

Laboratorio Emotest s.r.l.

# MONTHLY HAEMATOLOGY

CYCLE 16 SAMPLE 6

## Explanation of codes used in this report

R - Results removed due to reconstitution error  
N - No result returned  
C - Result corrected

Authorised by: Stephen Doherty, RIQAS Manager

Issue No: 1

Issue Date: 16/06/2023

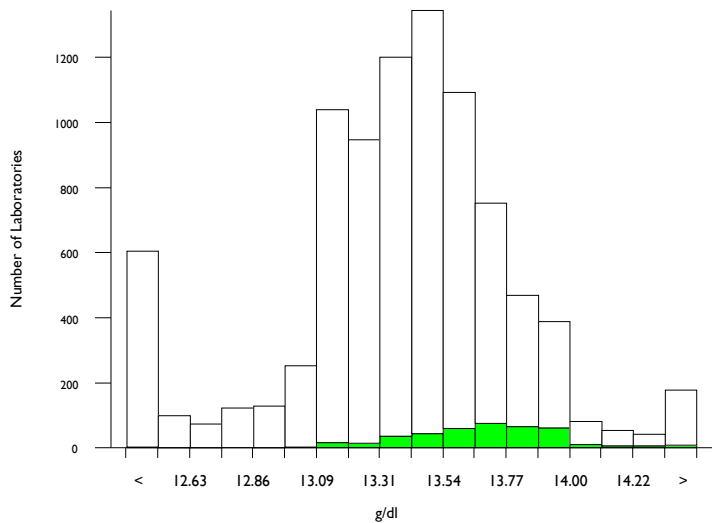
Randox Laboratories Limited  
55 Diamond Road  
CRUMLIN BT29 4QY  
Tel: +44 (0)28 9445 4399  
Fax: +44 (0)28 9445 4398  
Email: mail@riqas.com

