sample S005 (LQ711823015) was blood cell suspension for Coulter AcT 5-diff. and ABX Pentra analysers. Sample S006 (LQ711823016) was blood cell suspension for Mindray analysers. Sample S007 (LQ711823017) was blood cell suspension for Nihon Kohden Celltac MEK analysers. Sample S009 (LQ711823019) was blood cell suspension for Mythic analysers. Sample S010 (LQ7118230110) was blood cell suspension for Coulter DxH 560 AL analysers.

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

The materials were sent without temperature control packaging.

### Report info

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

### Comments – EQA Coordinator

This scheme is intended for blood count analysers doing five-part differential white blood cell counts. The statistical analyses were performed using absolute values, which are the basis of clinical decision-making. There was a great variation within some of the method groups in the results of the differential count. Some of the method groups were small, which partly explains the large variation. When looking at the results, it is good to check whether the samples have been analysed according to the instruction letter.

Most of the commercial haematological controls give different kinds of instrument alarms, which should be ignored when analysing control samples. Only numerical values are reported. The performance of different alarms should be evaluated with fresh patient samples and compared to manual microscopy.

All laboratories performing instrumental leucocyte 5-part differentiation should regularly compare manual and instrumental differentiation in patient samples. If these comparisons show significant differences, the instrument should be recalibrated. Regular service, calibration, and the use of commercial controls for 5-part differential increases the reliability of the analyser.

Commercial controls might not act like fresh patient samples. Because of that, in some analysers, the quality controls should be handled as control samples, not as patient samples, to give the right numerical values. Therefore, we have instructed to analyse most of the quality control samples in the control channel, and not in the standard channel.

2023-03-31

### FINAL REPORT

Product no. 4230-4240

Samples sent	2023-03-13
Round closed	2023-03-29
Final report	2023-03-31

### 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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### Expert

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*Accreditation does not cover  
products 4239 and 4340.*





Because different instruments give different results from the same quality control sample, the results should only be compared to those belonging to the same method group. For example, Coulter AcT and Sysmex XE and XT give very high basophile results due to the deviant way of handling the cells, but the variation of the numerical results in the method group is small. The low basophile values in these analysers should be controlled with patient samples and/or with other quality control samples.

**End of report**