LABQUALITY

External Quality Assessment Scheme

Erythrocyte Sedimentation Rate for Alifax Round 1, 2023

Specimens
Please find enclosed 3 test tubes S002, S003 and S004, each 3 mL, containing synthetic latex solution.

Caution
Although these quality control samples are not derived from human blood, they must be handled with the same care as patient samples.

Examinations
ESR

Storage and use
The samples are ready to use, and they are supplied in the test tubes that can be loaded directly into rack. Samples should be stored in a refrigerator (+2… +8 ° C).

Procedure:

1. Perform the washing procedure according to the instrument operative manual.
2. From MAIN MENU press the key 6 “Electronic Calibration” except for ROLLER 10 for which “WASH” function must be selected. The analyser may require a washing cycle if not already performed.
3. To start the control procedure press “1” except for ROLLER 10 for which “STANDARD” function must be selected from MAIN MENU.
4. Prepare three washing tubes containing at least 3 mL of distilled water.
5. Load the tubes of the kit and the washing tubes on the rack in the case of TEST1 analyser, or on the rotor in the case of Roller 10/20 or MicroTEST1 analysers, verifying the loading position number indicated on the test tubes, according to the following scheme:

1. Washing tube	position no. 1
2. LATEX Test tube L2	position no. 2
3. LATEX Test tube L3	position no. 3
4. LATEX Test tube L4	position no. 4
5. Washing tube	position no. 5
6. Washing tube	position no. 6

   On TEST1 analyser with the Internal Bar Code Reader (IBCR) the tubes must be placed with the labels on the right way for the bar code reading.
   Note: It is highly recommended to respect strictly the samples loading sequence as described to avoid a wrong instrument check.
6. Following the TEST1 analyser menu driven instructions, open the loading door and insert the rack with the test tubes prepared for the check. After closing the front door, the analysis of controls will be started automatically.
7. In case of use on analysers MicroTEST1 and Roller 10/20 with the external bar code reader (EBCR), execute the reading of the bar code of each single test tube while loading the test-tubes on the mixing rotor.
8. If the analyser is without any bar code reader or the reader is not able to read the bar codes on the test tubes, the bar code indicated on each single test tube of the kit will need to be entered manually. Note**:** It is necessary to enter the whole bar code carried on each single tube of kit.

2023-02-27

INSTRUCTIONS

Product no. 2731, 2732
LQ7473223012-014/IT

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

The results should be reported no later than **March 26, 2023**.

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FINAS
Finnish Accreditation Service
PT02 (EN ISO/IEC 17043)

Quality Management
ISO 9001:2015

9. Upon completed the mixing phase, the analyser will perform the withdrawal and the analysis of the control standards.

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

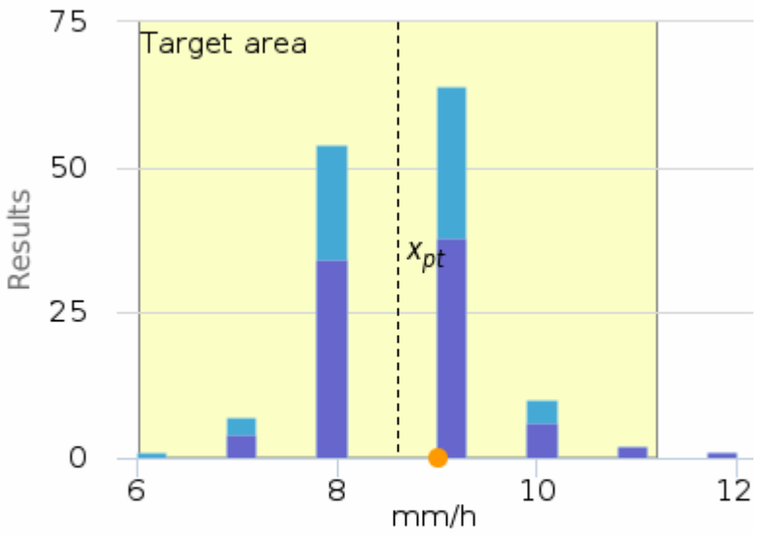
S002

S003

S004

Sedimentation rate |Test 1

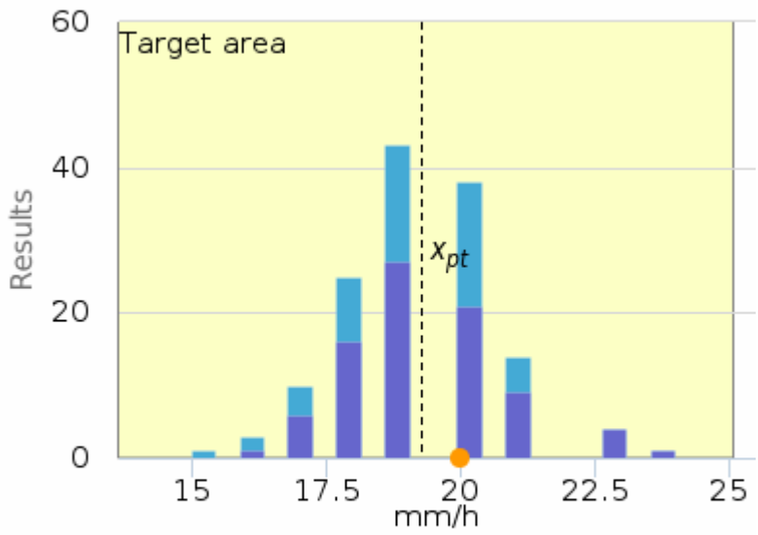
Sample S002-Sedimentation rate-2731



All method groups Test 1
Own result: 9 (22.03.2023)
Diff%: 4 | x_{pt}: 9
Target area: 6-11 | Target: ±30%

	x_{pt}	sd	SEM	CV%	n
Test 1	9 mm/h	<1	<1	9.2	85
All methods	9 mm/h	<1	<1	8.8	139

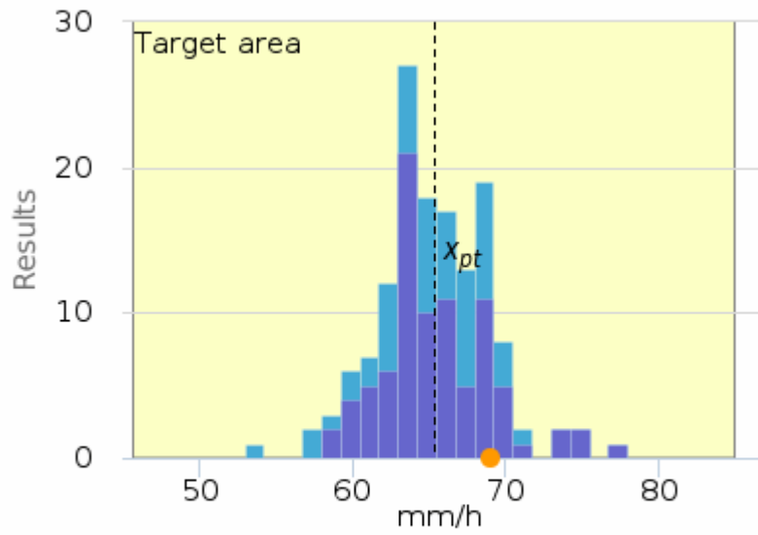
Sample S003-Sedimentation rate-2731



All method groups Test 1
Own result: 20 (22.03.2023)
Diff%: 4 | x_{pt}: 19
Target area: 14-25 | Target: ±30%

	x_{pt}	sd	SEM	CV%	n
Test 1	19 mm/h	1	<1	7.3	85
All methods	19 mm/h	1	<1	7.2	139

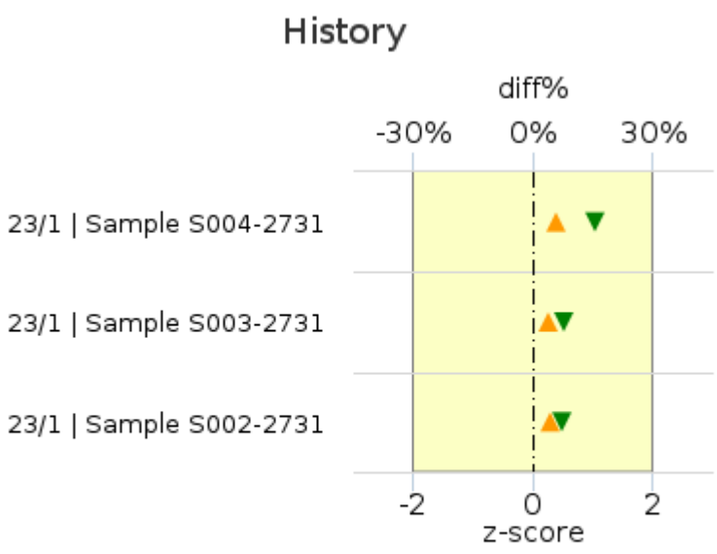
Sample S004-Sedimentation rate-2731



All method groups Test 1
Own result: 69 (22.03.2023)
Diff%: 6 | x_{pt}: 65
Target area: 46-85 | Target: ±30%

	x_{pt}	sd	SEM	CV%	n
Test 1	65 mm/h	4	<1	5.4	86
All methods	65 mm/h	3	<1	5.3	140

History



diff%
z-score

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S004-2731	65	69	6%	1.05
23/1	Sample S003-2731	19	20	4%	0.51
23/1	Sample S002-2731	9	9	4%	0.48

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Report info

Participants

501 participants from 27 countries.

Report info

Your own result should be compared to others using the same method.
Assigned values (x_{pt}, target values) are means of the results where results deviating more than +/- 3*standard deviation from the median are removed. The standard uncertainty (u) of the assigned value is reported as standard error of the mean (SEM). Additionally, if the measurement uncertainty of the target value is large an automatic text is printed on the report: “The uncertainty of the assigned value is not negligible, and evaluations could be affected.”
In case the client’s result is the only one in the method group, no assigned value will be calculated, no target area shown, and no statistics calculated. In case there are only a few results in the client’s own method group, the result can be compared to all method mean or to a group that is similar to the own method.
Results reported with < or > -signs cannot be included in the statistics.

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

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Sample S001 | Sedimentation rate, mm/h

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Automated: Electa lab	53	53	3	4.7	1	51	56	-	3
Automated: Excyte M	-	-	-	-	-	58	58	-	1
Automated: Excyte 20	59	58	6	9.7	2	51	67	-	6
Automated: Kimased Auto	-	-	-	-	-	71	71	-	1
Automated: Microsed	51	51	6	11.3	<1	38	64	-	41
Automated: Mini-Ves	-	-	-	-	-	83	83	-	1
Automated: Mix-Rate	55	55	6	11.3	1	44	70	-	18
Automated: Monitor V10	55	57	3	6.1	2	50	57	-	4
Automated: Monitor V100	54	55	4	7.1	2	49	58	-	4
Automated: Monitor V20	-	-	-	-	-	53	53	-	1
Automated: Sed Rate Timer & Screener	48	49	5	10.1	2	43	55	-	5
Automated: Sedimatic 100	-	-	-	-	-	58	58	-	1
Automated: Sediplus	51	50	6	11.7	2	44	65	-	16
Automated: Sedisystem	-	-	-	-	-	59	59	-	1
Automated: Sedivette	32	41	23	71.5	13	6	49	-	3
Automated: Sedi-15	-	-	-	-	-	78	78	-	1
Automated: Sedi-40	41	42	3	8.1	<1	34	45	-	14
Automated: StaRRsed	36	36	2	5.3	<1	33	38	-	11
Automated: StaRRsed InteRRliner	37	36	4	9.5	<1	33	46	-	21
Automated: StaRRsed Inversa	38	35	6	17.1	3	34	49	-	5
Automated: Vacuette SRS 100/II	46	44	3	5.8	1	44	51	-	7
Automated: Vacuette SRS 20/II	47	48	4	8.3	<1	40	59	2	43
Automated: Vacuette SRT 10/II	46	45	5	11.6	<1	38	64	2	59
Automated: Ves-Matic CUBE 200	-	-	-	-	-	61	61	-	1
Automated: Ves-Matic CUBE 30	69	72	13	18.8	5	52	84	-	6
Automated: Ves-Matic Cube 30 Touch	44	38	16	36.2	5	26	74	-	9
Automated: Ves-Matic 30	77	82	9	12.0	5	66	82	-	3
Automated: Vision Analyzers	39	40	9	21.9	5	30	47	-	3
Microvette CB200	-	-	-	-	-	40	40	-	1
Vacuum: Kimased	-	-	-	-	-	68	68	-	1
Vacuum: MONOSED ESR	54	50	11	20.2	3	42	79	-	14
Vacuum: Seditainer tube	44	44	4	8.0	2	40	48	-	4
Vacuum: Sedivette tube	47	45	7	13.9	2	42	62	-	8
Vacuum: Vacuette tube	45	45	8	17.3	<1	35	80	1	67
Vacuum: Vacutainer tube	-	-	-	-	-	40	40	-	1
Vacuum: Venoject other	-	-	-	-	-	73	73	-	1
Westergren: Aquisel P-3 System	54	53	8	15.6	4	47	65	-	4
Westergren: Medlab pipette	51	50	8	15.8	5	43	59	-	3
Westergren: Sarstedt pipette	46	46	5	10.5	1	39	56	1	21
Westergren: Sediplast pipette	49	50	9	18.2	4	32	56	-	6
Westergren: Sedi-Rate pipette	-	-	-	-	-	48	48	-	1
Westergren: Vacuette pipette	45	45	8	16.8	2	33	58	-	16
Westergren: Westergren pipette	50	48	16	32.5	6	28	77	-	8
All	**47**	**46**	**9**	**18.2**	**<1**	**17**	**78**	**10**	**445**

Sample S001 | Sedimentation rate, mm/h| histogram summaries in LabScala

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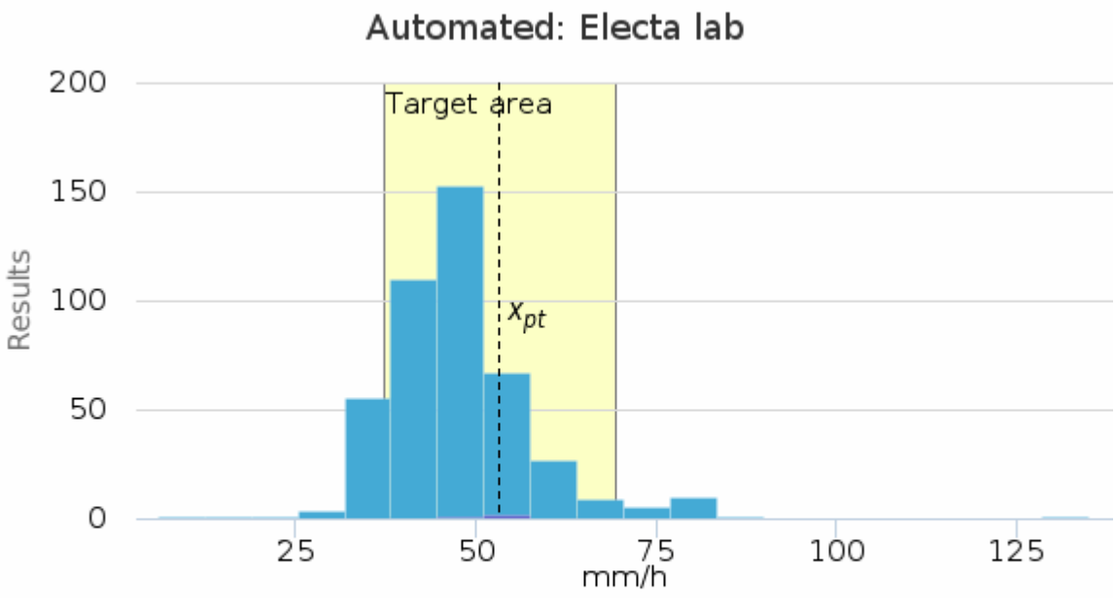
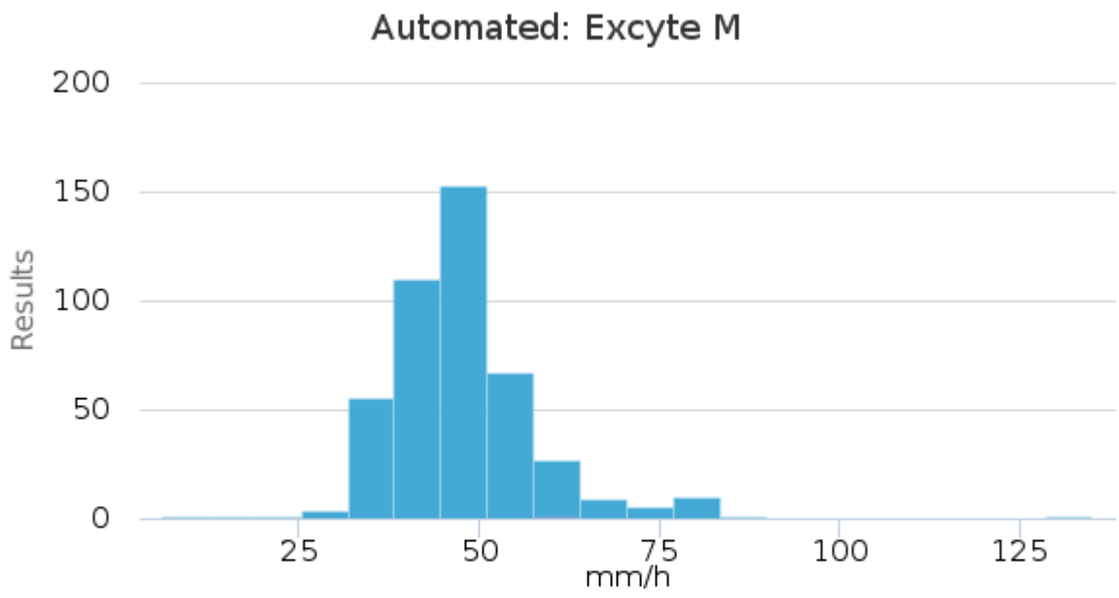
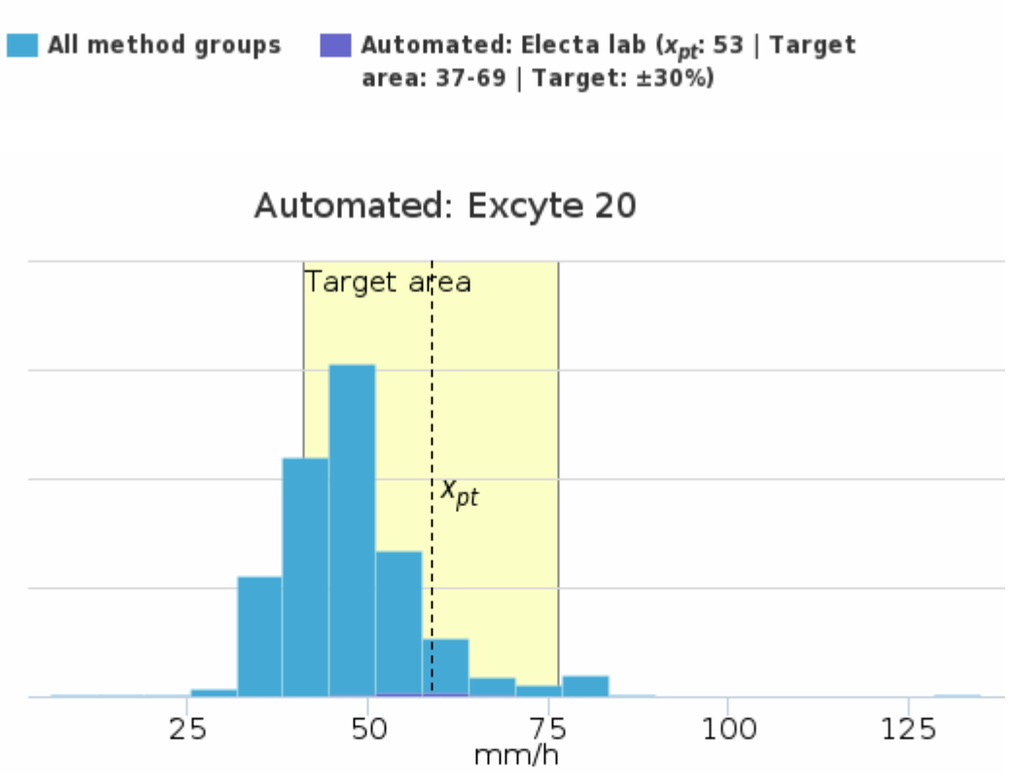
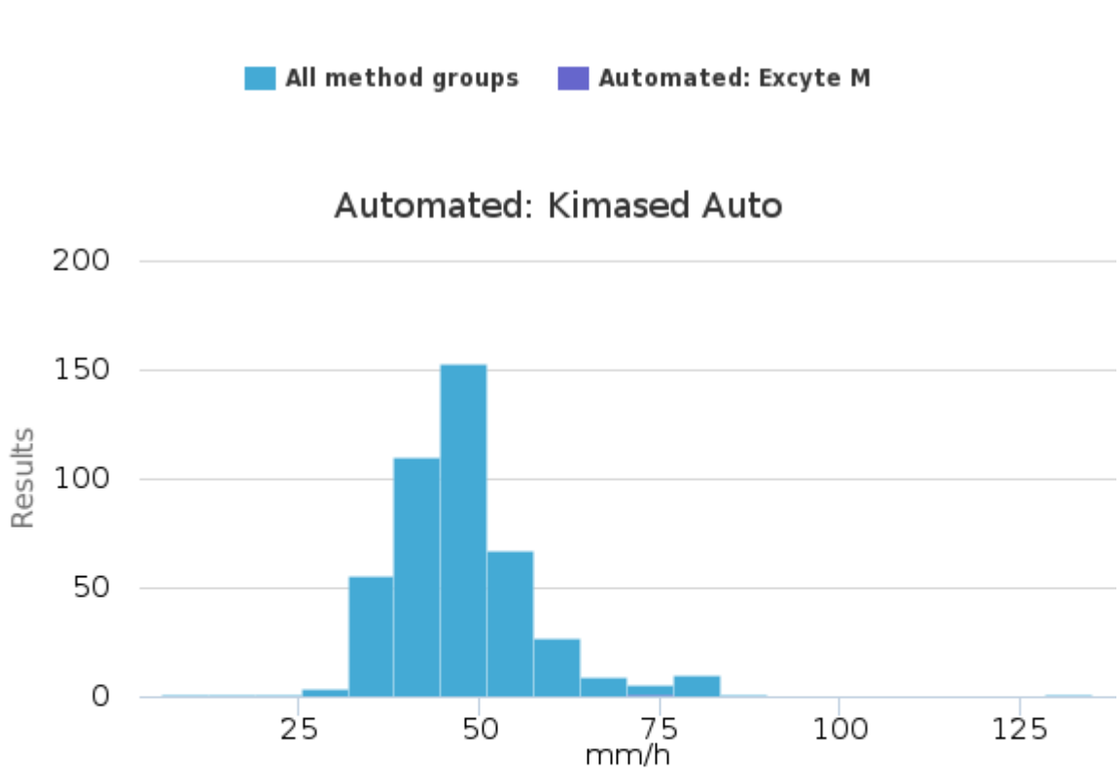
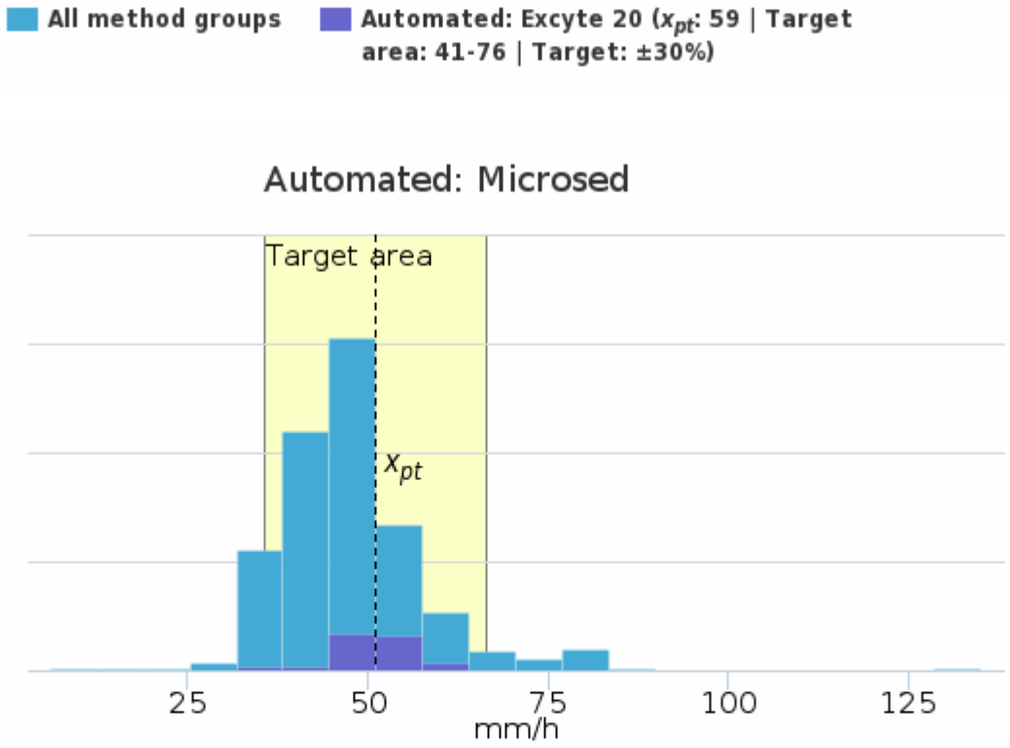
Erythrocyte sedimentation rate, March, 1-2023