# Haemoglobin, g/dl

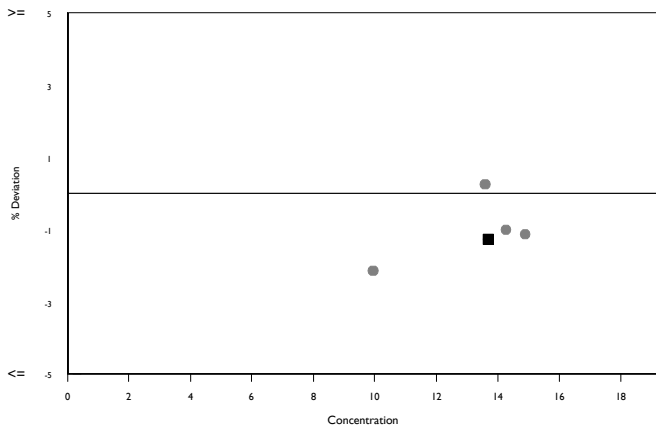
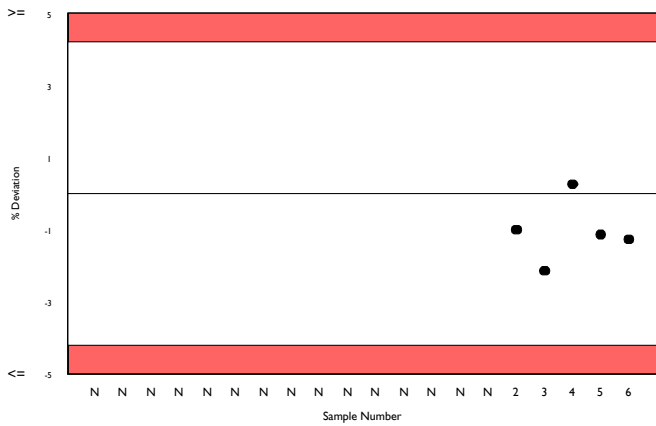
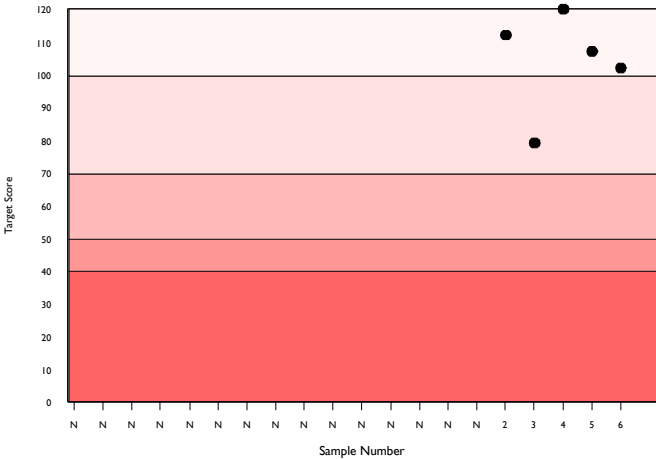
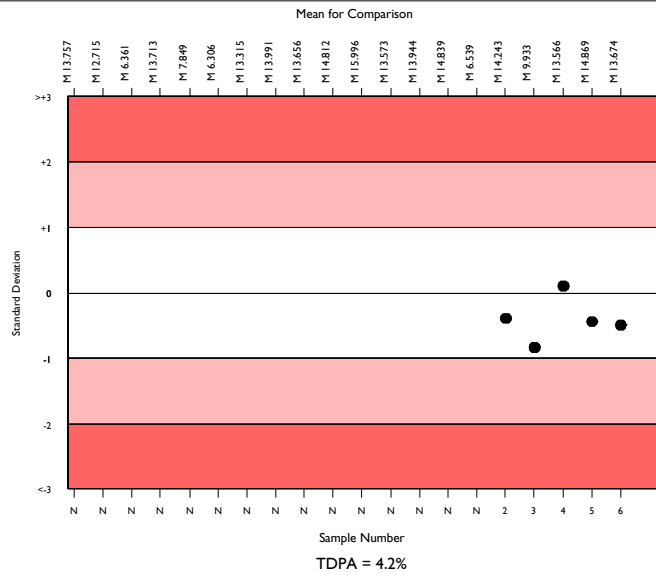
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	8143	13.433	2.3	0.00	0.34	720
Abbott Cell-Dyn Ruby	378	13.674	1.5	0.01	0.35	37

▲ Your Result	13.500	SDI	-0.50
		RMSDI	Too Few
■ Mean for Comparison	13.674	TS	102
		RMTS	Too Few
		%DEV	-1.3
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	4.20%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1838	13.512	1.1	0.00
Sysmex XN-L Series (330/350/450/550)	674	13.369	0.9	0.01
Mindray BC-6000/6200/6600/6800/6800Plus	391	13.573	1.1	0.01
Abbott Cell-Dyn Ruby	378	13.674	1.5	0.01
Beckman Coulter DxH 600/800/900 Series	380	13.198	1.2	0.01
Sysmex XP Series	326	13.244	1.6	0.01
Mindray BC 1000/2000/3000 series	302	13.431	2.8	0.03
Sysmex XS series	283	13.445	1.2	0.01
Nihon Kohden Celltac Alpha/plus	277	13.739	2.6	0.03
Siemens/Bayer Advia 120/2120	273	13.612	1.8	0.02
Calculated from HCT	244	12.303	2.8	0.03
Manual Methods	161	12.433	3.1	0.04
Sysmex XT series	163	13.498	1.2	0.02
Mindray BC 5100/5180/5300/5380/5390	159	13.411	1.9	0.03
Mindray BC 5000/5150/5140/5130/5120	146	13.392	1.5	0.02
ABX Micros/Minos/ABC VET	140	13.268	2.7	0.04
Mindray BC 10/20/30	124	13.576	2.1	0.03
Sysmex KX 21	116	13.264	2.0	0.03
Beckman Coulter DxH 500 Series	104	12.419	2.6	0.04
Horiba ABX Pentra 60/80/XLR	106	13.371	1.7	0.03
Horiba Yumizen H500/ 550	104	13.324	1.5	0.02