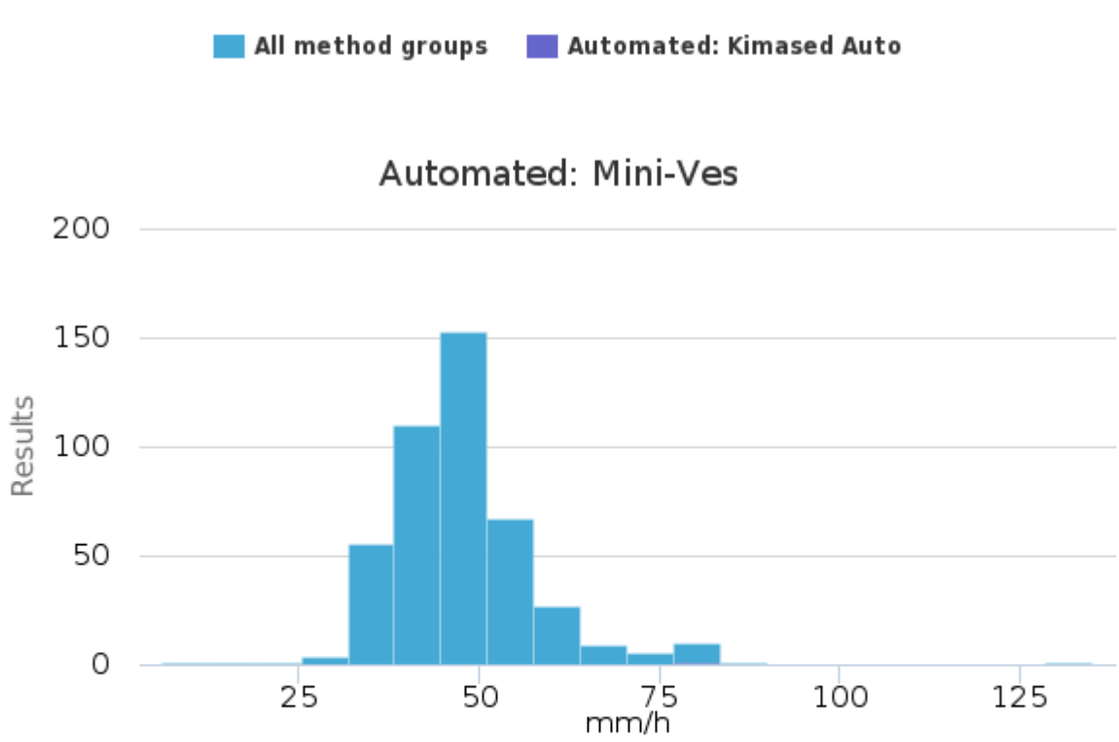












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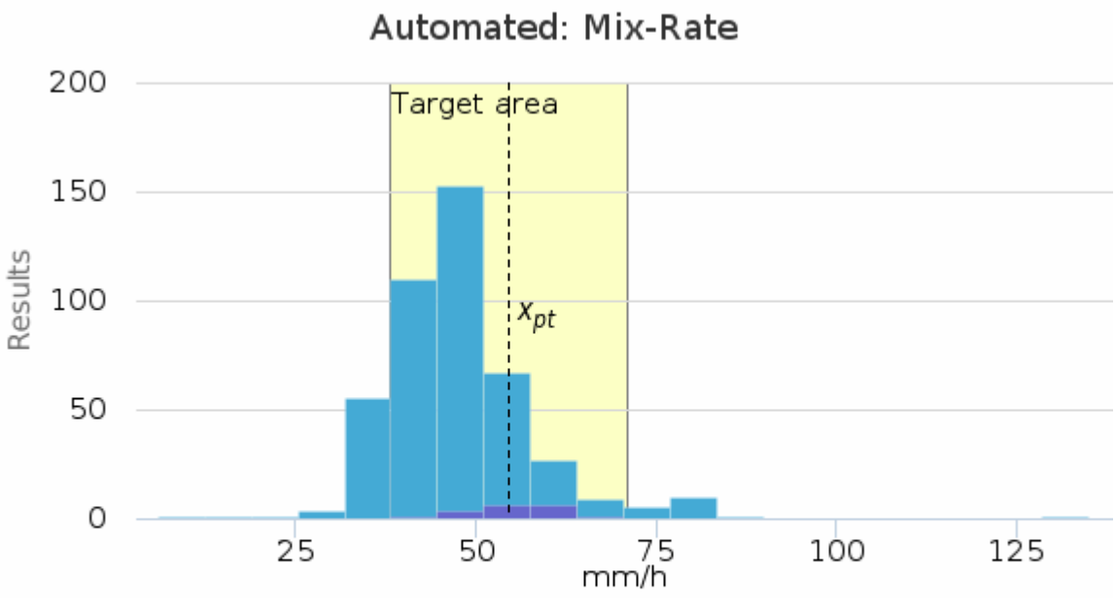

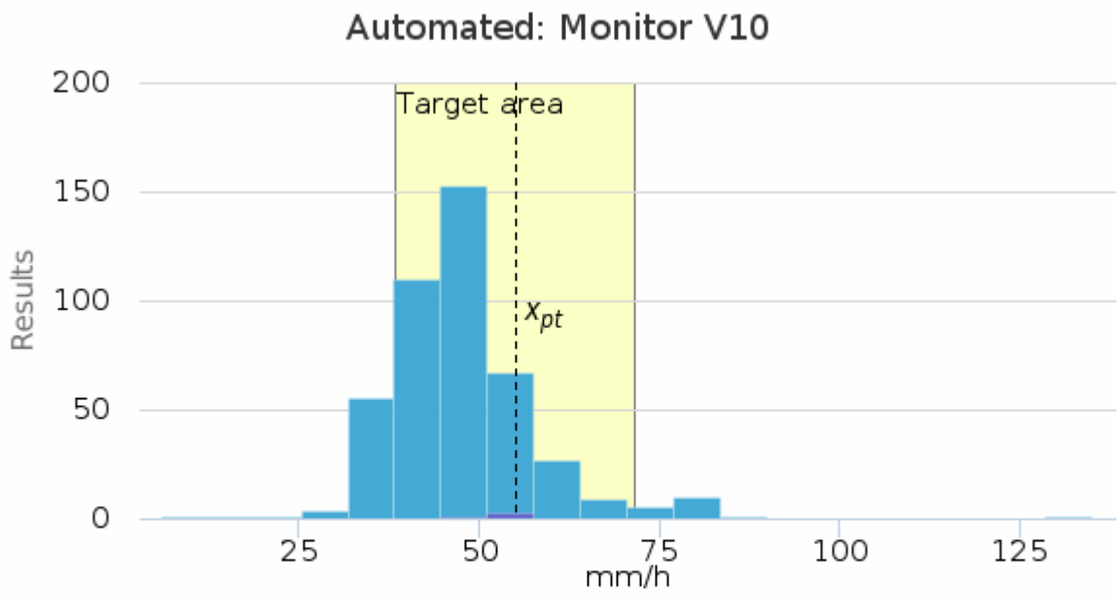

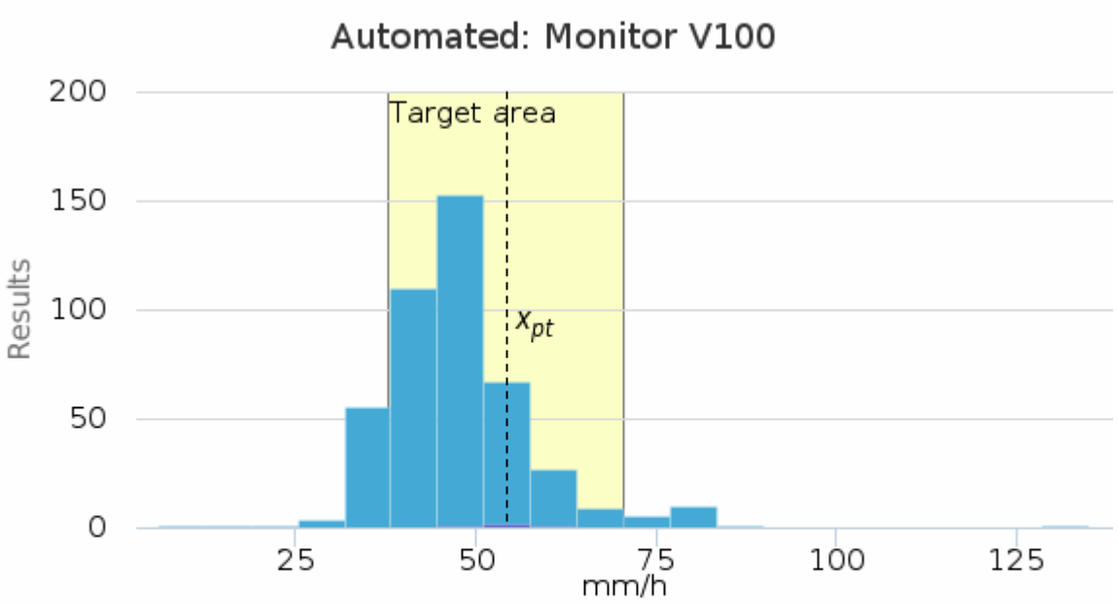

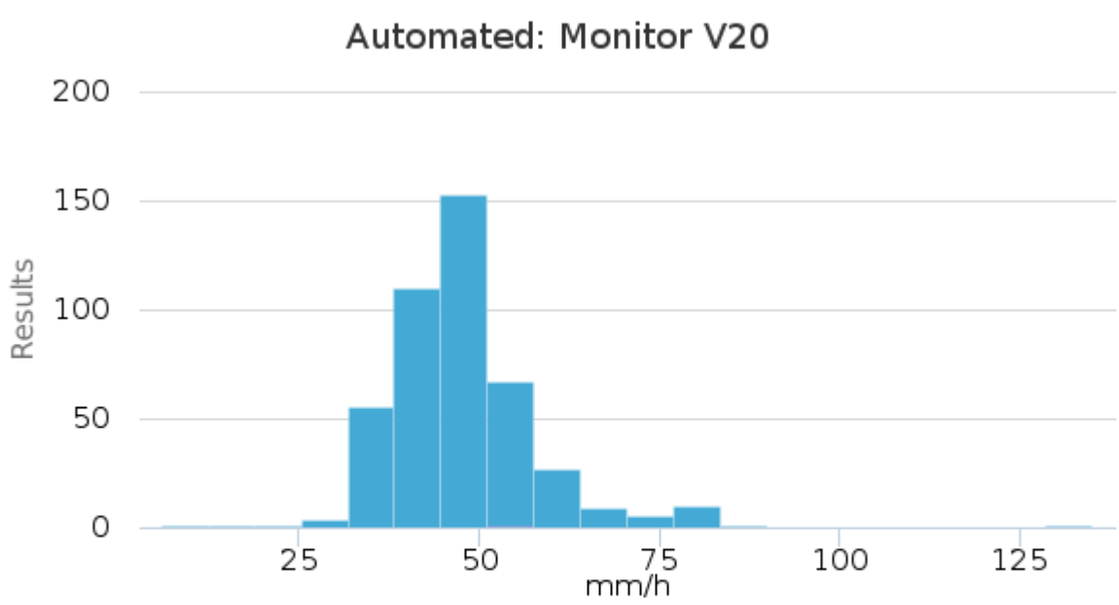

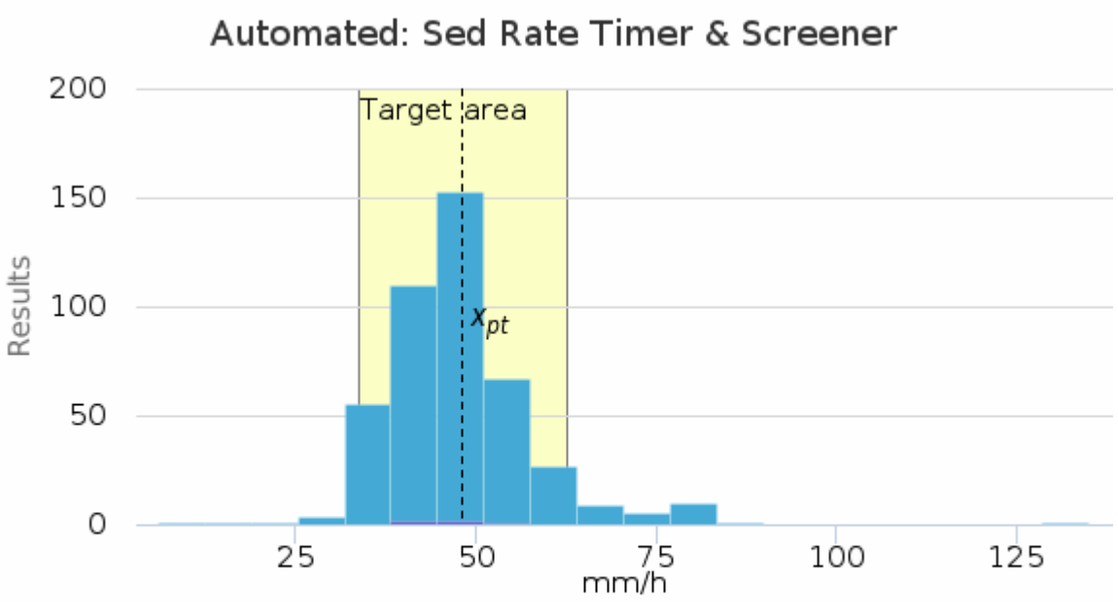

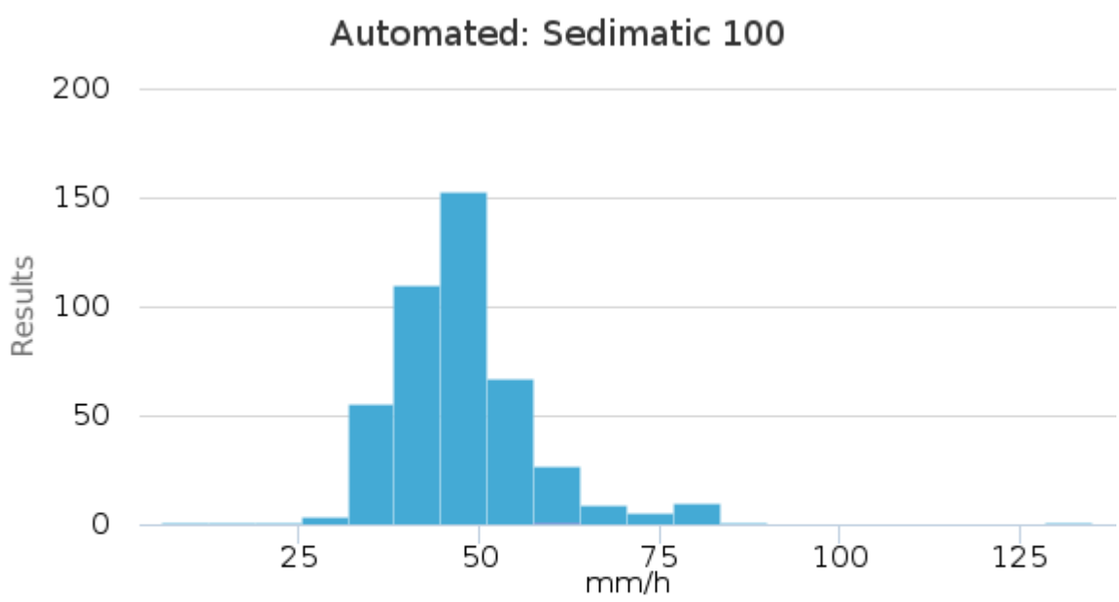

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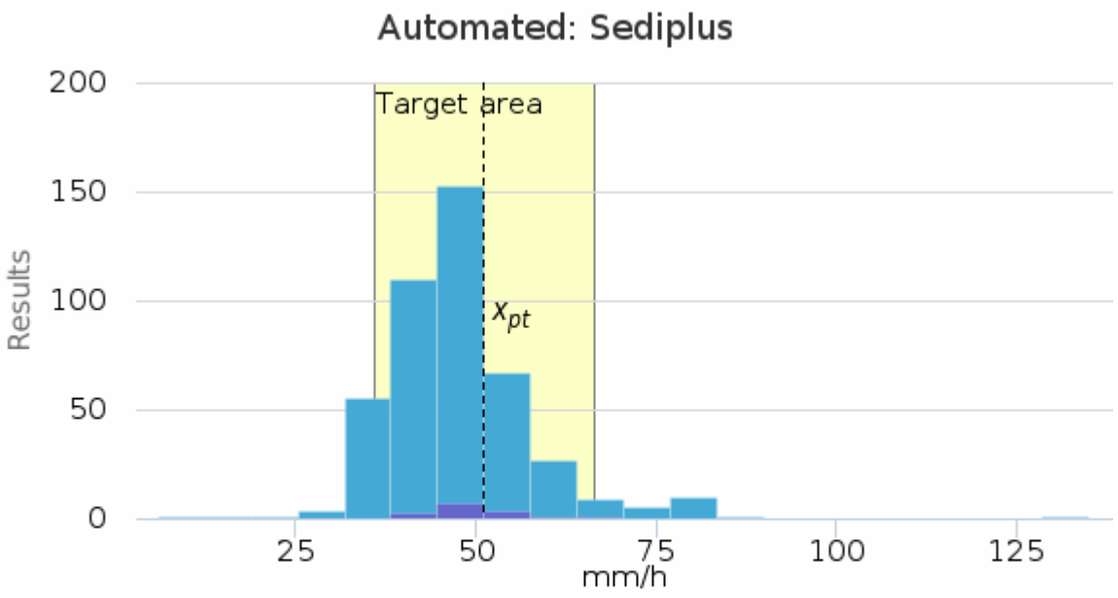
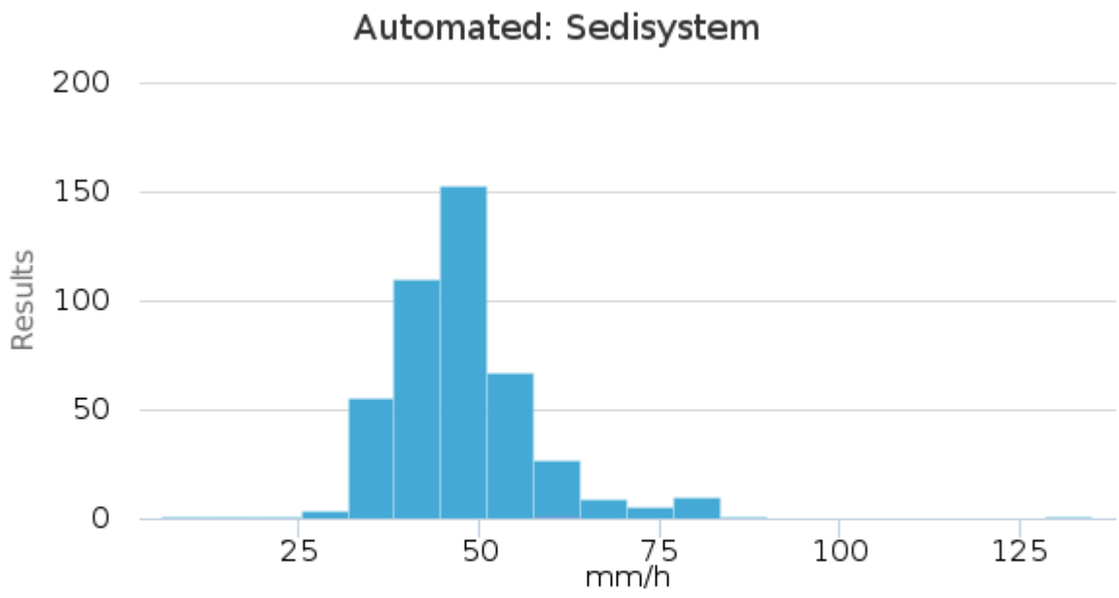
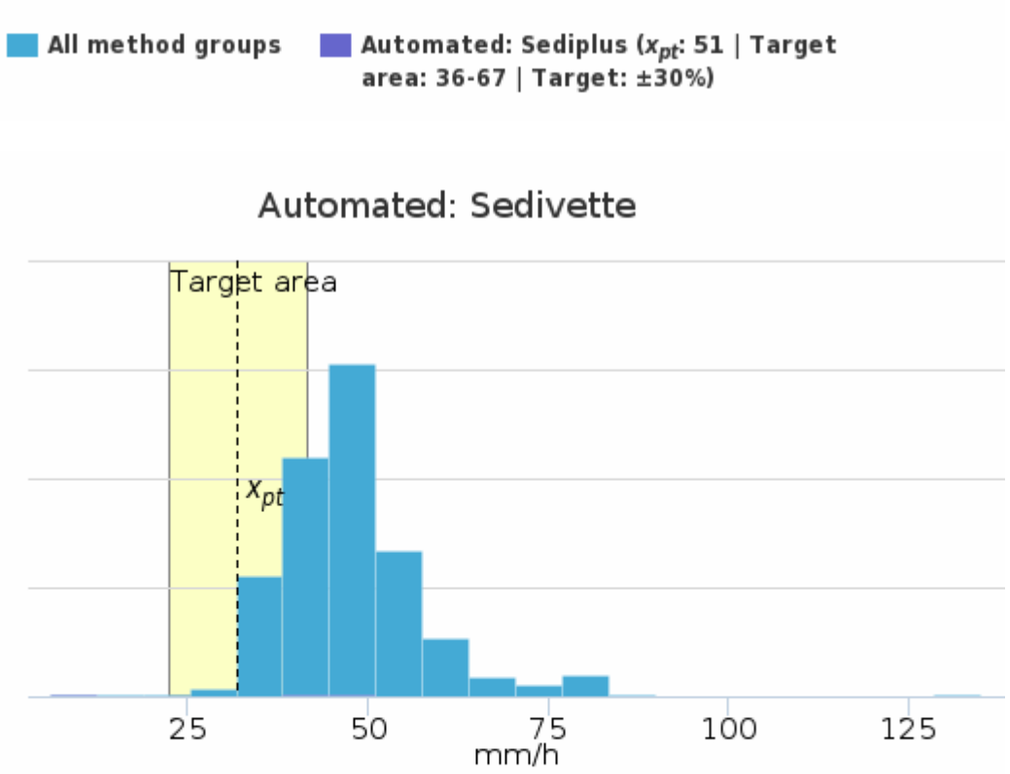
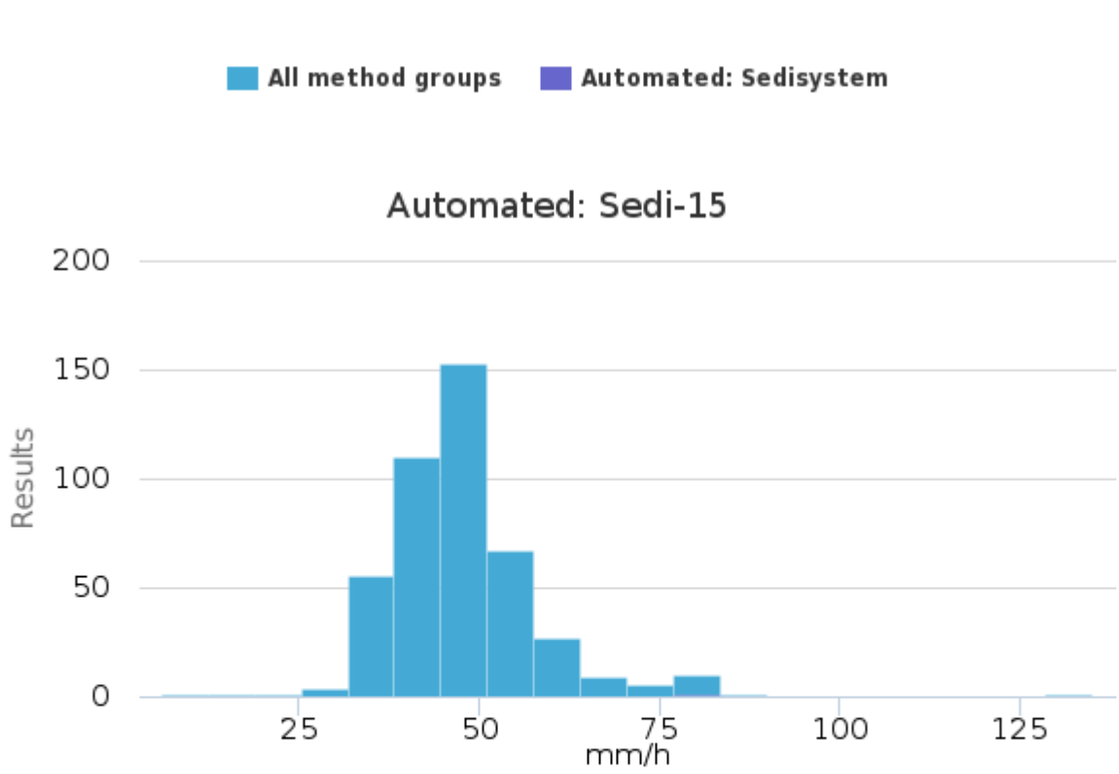
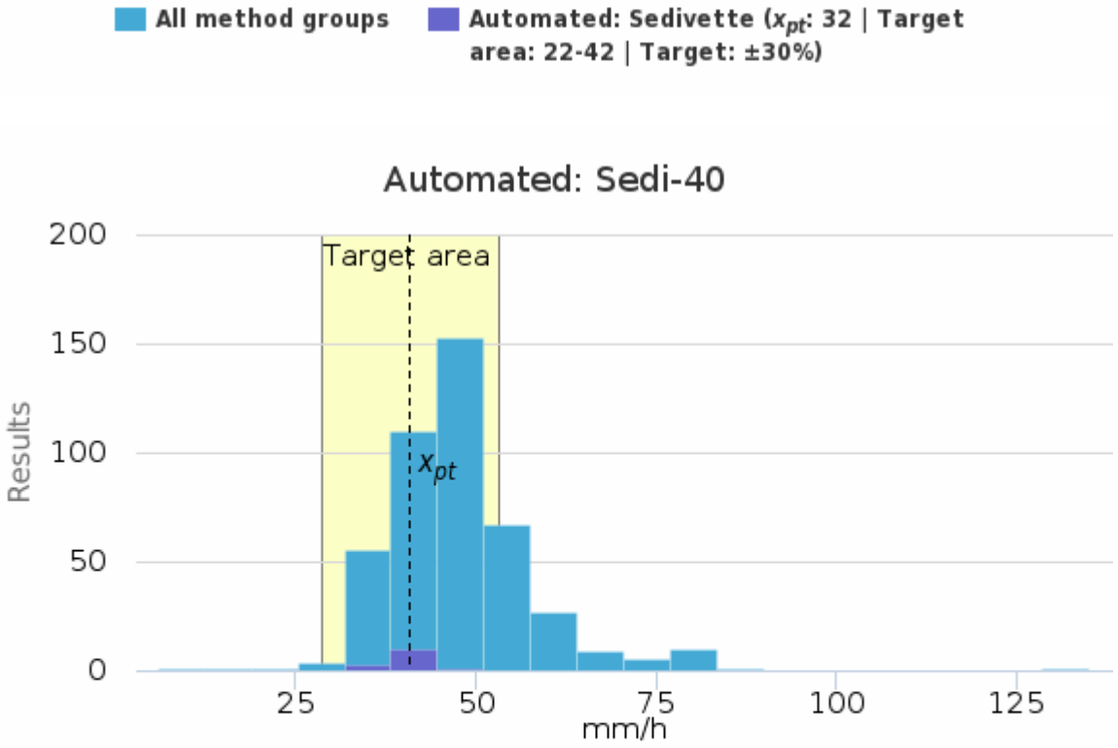
Erythrocyte sedimentation rate, March, 1-2023