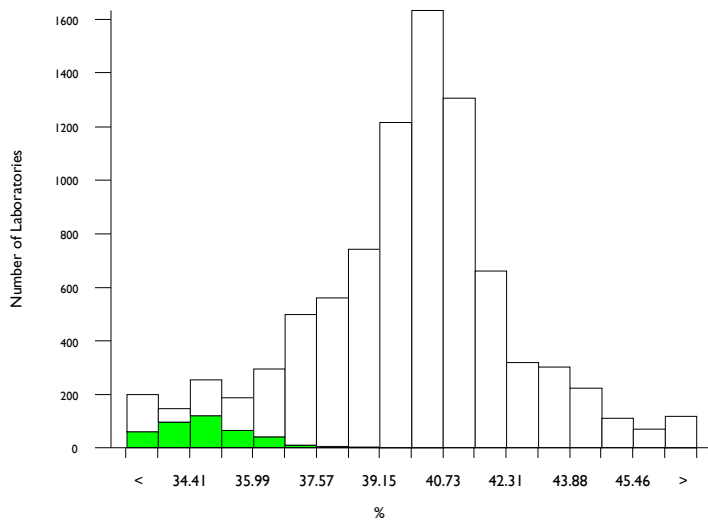


# Haematocrit (HCT), %

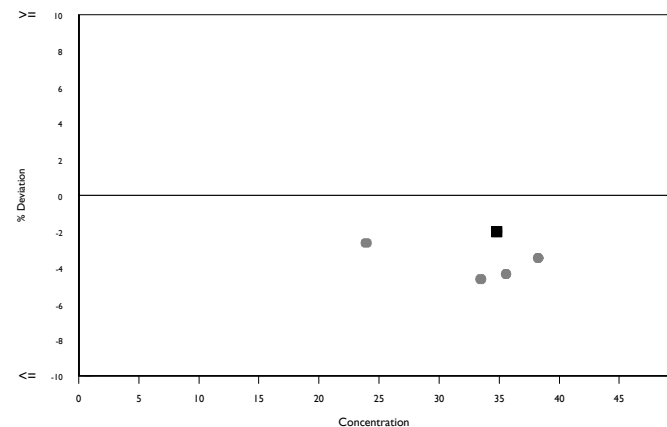
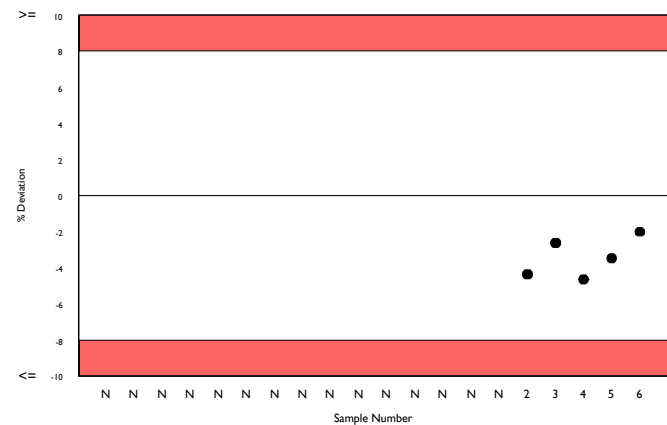
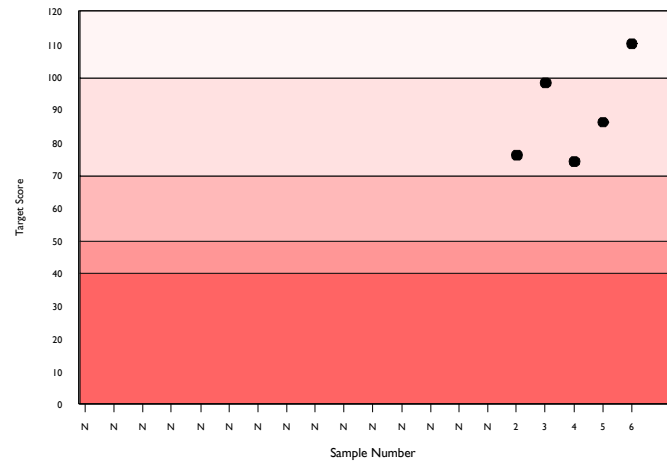
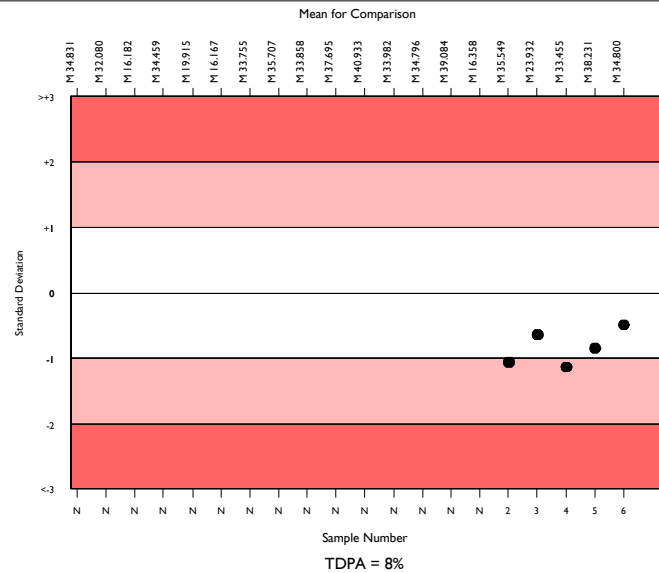
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All Methods	8193	39.943	5.3	0.03	1.63	642
Abbott Cell-Dyn Ruby	372	34.800	2.7	0.06	1.42	36

▲ Your Result	34.100	SDI	-0.49
		RMSDI	Too Few
■ Mean for Comparison	34.800	TS	110
		RMTS	Too Few
		%DEV	-2.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	8.00%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1828	40.283	2.0	0.02
Sysmex XN-L Series (330/350/450/550)	683	40.139	2.4	0.05
Mindray BC-6000/6200/6600/6800/6800Plus	393	43.788	1.9	0.05
Abbott Cell-Dyn Ruby	372	34.800	2.7	0.06
Beckman Coulter DxH 600/800/900 Series	364	40.746	1.5	0.04
Sysmex XP Series	332	37.688	3.0	0.08
Mindray BC 1000/2000/3000 series	290	40.923	3.4	0.10
Sysmex XS series	276	40.233	2.2	0.07
Microhematocrit Centrifugation	273	37.121	2.5	0.07
Nihon Kohden Celltac Alpha/plus	270	40.779	3.1	0.10
Siemens/Bayer Advia 120/2120	261	35.561	2.7	0.08
Manual Methods	164	37.274	2.2	0.08
Sysmex XT series	163	40.504	2.4	0.10
Mindray BC 5100/5180/5300/5380/5390	158	42.111	3.3	0.14
Mindray BC 5000/5150/5140/5130/5120	151	41.333	3.0	0.13
ABX Micros/Minos/ABC VET	137	39.440	3.5	0.15
Mindray BC 10/20/30	119	40.753	2.8	0.13
Sysmex KX 21	118	37.993	3.3	0.14
Beckman Coulter DxH 500 Series	106	39.979	2.8	0.14
Horiba ABX Pentra 60/80/XLR	101	37.527	2.0	0.09
Horiba Yumizen H500/ 550	105	38.598	2.4	0.11