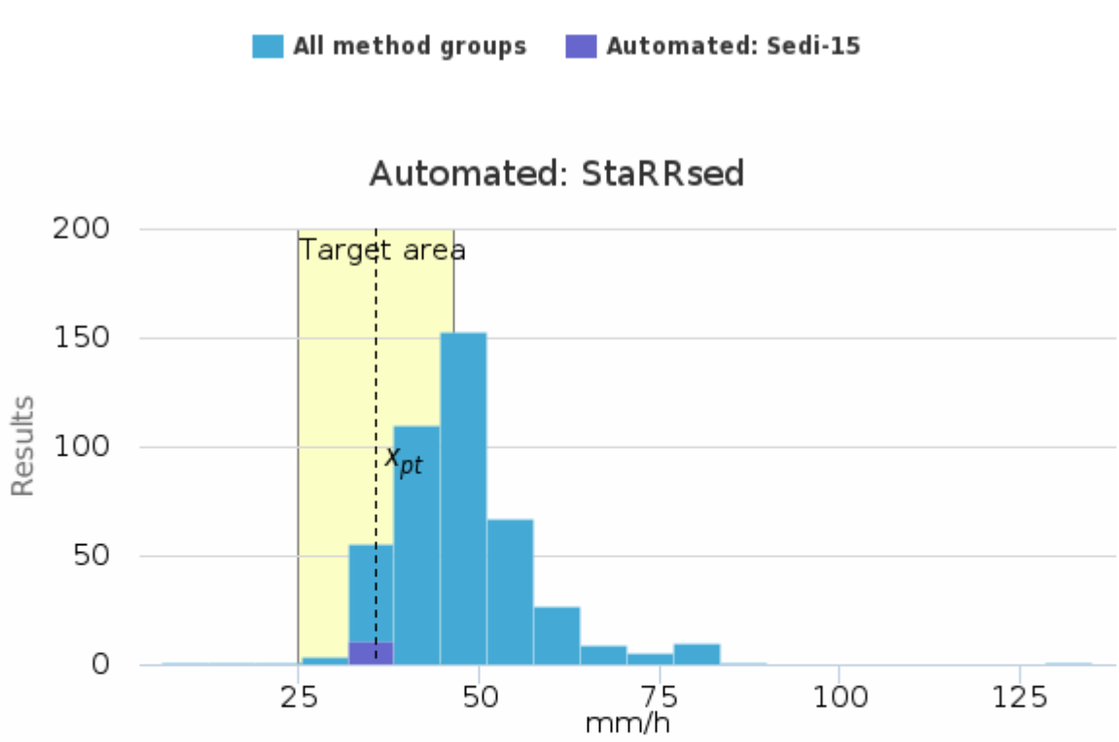












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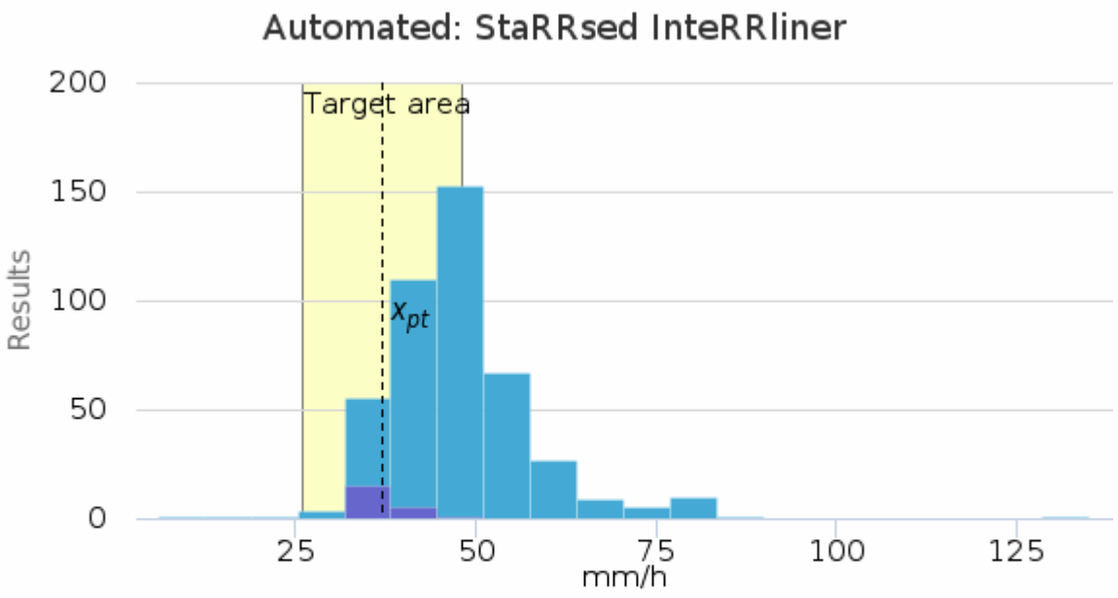
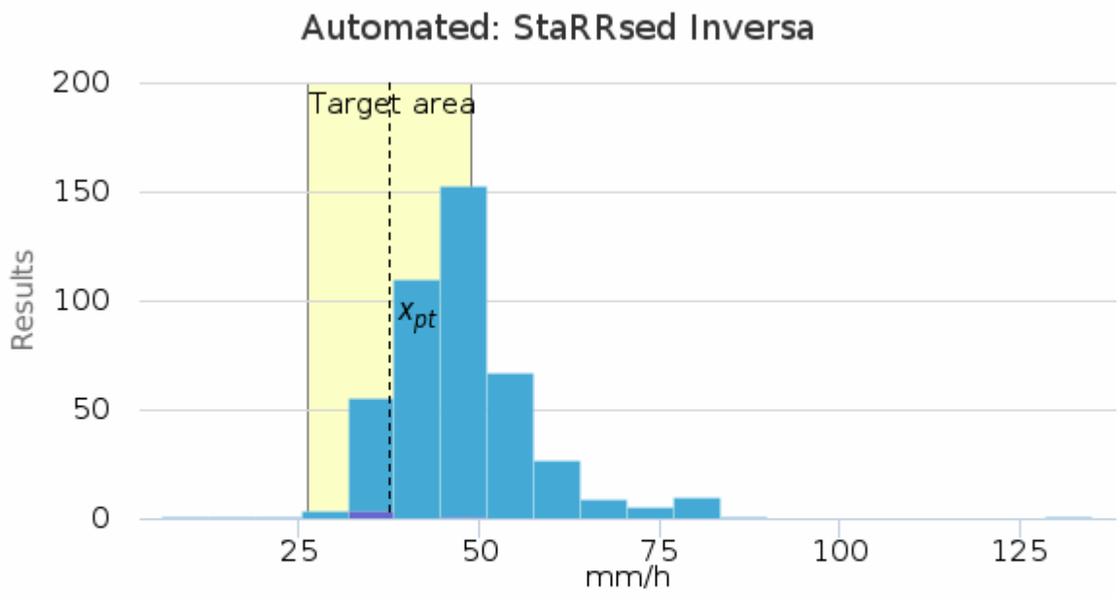
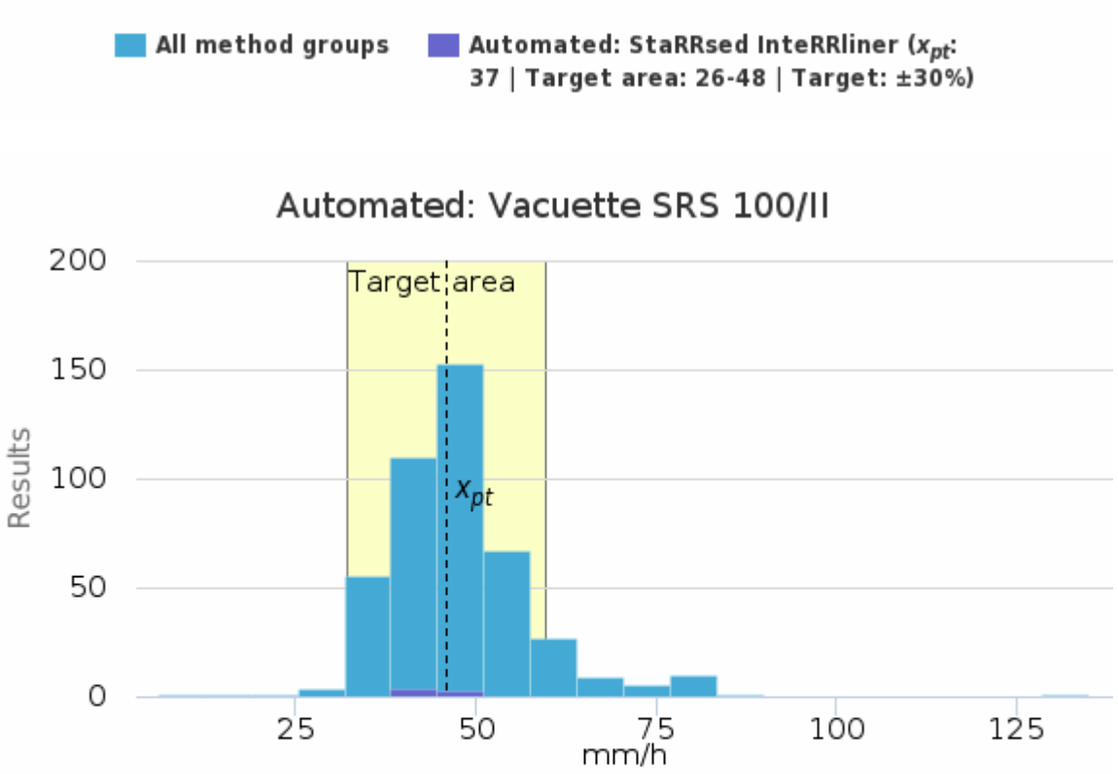
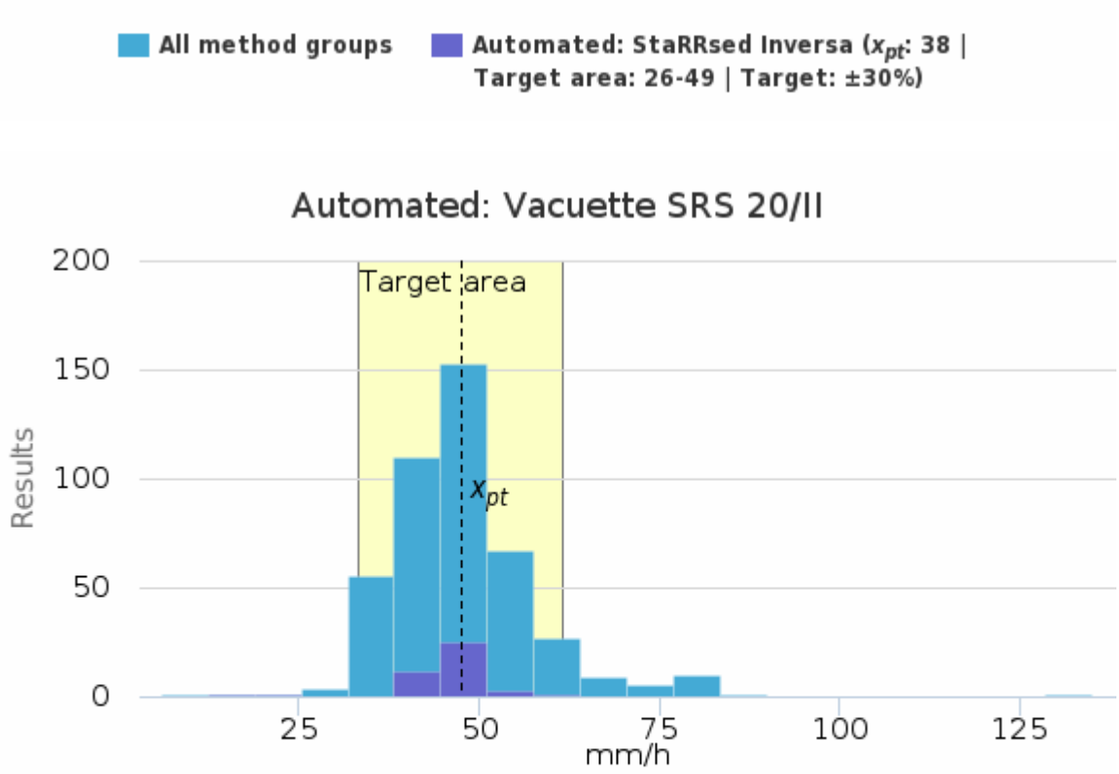
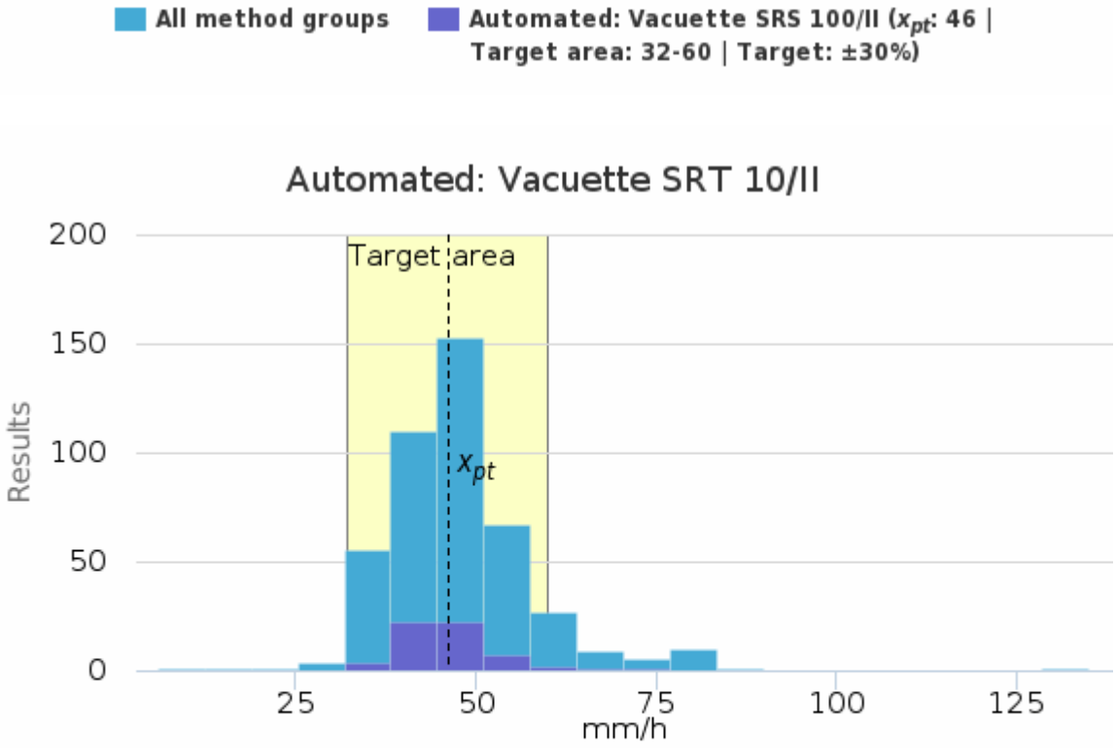
Erythrocyte sedimentation rate, March, 1-2023

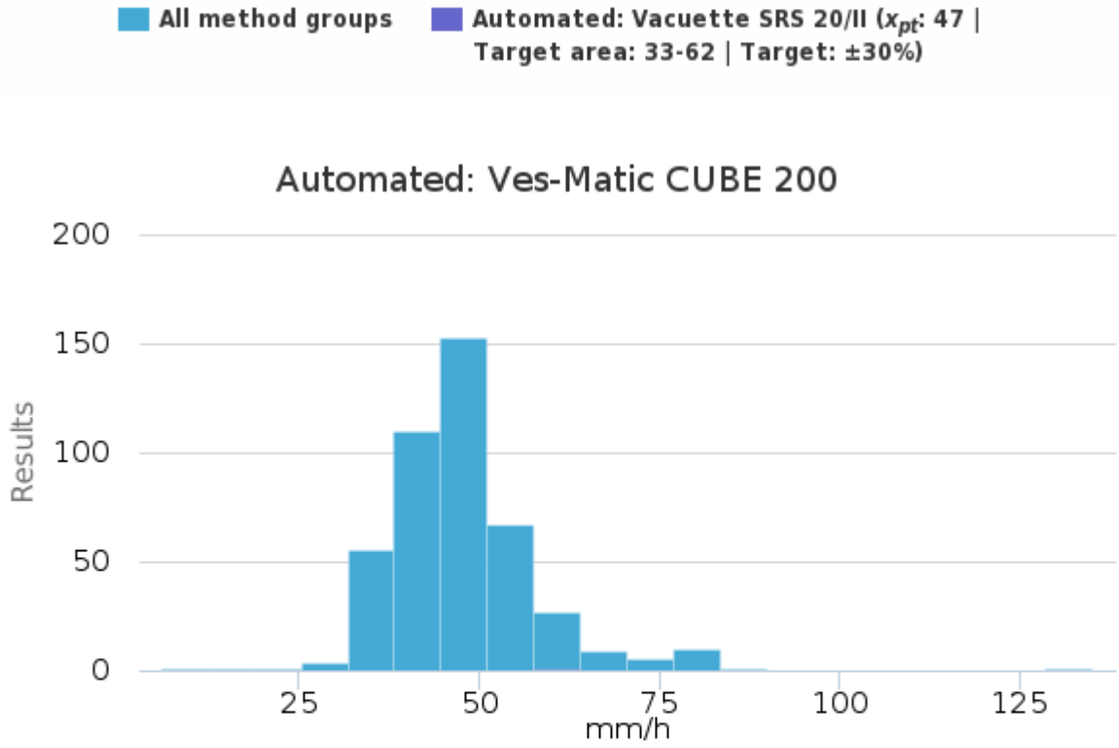












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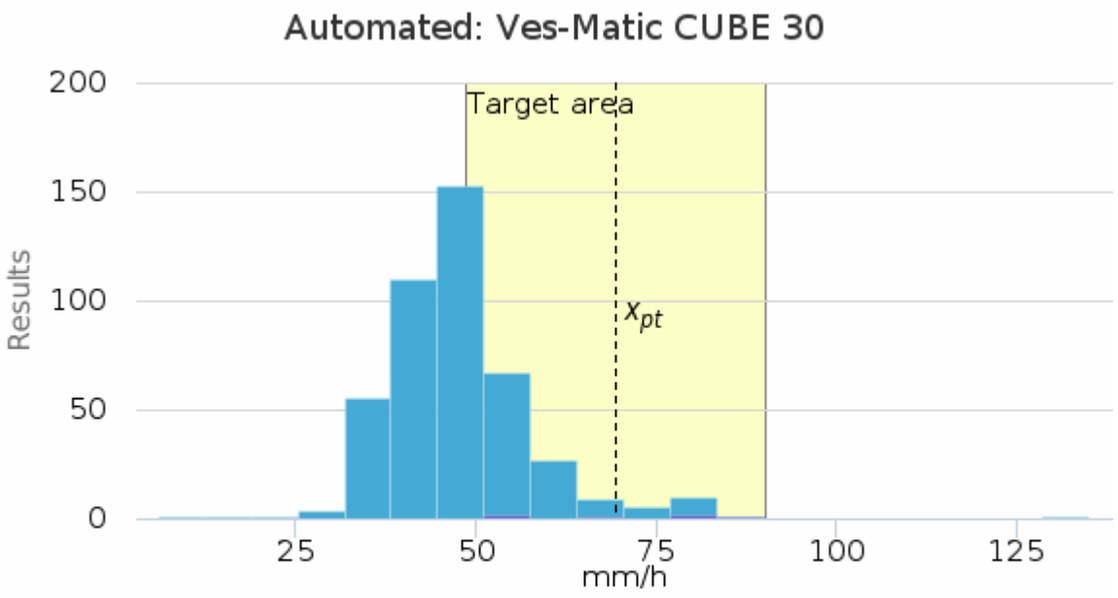
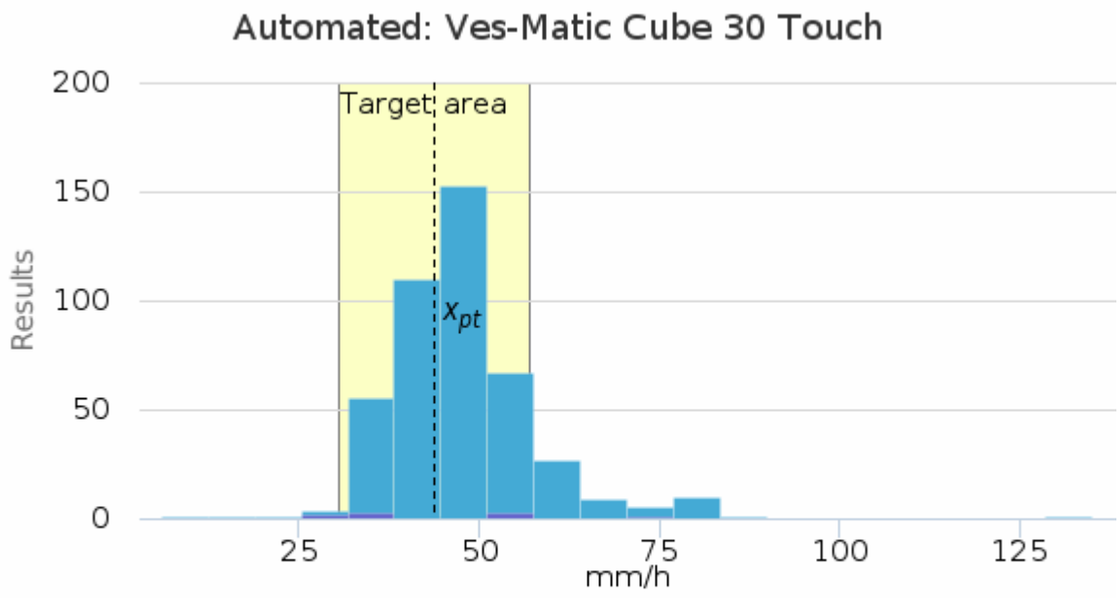
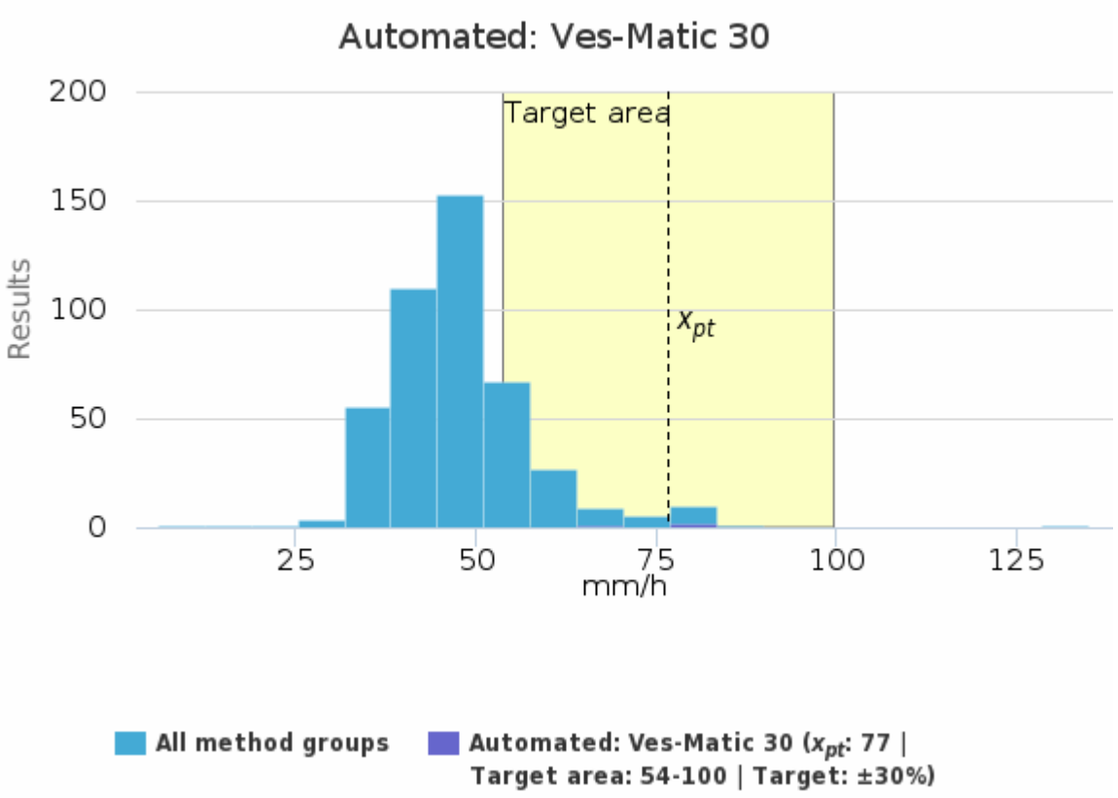
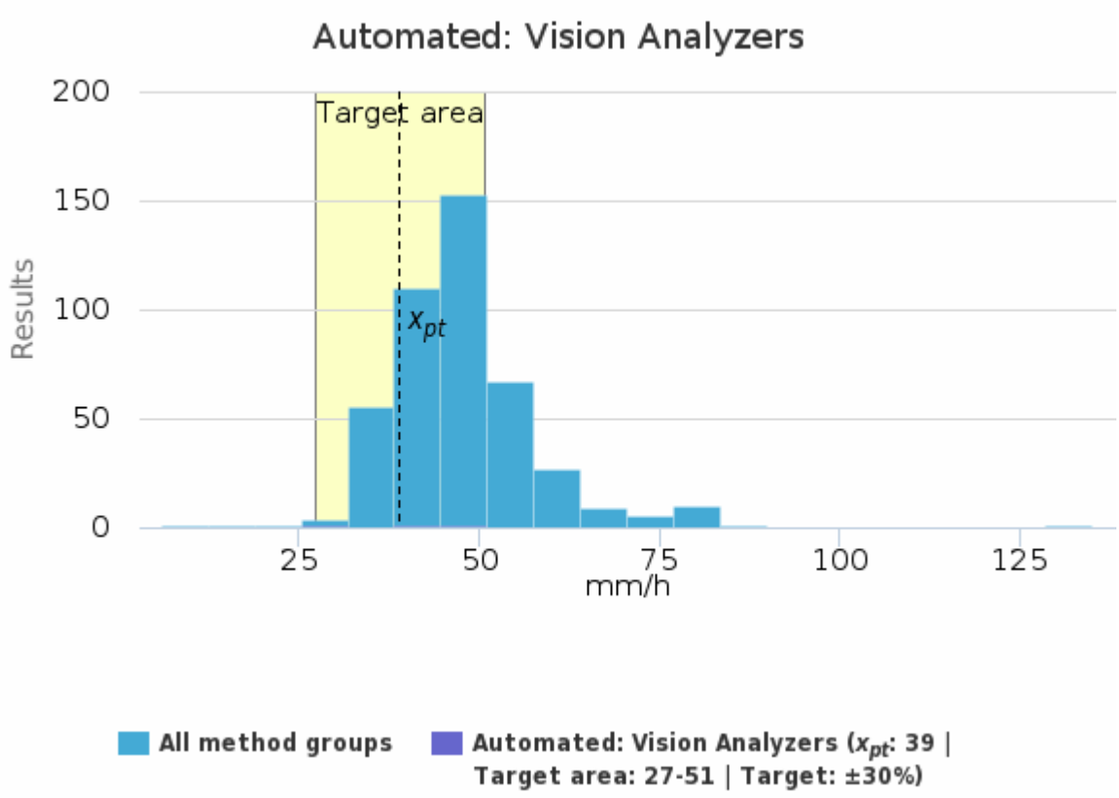
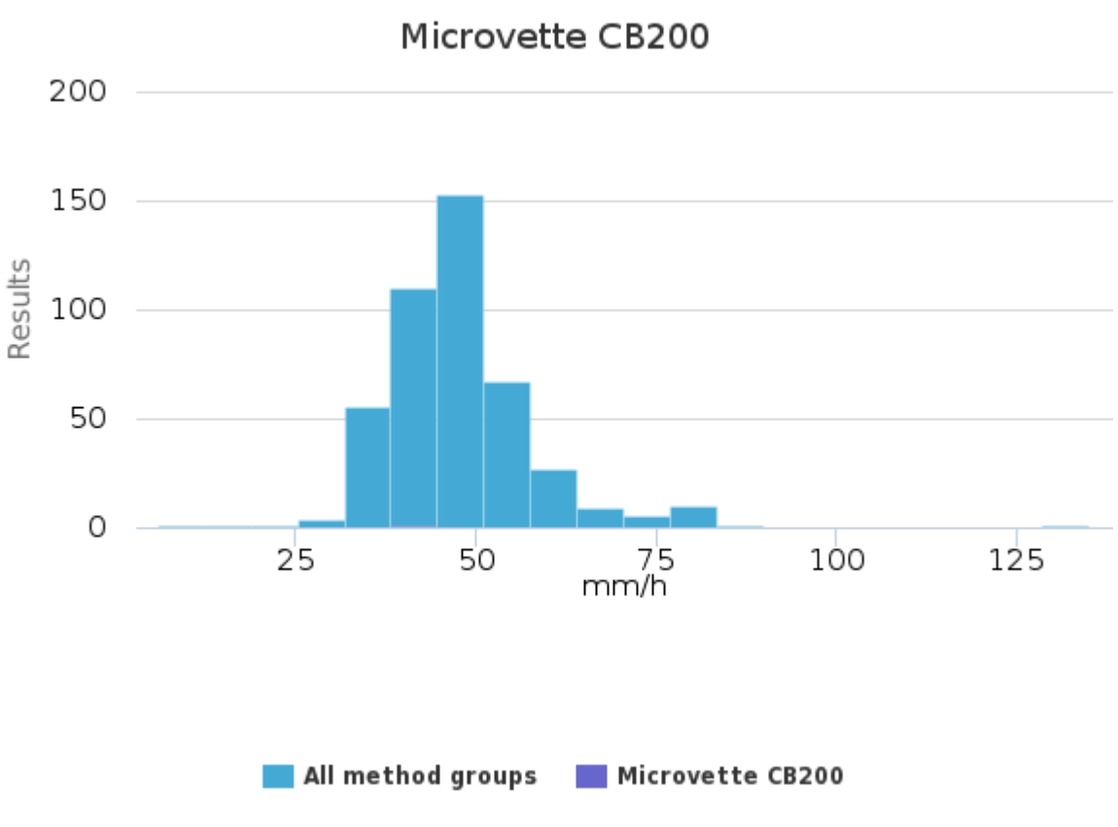
Erythrocyte sedimentation rate, March, 1-2023

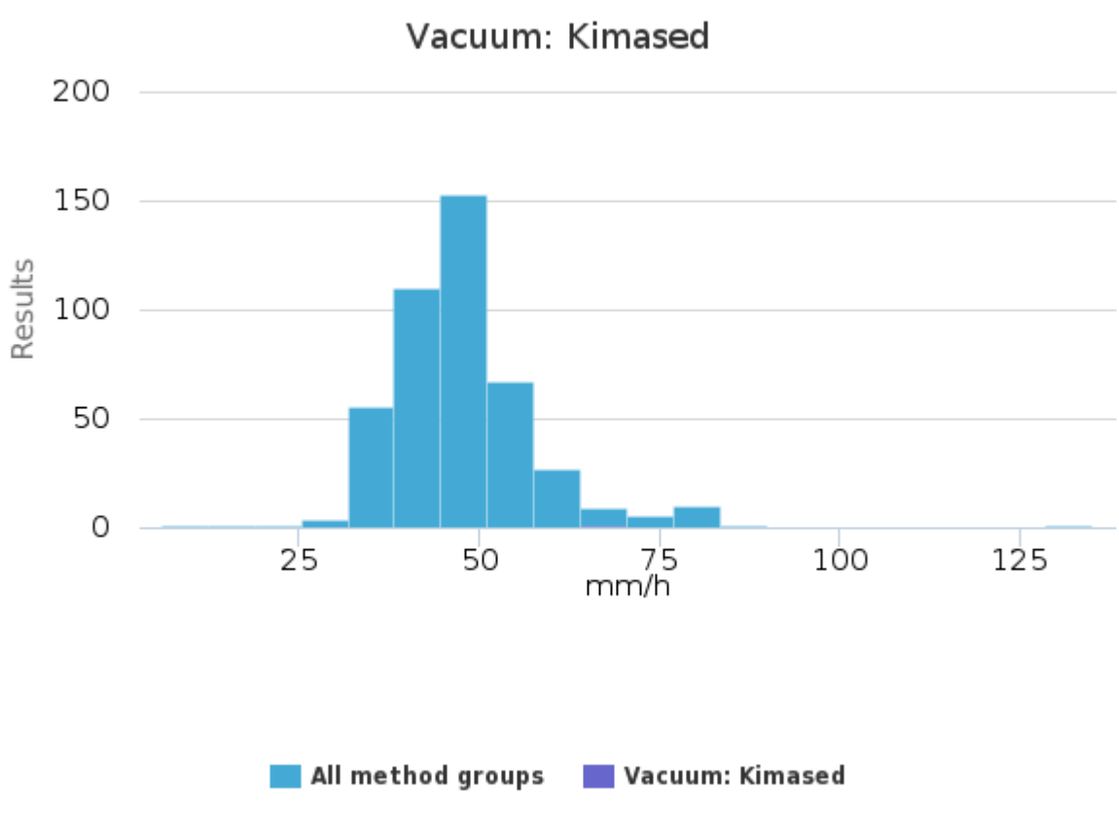












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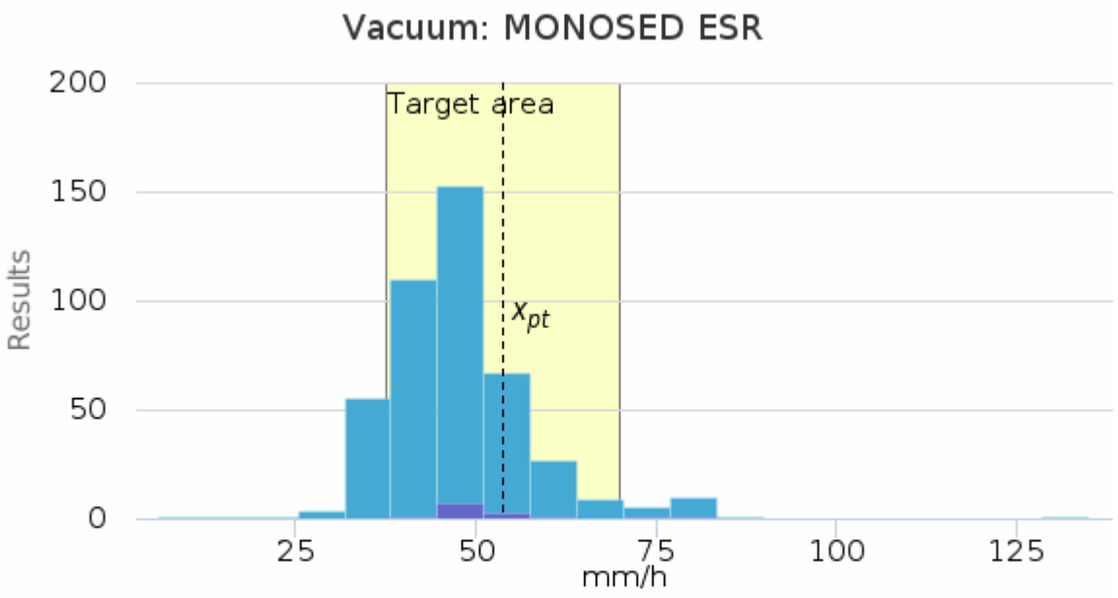
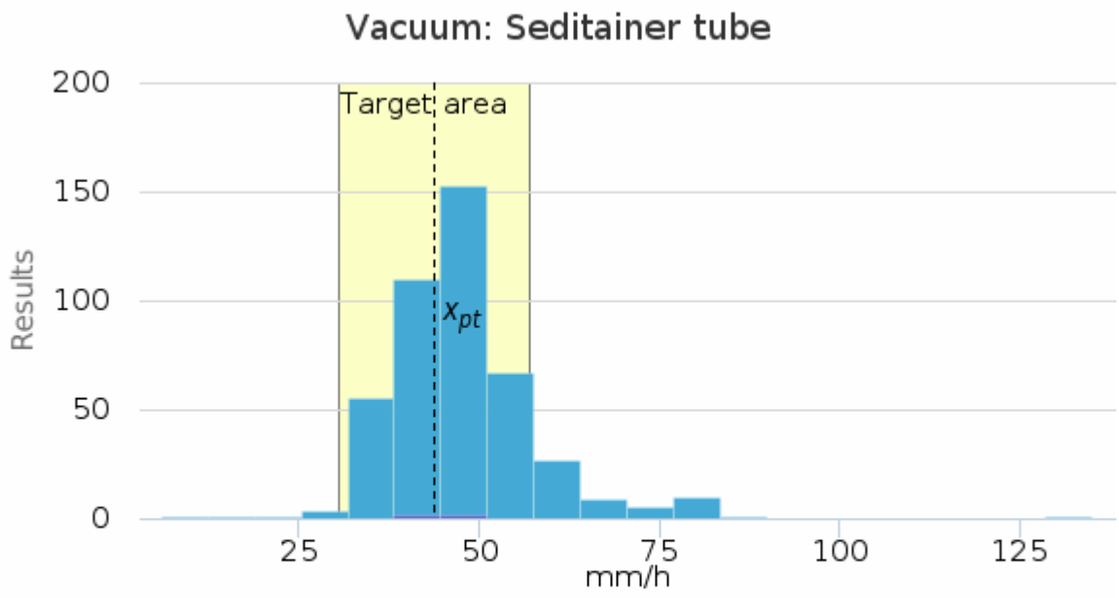
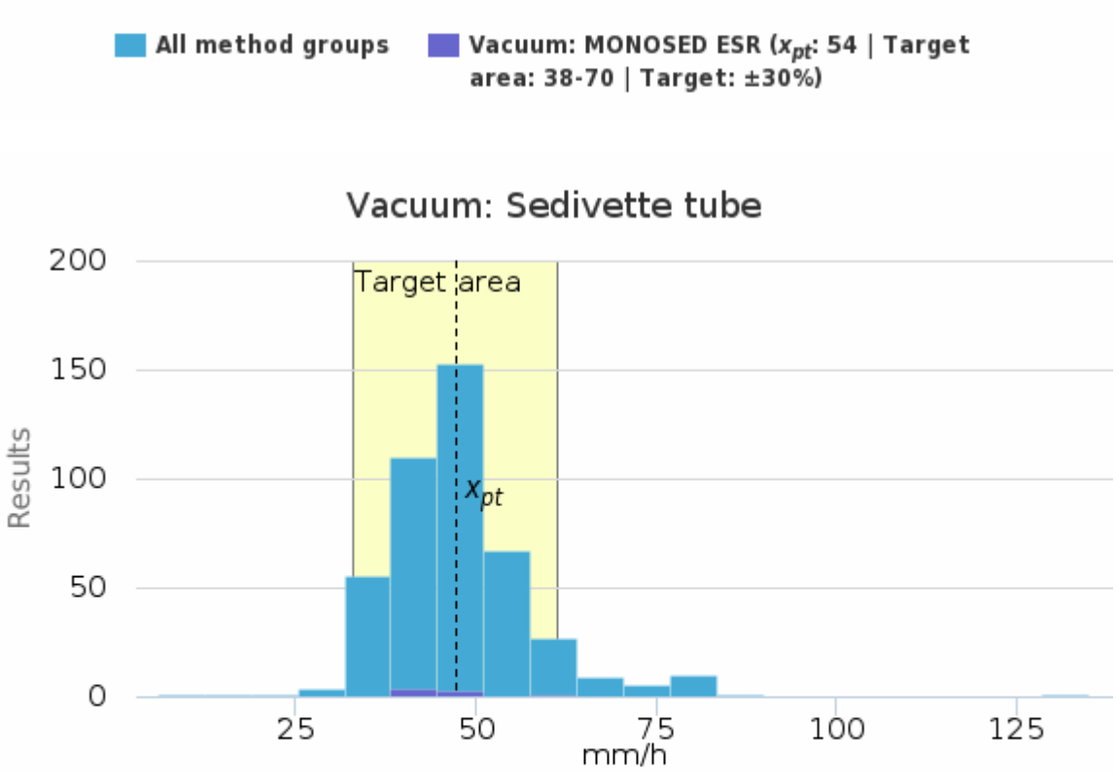
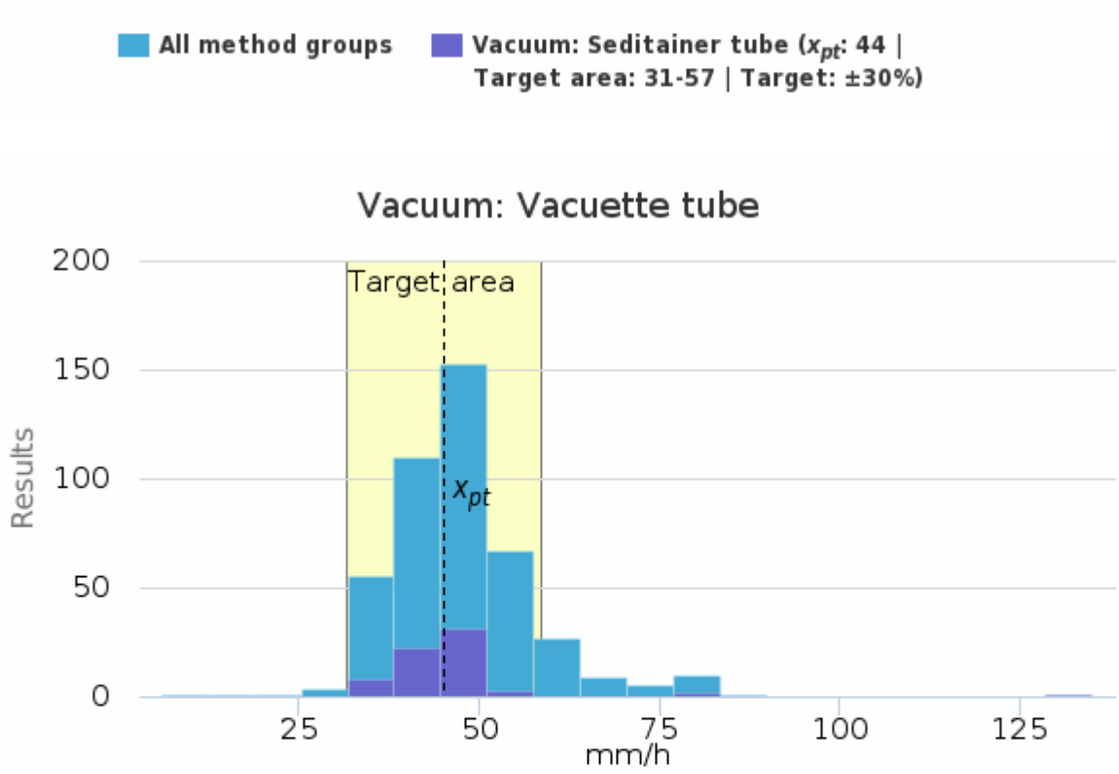
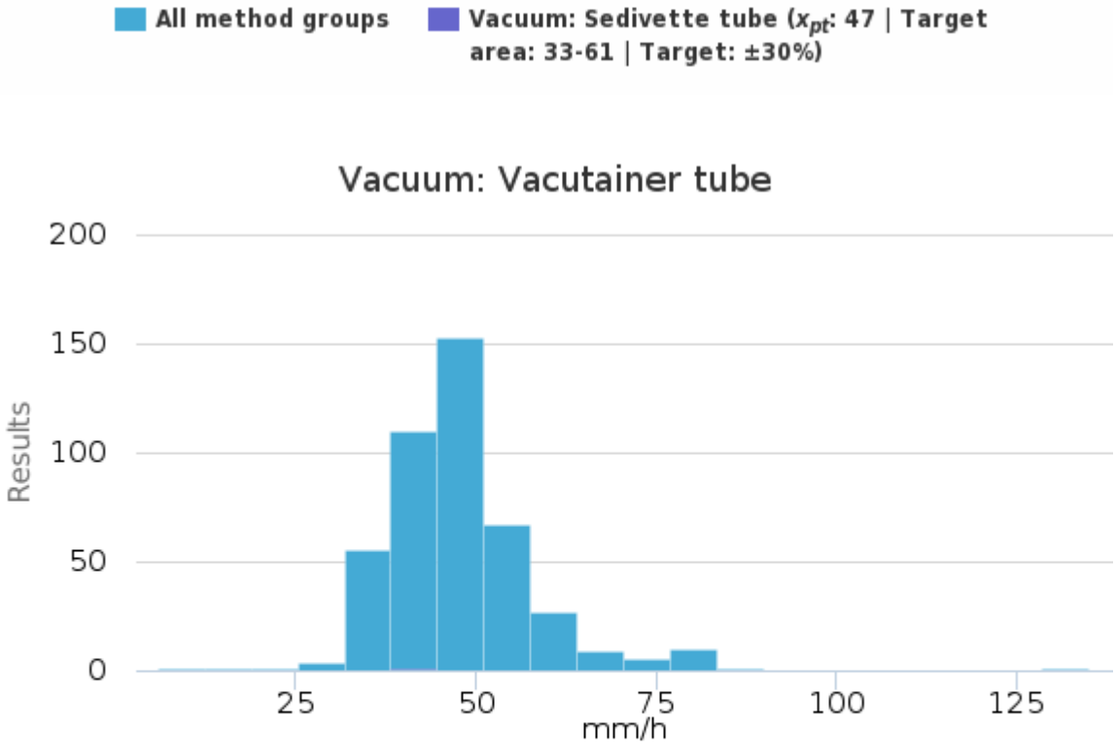
Erythrocyte sedimentation rate, March, 1-2023

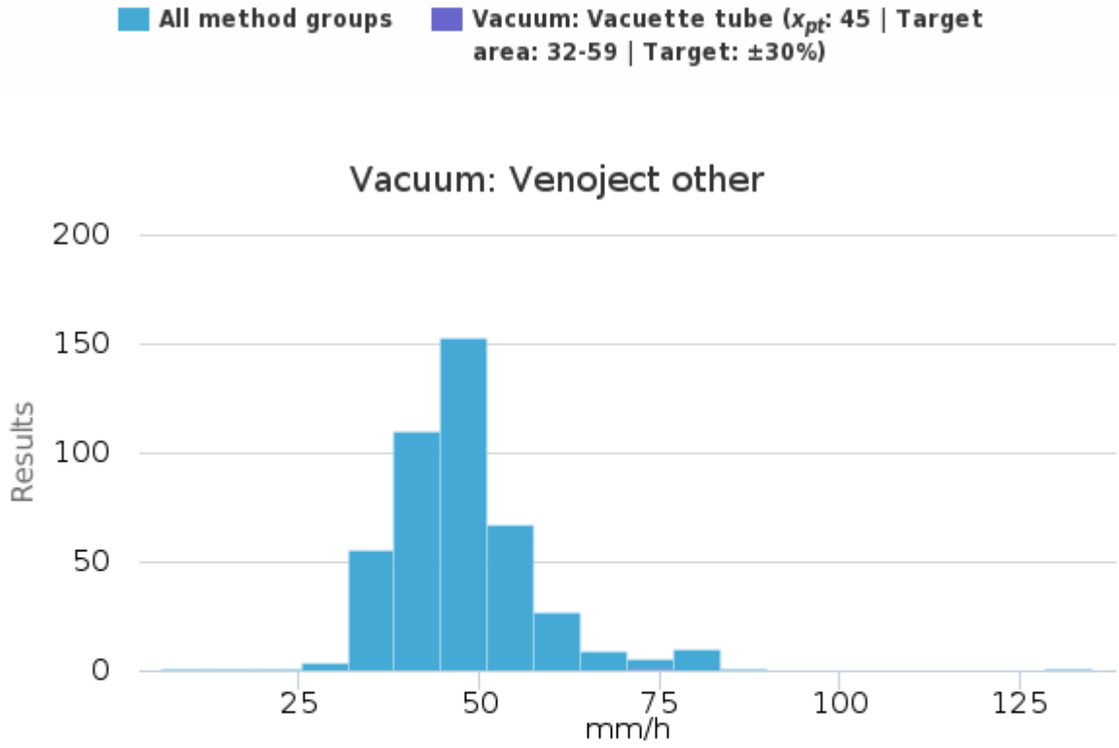












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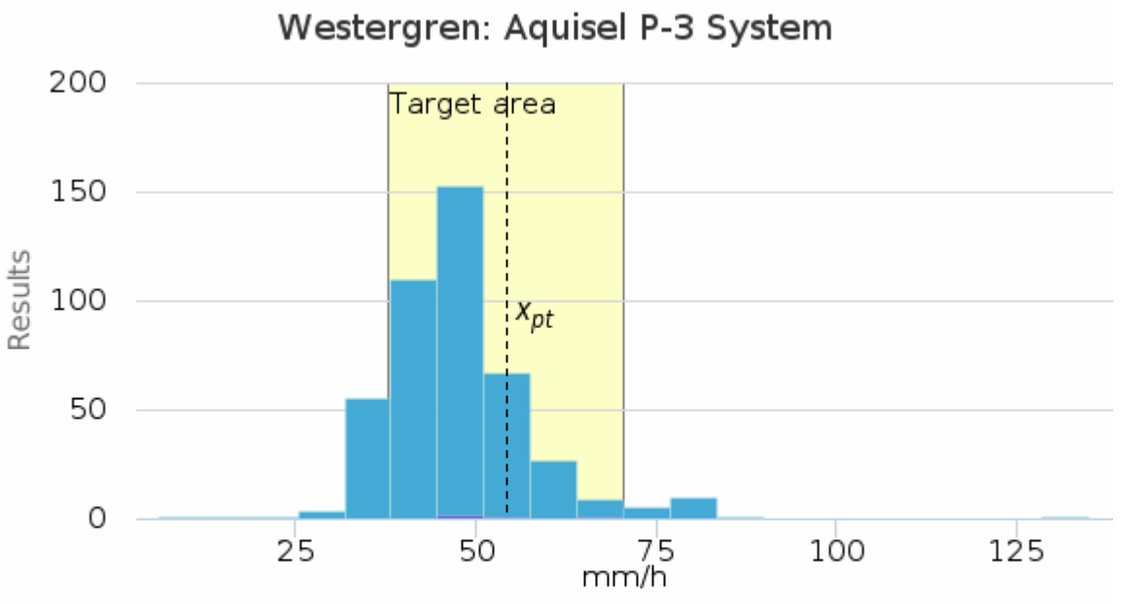
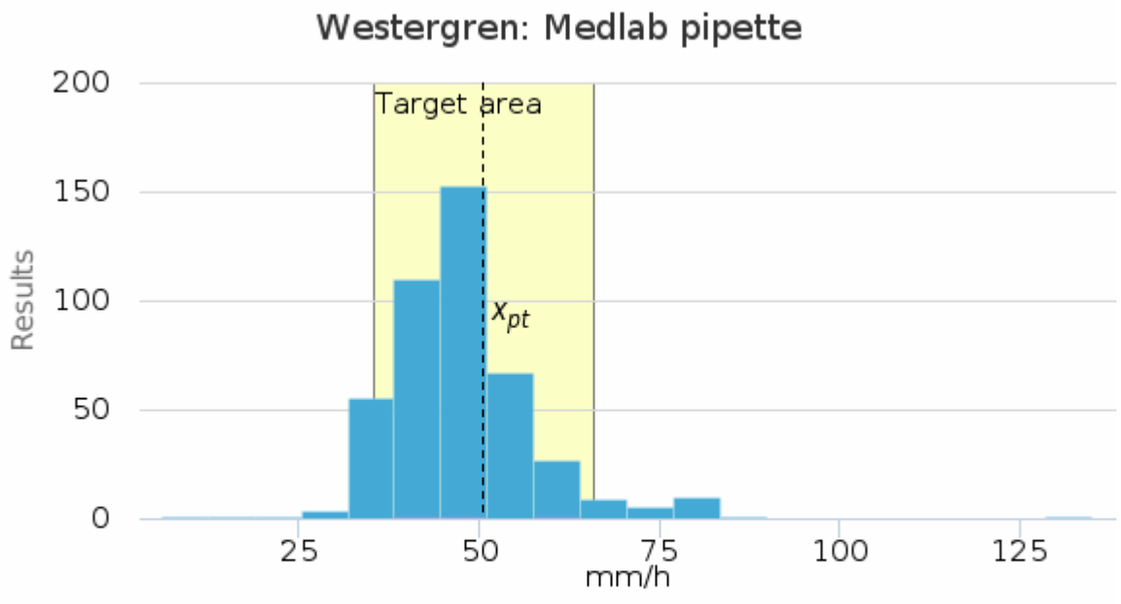
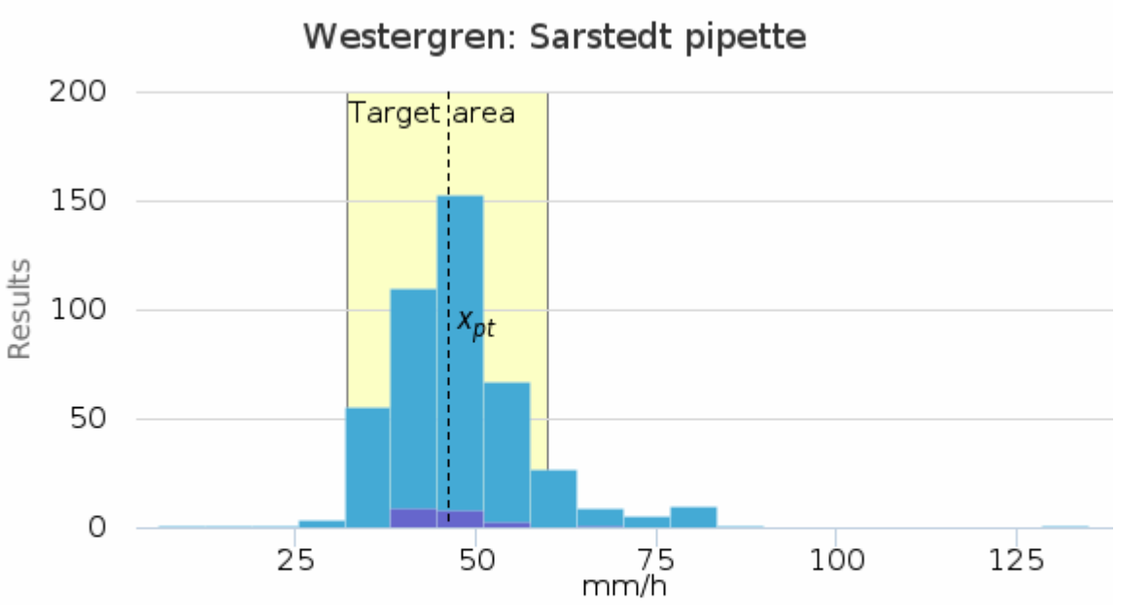
Erythrocyte sedimentation rate, March, 1-2023

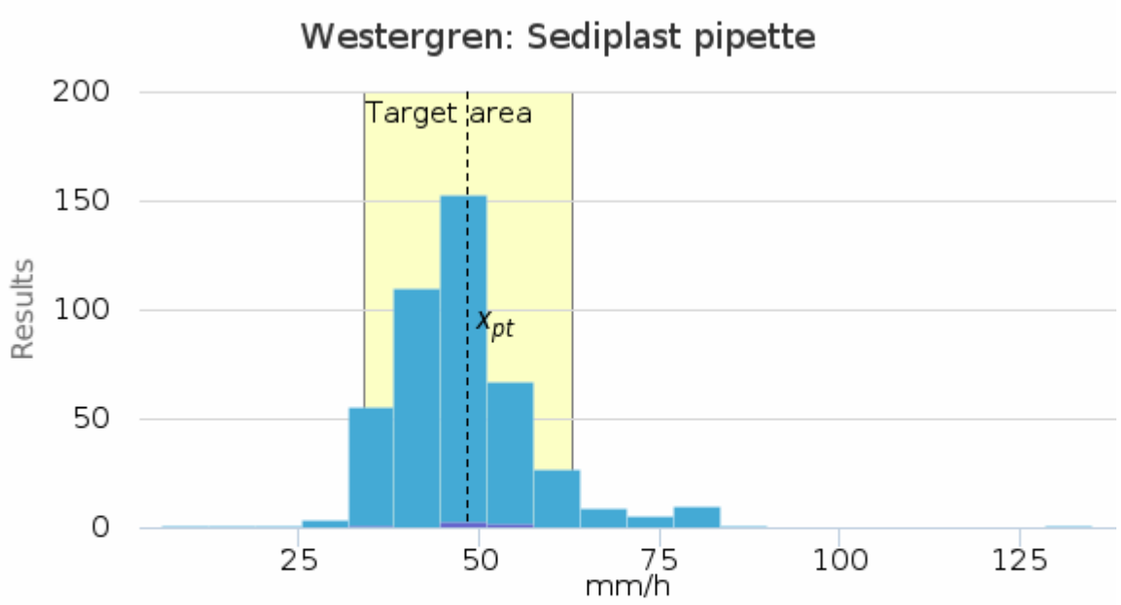




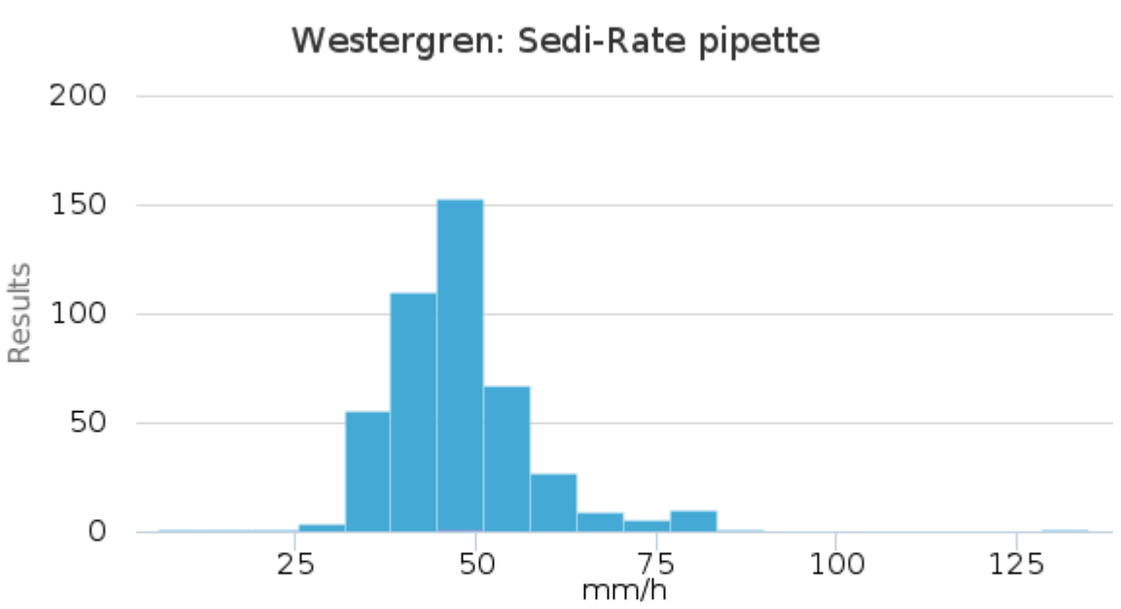
All method groups
Westergren: Aquisel P-3 System (x_{pt}: 54 | Target area: 38-71 | Target: ±30%)



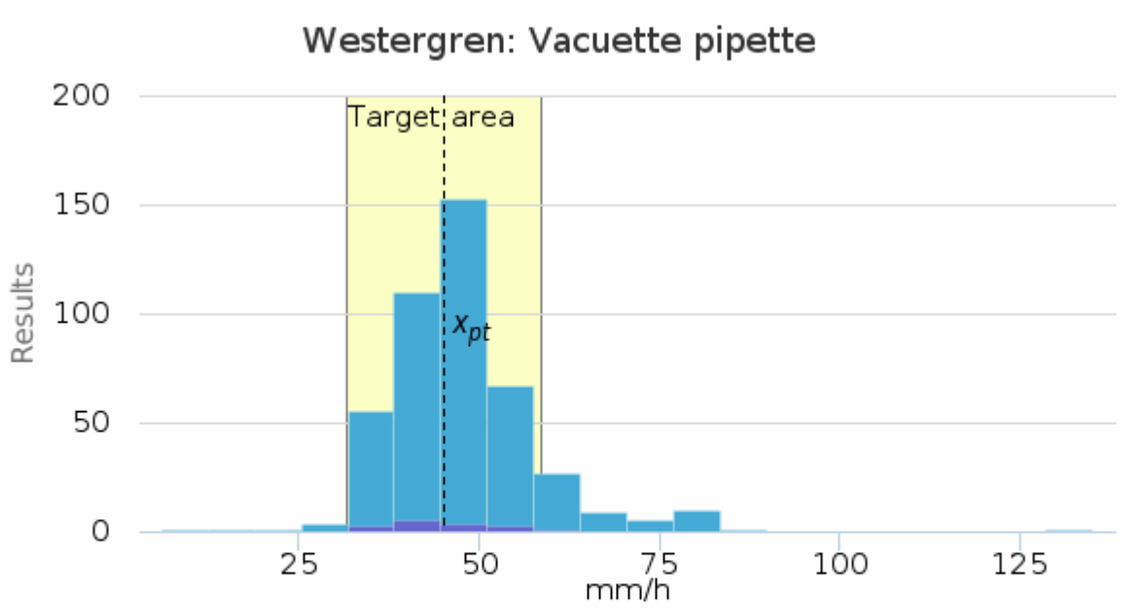
All method groups
Westergren: Medlab pipette (x_{pt}: 51 | Target area: 35-66 | Target: ±30%)



All method groups
Westergren: Sarstedt pipette (x_{pt}: 46 | Target area: 32-60 | Target: ±30%)



All method groups
Westergren: Sediplast pipette (x_{pt}: 49 | Target area: 34-63 | Target: ±30%)



All method groups
Westergren: Sedi-Rate pipette

All method groups
Westergren: Vacuette pipette (x_{pt}: 45 | Target area: 32-59 | Target: ±30%)

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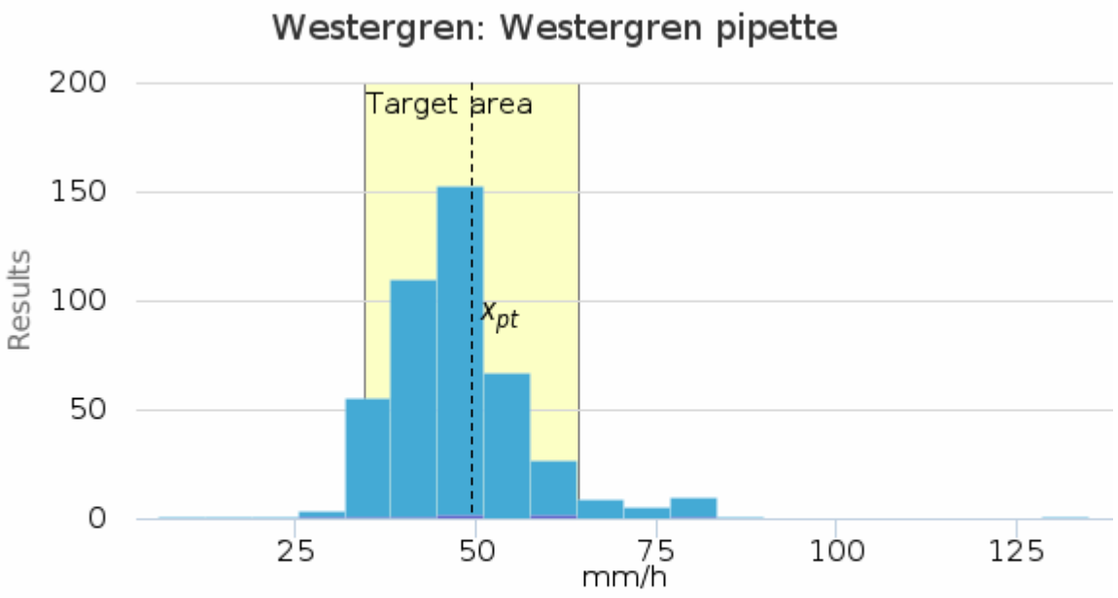
Erythrocyte sedimentation rate, March, 1-2023



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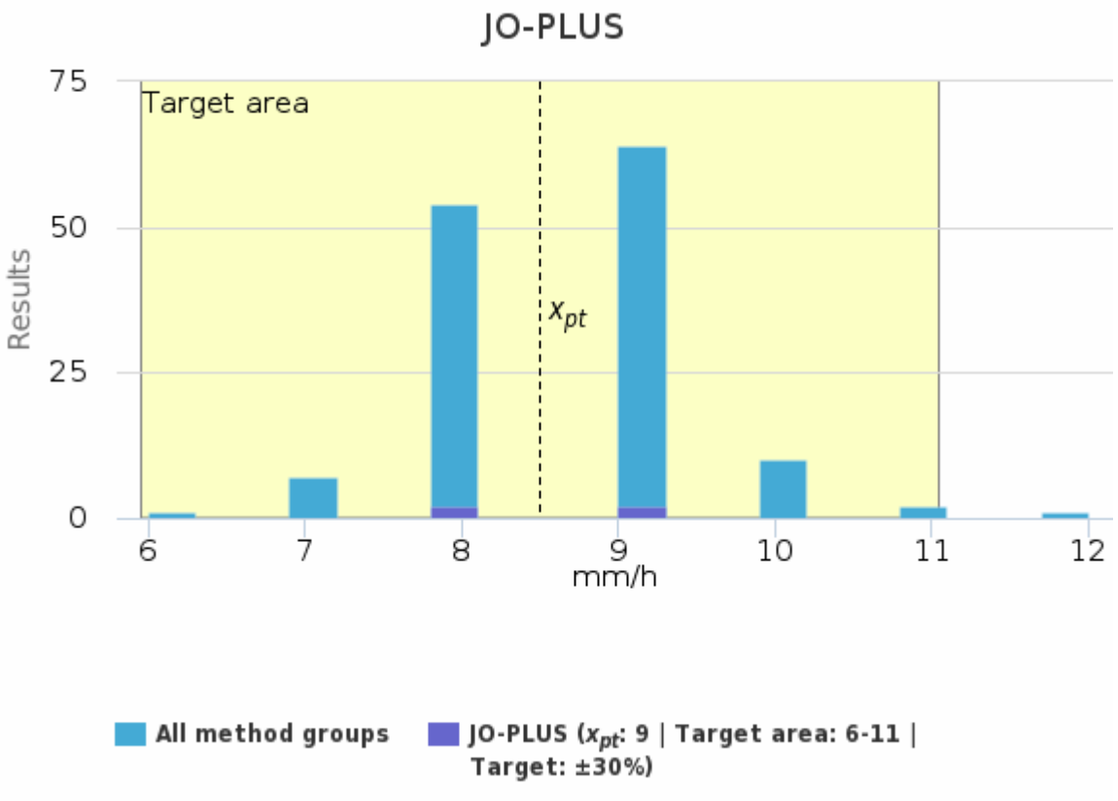
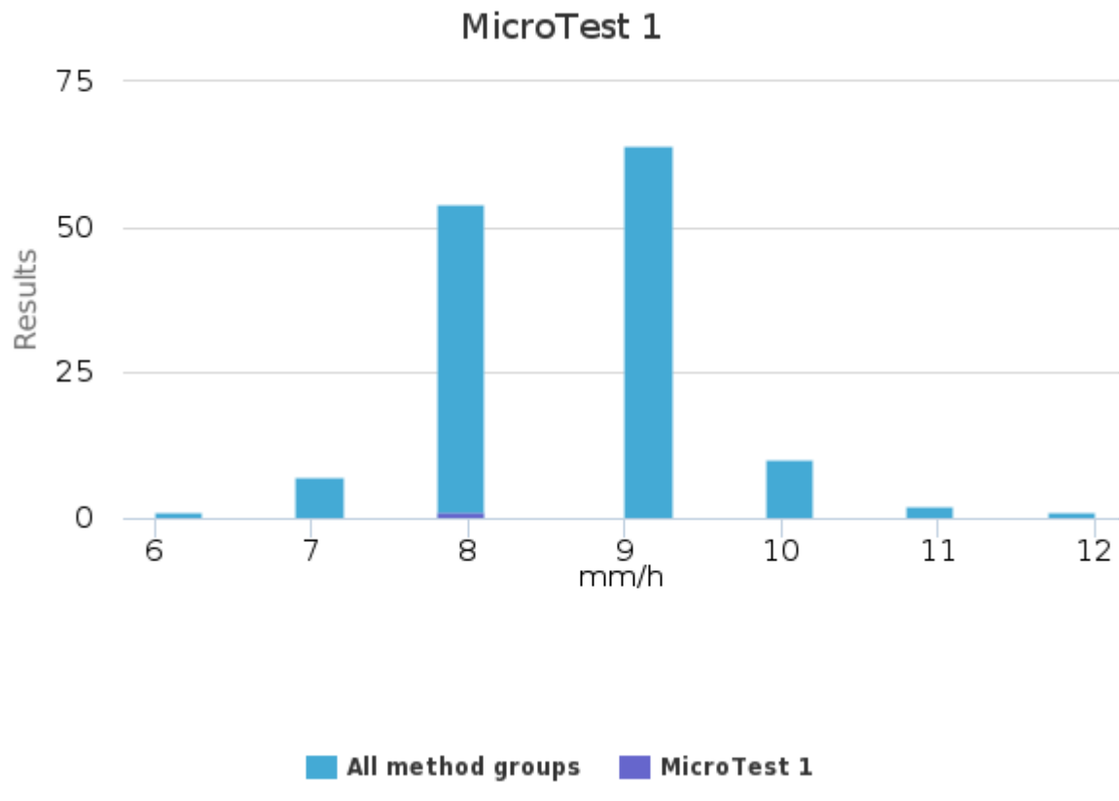
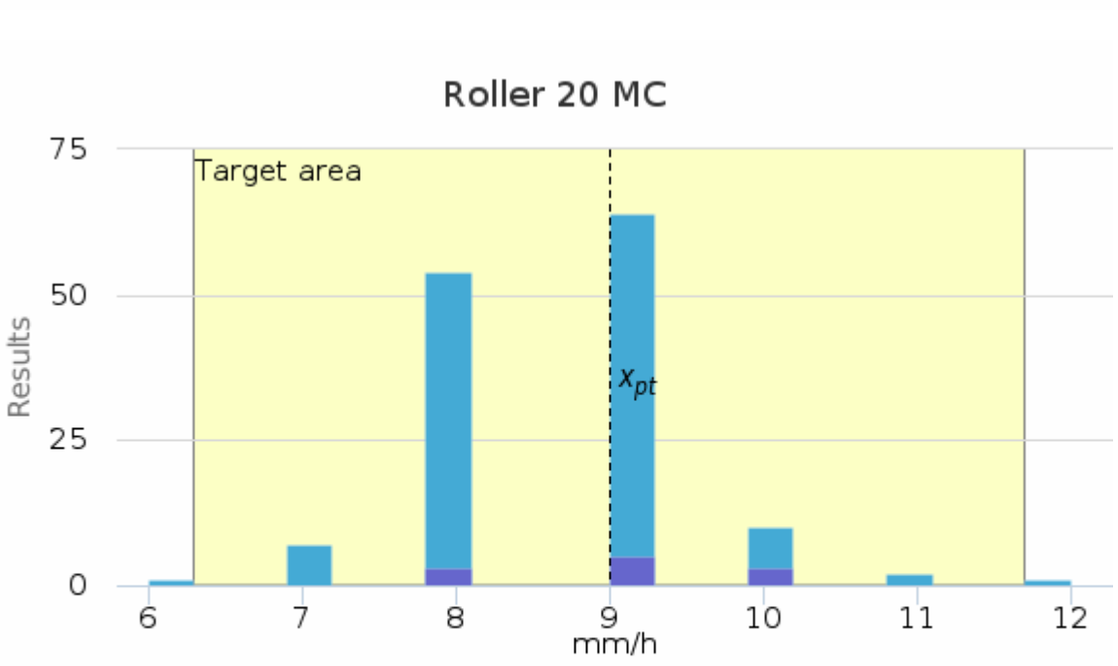
Sample S002 | Sedimentation rate, mm/h

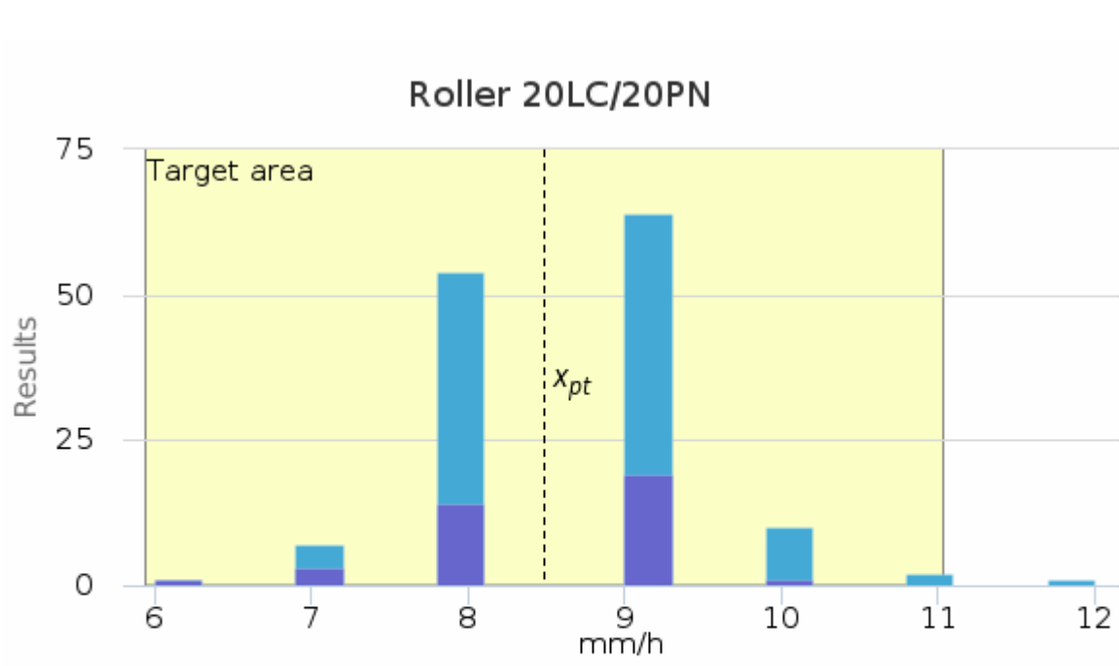
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
JO-PLUS	9	9	<1	6.8	<1	8	9	-	4
MicroTest 1	-	-	-	-	-	8	8	-	1
Roller 20 MC	9	9	<1	8.6	<1	8	10	-	11
Roller 20LC/20PN	8	9	<1	8.2	<1	7	10	1	38
Test 1	9	9	<1	9.2	<1	7	11	1	85
All	**9**	**9**	**<1**	**8.8**	**<1**	**7**	**11**	**2**	**139**

Sample S002 | Sedimentation rate, mm/h| histogram summaries in LabScala









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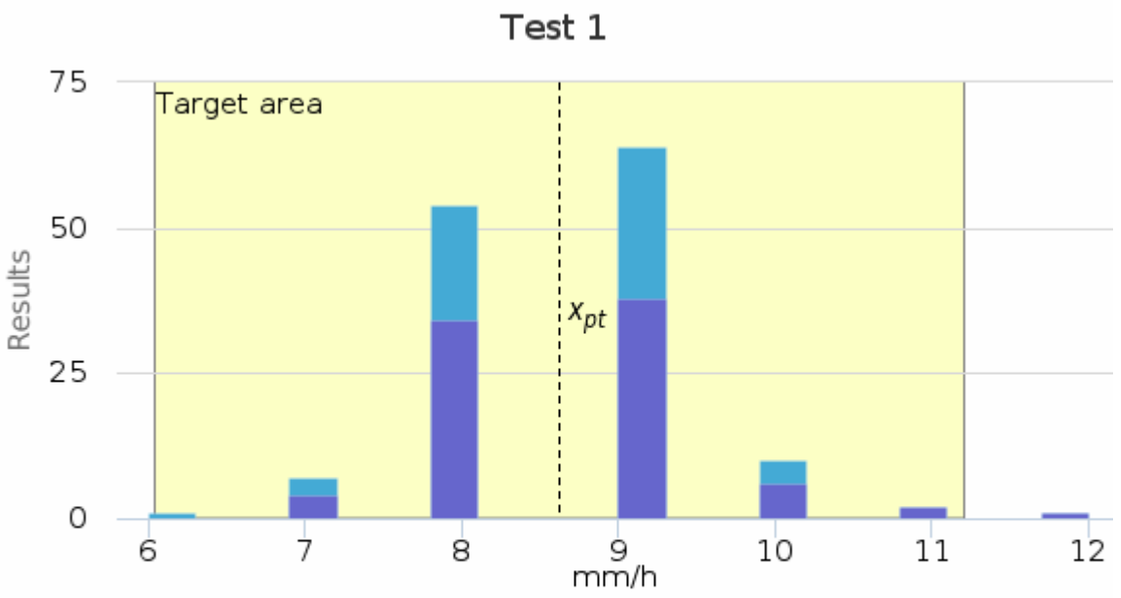
Erythrocyte sedimentation rate, March, 1-2023



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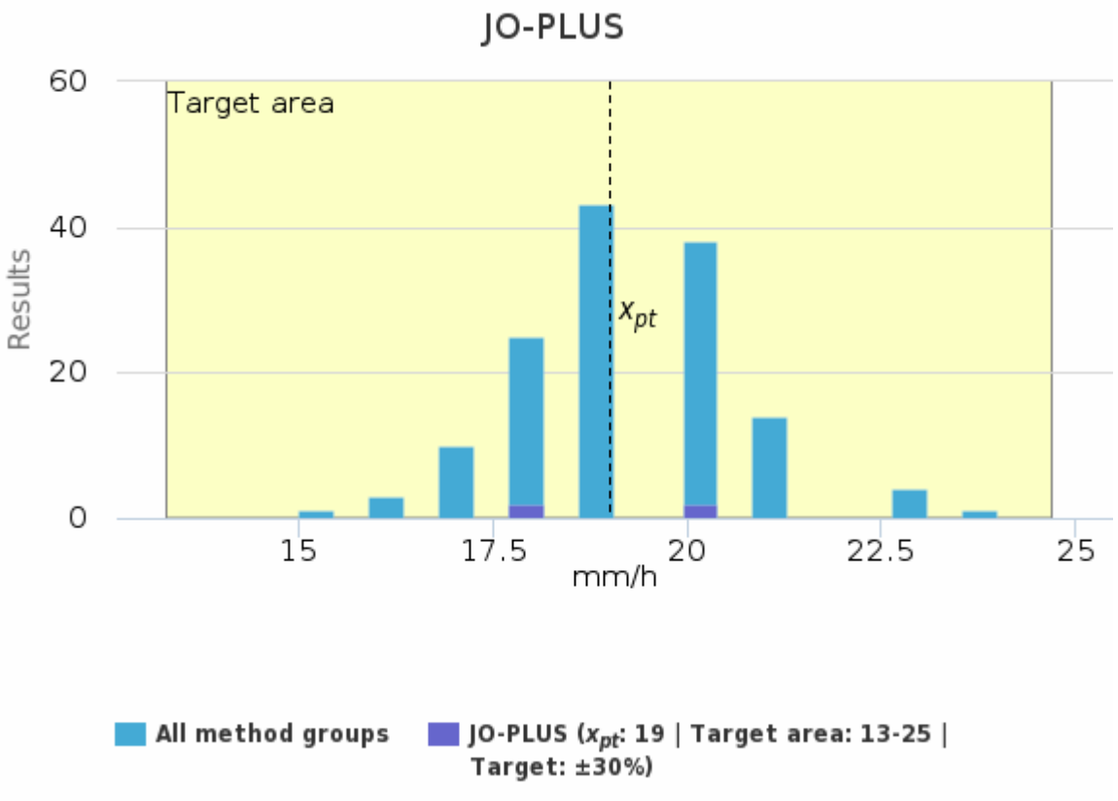
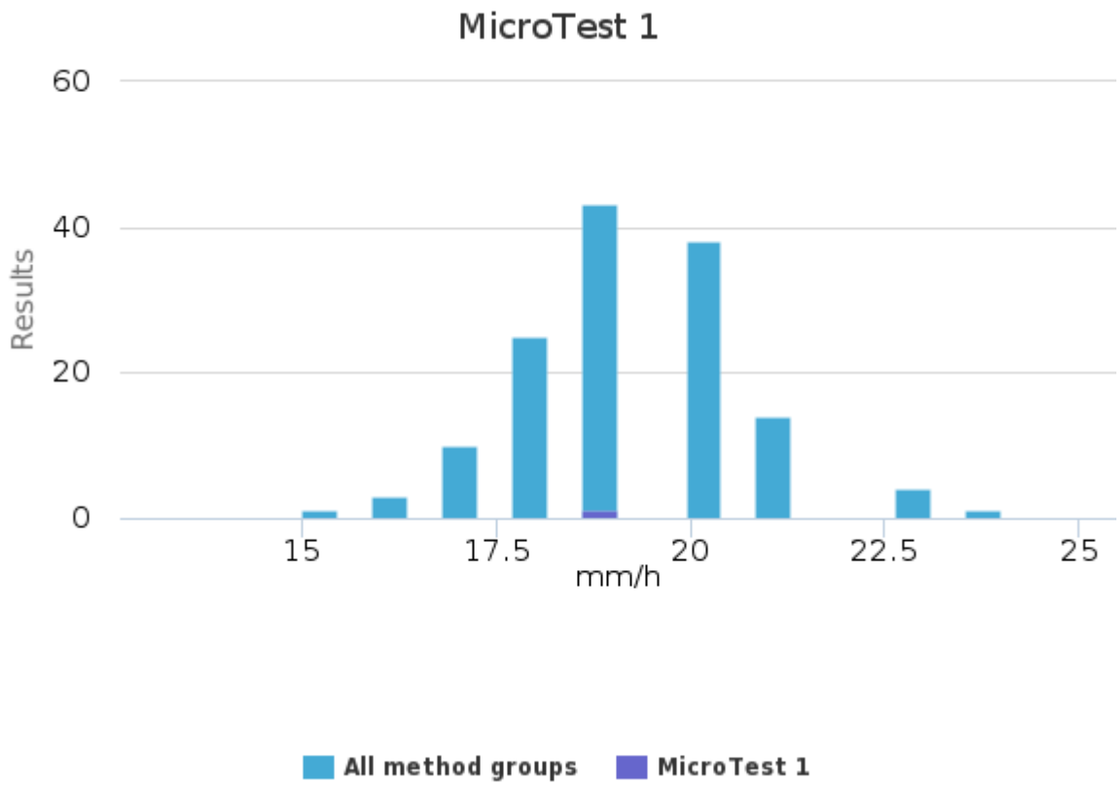
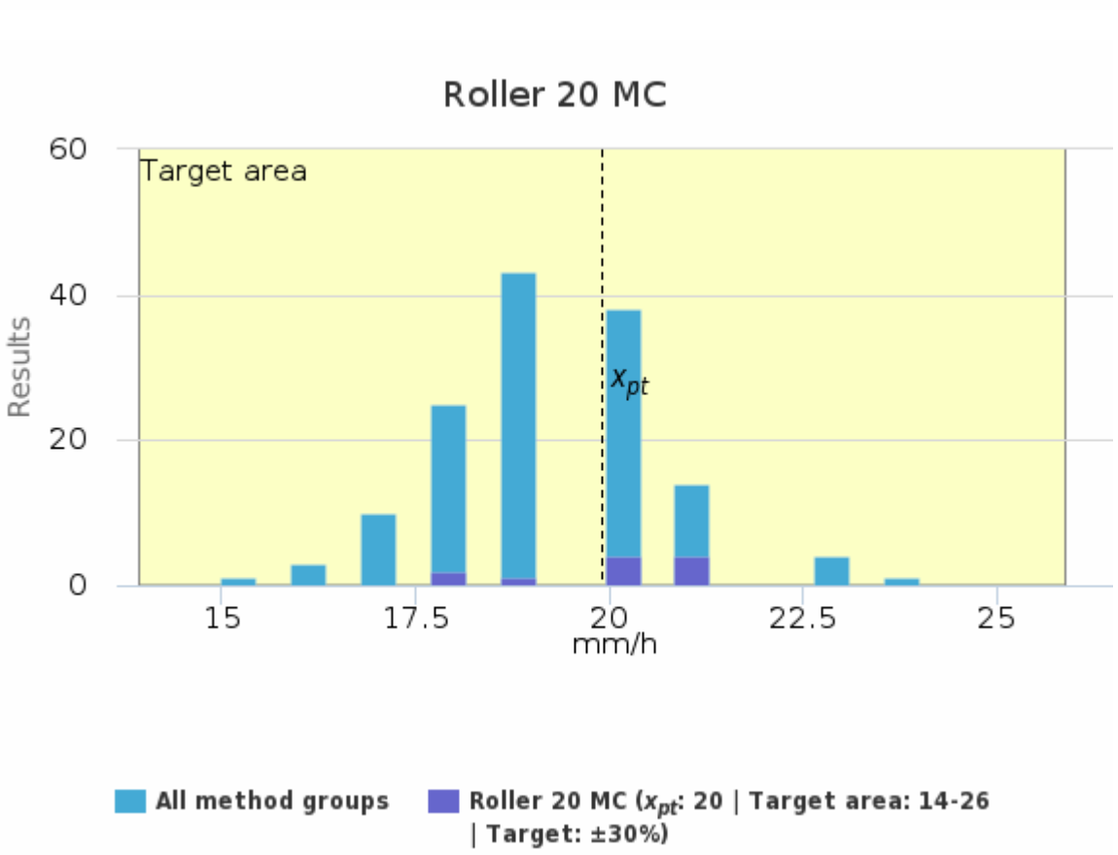
Sample S003 | Sedimentation rate, mm/h

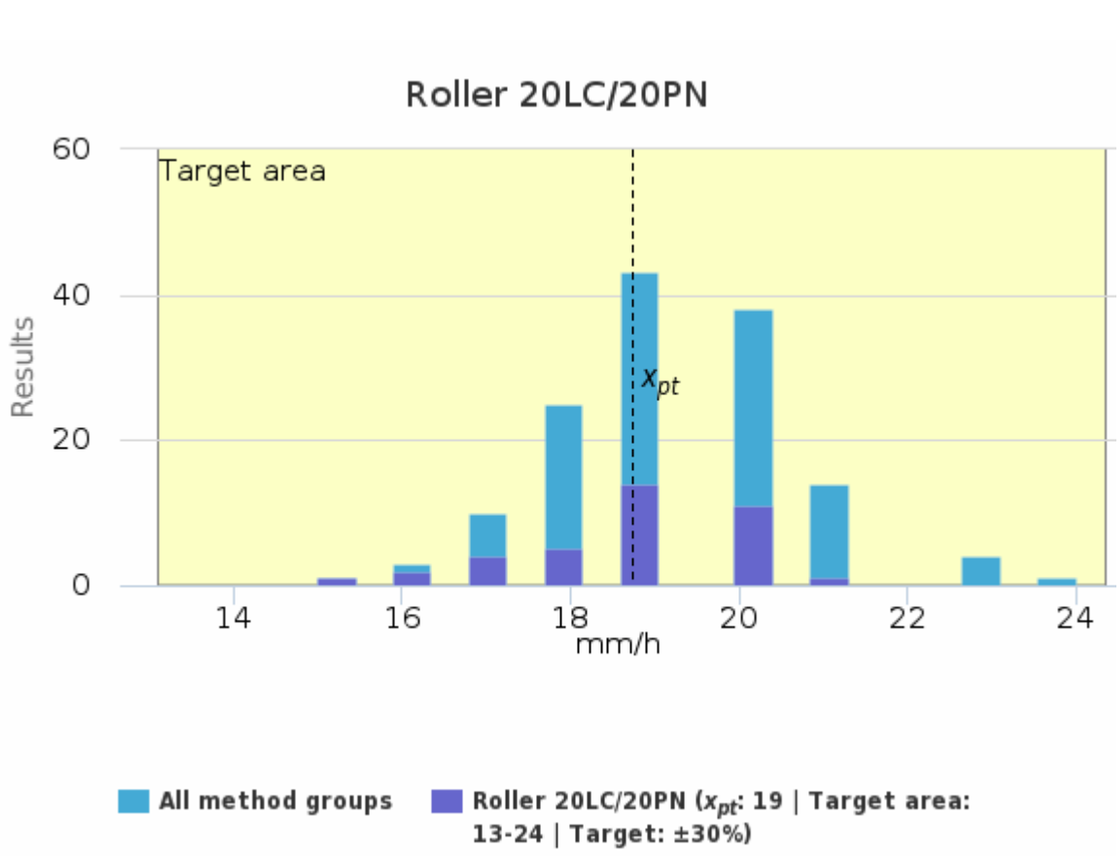
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
JO-PLUS	19	19	1	6.1	<1	18	20	-	4
MicroTest 1	-	-	-	-	-	19	19	-	1
Roller 20 MC	20	20	1	5.7	<1	18	21	-	11
Roller 20LC/20PN	19	19	1	7.2	<1	15	21	-	38
Test 1	19	19	1	7.3	<1	16	23	1	85
All	**19**	**19**	**1**	**7.2**	**<1**	**15**	**23**	**1**	**139**

Sample S003 | Sedimentation rate, mm/h| histogram summaries in LabScala









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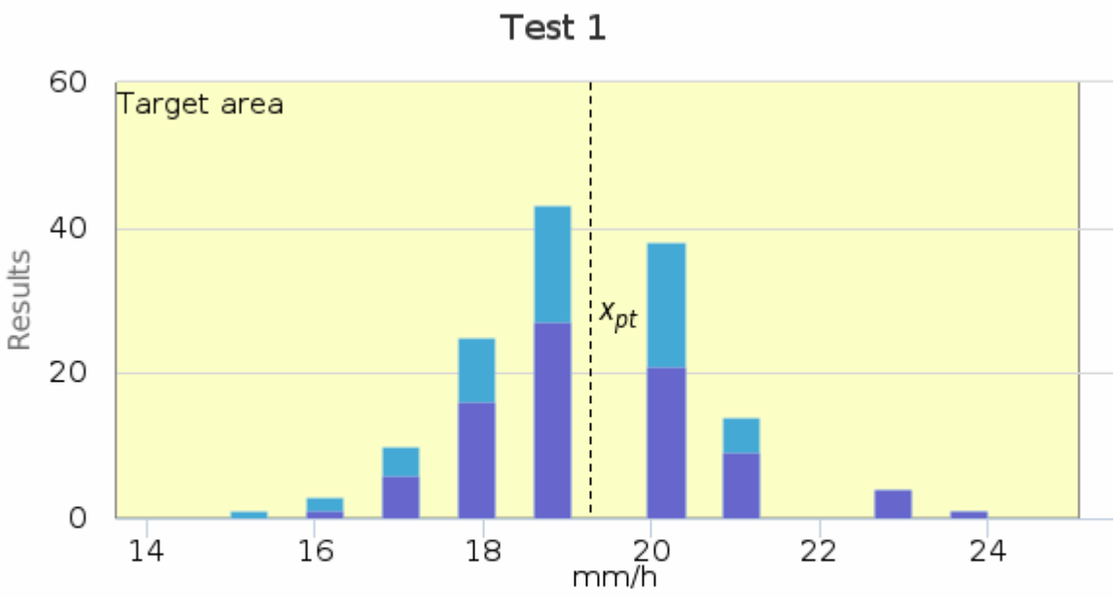
Erythrocyte sedimentation rate, March, 1-2023



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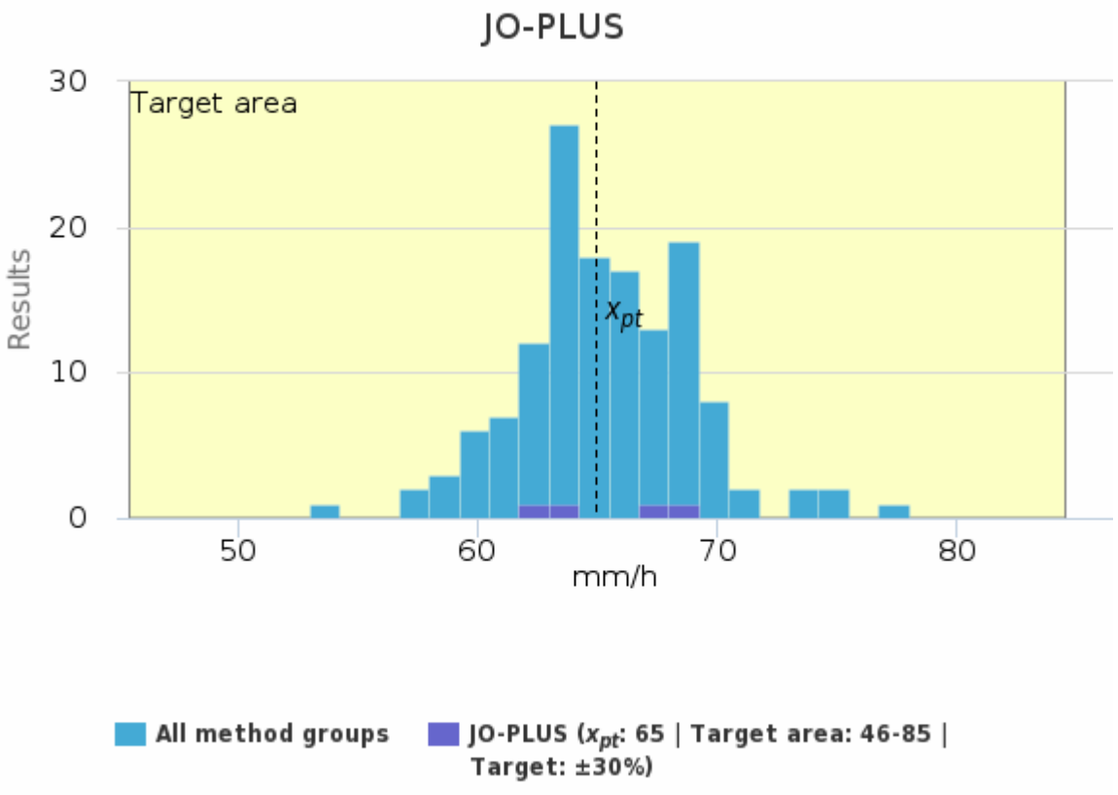
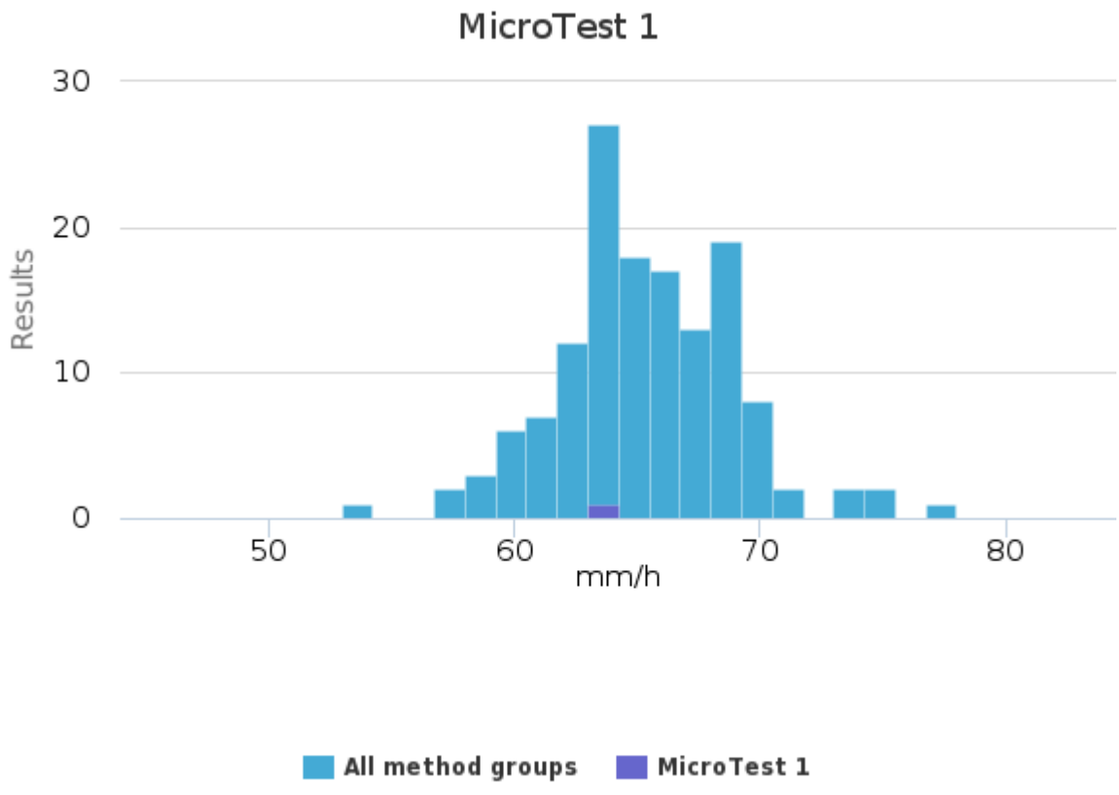
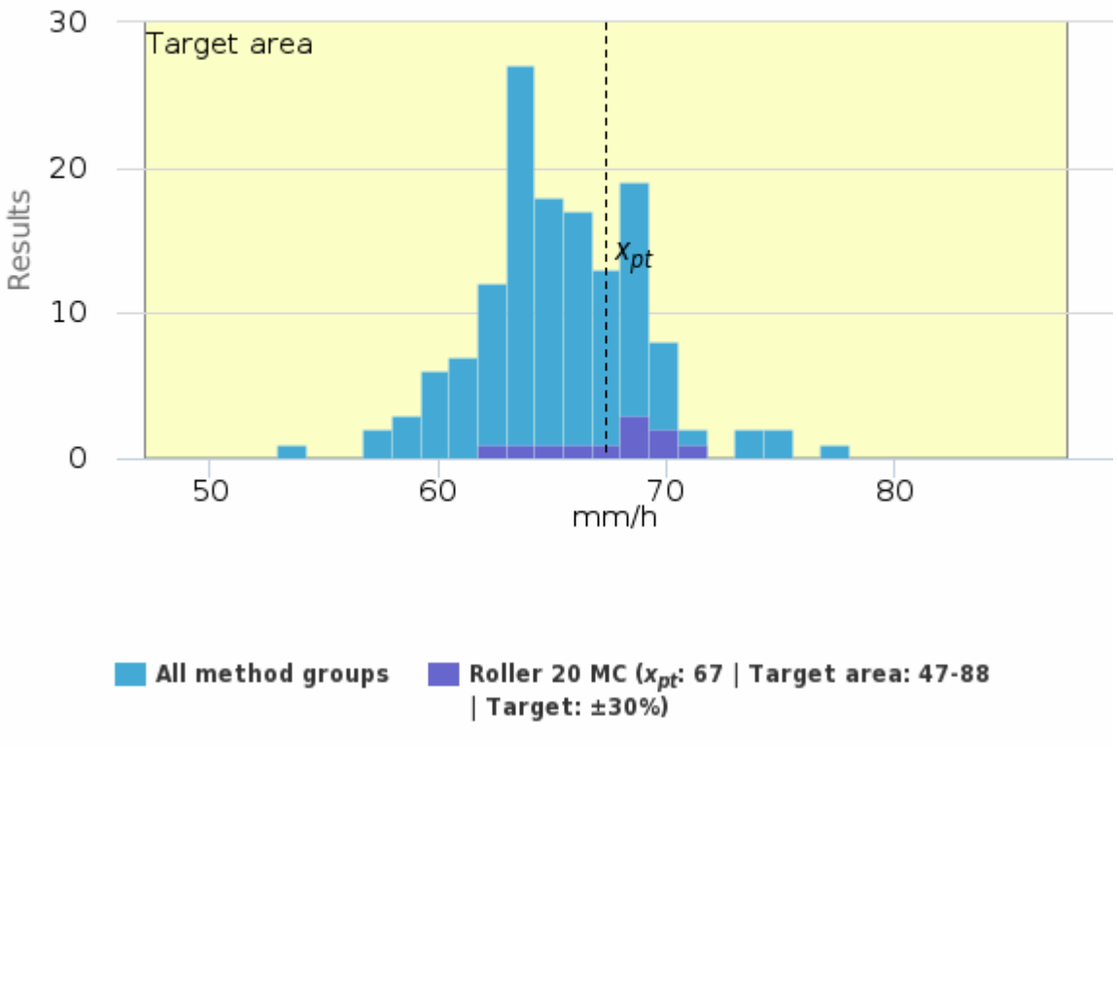
Sample S004 | Sedimentation rate, mm/h

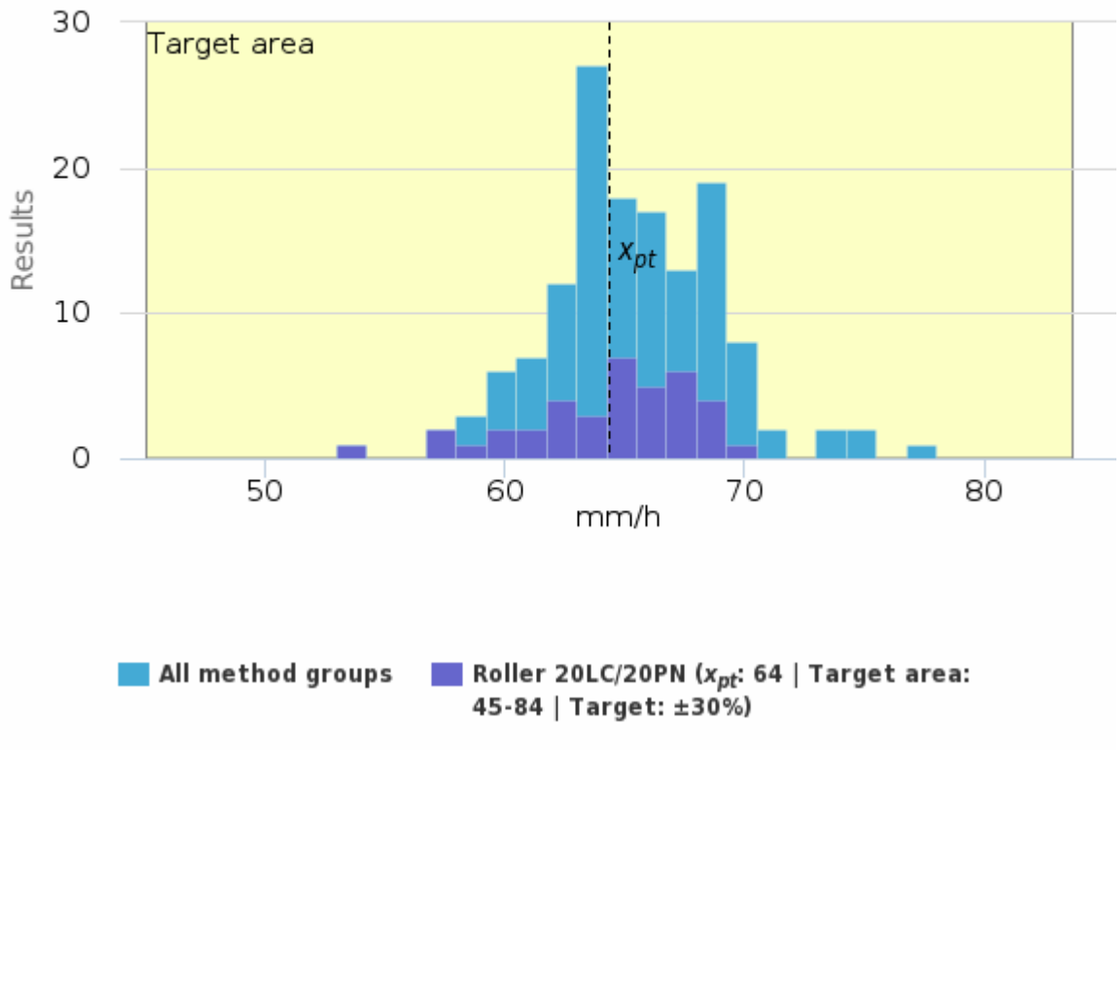
Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
JO-PLUS	65	65	3	4.5	1	62	68	-	4
MicroTest 1	-	-	-	-	-	64	64	-	1
Roller 20 MC	67	69	3	4.5	<1	62	71	-	11
Roller 20LC/20PN	64	65	3	5.1	<1	57	70	1	38
Test 1	65	65	4	5.4	<1	58	75	1	86
All	**65**	**65**	**3**	**5.3**	**<1**	**57**	**75**	**2**	**140**

Sample S004 | Sedimentation rate, mm/h| histogram summaries in LabScala









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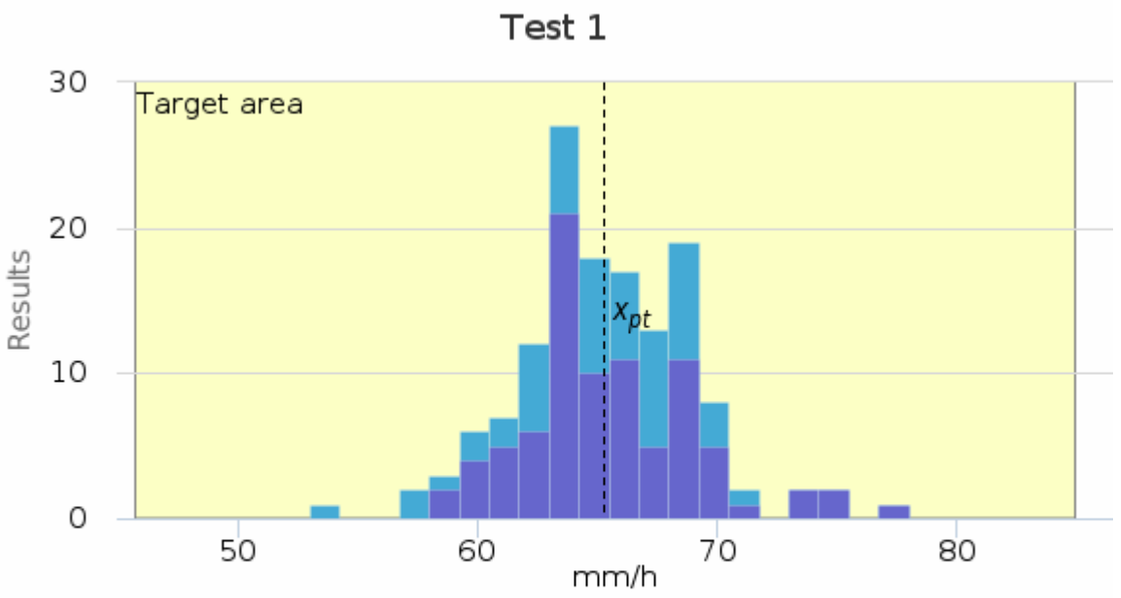
Erythrocyte sedimentation rate, March, 1-2023



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Report info

Participants

501 participants from 27 countries.

Report info

Your own result should be compared to others using the same method.
Assigned values (x_{pt}, target values) are means of the results where results deviating more than +/- 3*standard deviation from the median are removed. The standard uncertainty (u) of the assigned value is reported as standard error of the mean (SEM). Additionally, if the measurement uncertainty of the target value is large an automatic text is printed on the report: “The uncertainty of the assigned value is not negligible, and evaluations could be affected.”
In case the client’s result is the only one in the method group, no assigned value will be calculated, no target area shown, and no statistics calculated. In case there are only a few results in the client’s own method group, the result can be compared to all method mean or to a group that is similar to the own method.
Results reported with < or > -signs cannot be included in the statistics.

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

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LABQUALITY

External Quality Assessment Scheme

Erythrocyte Sedimentation Rate for Alifax Analysers
Round 1, 2023

Specimens
Sample S002 (LQ747323012), sample S003 (LQ747323013) and sample S004 (LQ747323014) were test-tubes containing 3 mL of synthetic latex solution.

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 essential information of the samples and results in each round.

Comments - Expert
The manufacturer of Sedimentation Rate controls for Alifax Analysers has given the following target values and ranges:

Sample S002: 10 mm/h (6-11)
Sample S003: 21 mm/h (17-25)
Sample S004: 69 mm/h (60-79)

In this Alifax survey were 140 ESR results on each level.

Sample S002 was at normal level (10 mm/h) and all five methods reached the target range. The averages were near the target value.

The level of sample S003 was higher and the averages of all five methods were in the target range and the result of Roller 20 MC (20 mm/h) was nearest the target point 21 mm/h.

Sample S004 had the highest target point and the averages of all five methods were in the target range. The group of Roller 20MC (67 mm/h) was nearest to the target point 69 mm/h.

The group of JO-PLUS has the best CV for sample S002 6.8% (n=4). The group of Roller 20 MC has the best CV for sample S003 5.7% (n=11) and the group of JO-PLUS and Roller 20 MC had the best CV (4.5%) for sample S004.

End of report

2023-03-31

FINAL REPORT

Product no. 2731, 2732

Samples sent	2023-02-27
Round closed	2023-03-26
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.

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FINAS
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Quality Management
ISO 9001:2015

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