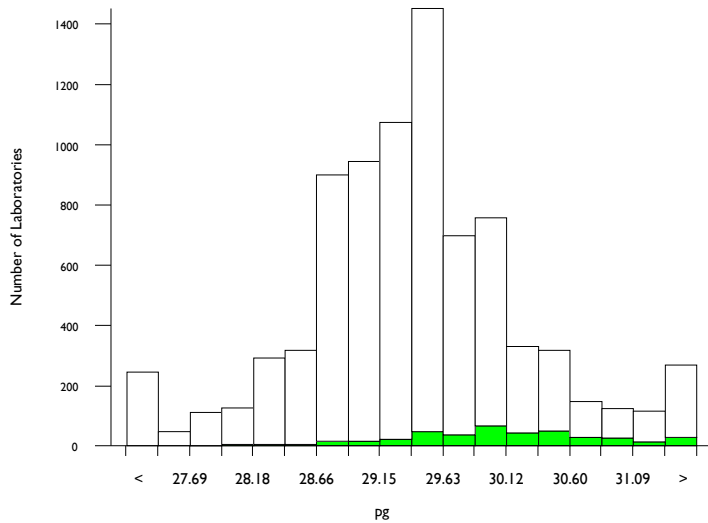
# MCH, pg

- All Methods
- Abbott Cell-Dyn Ruby

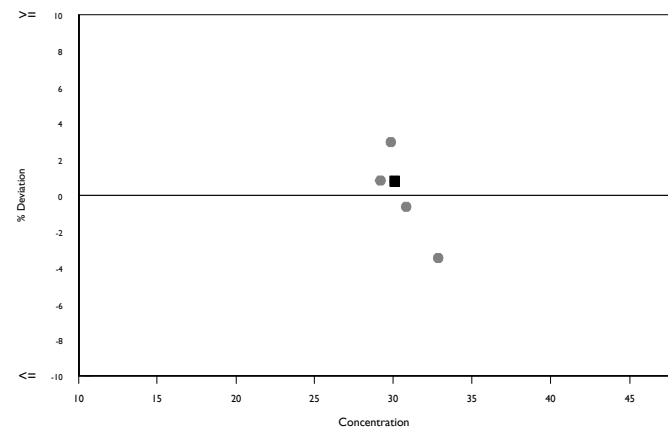
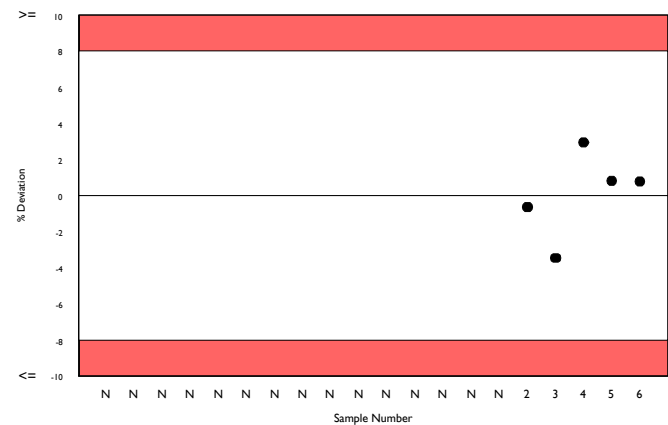
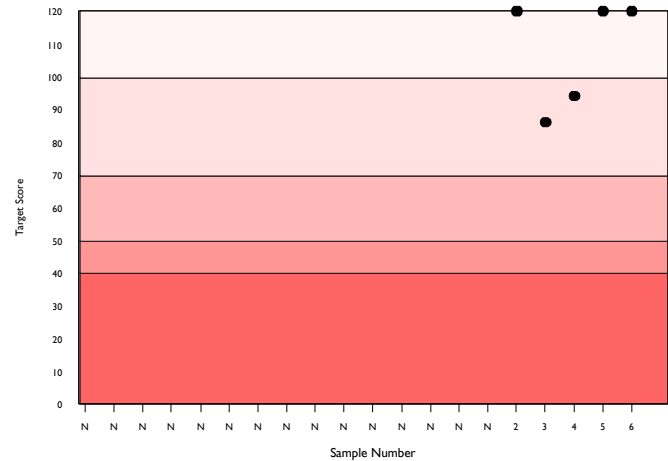
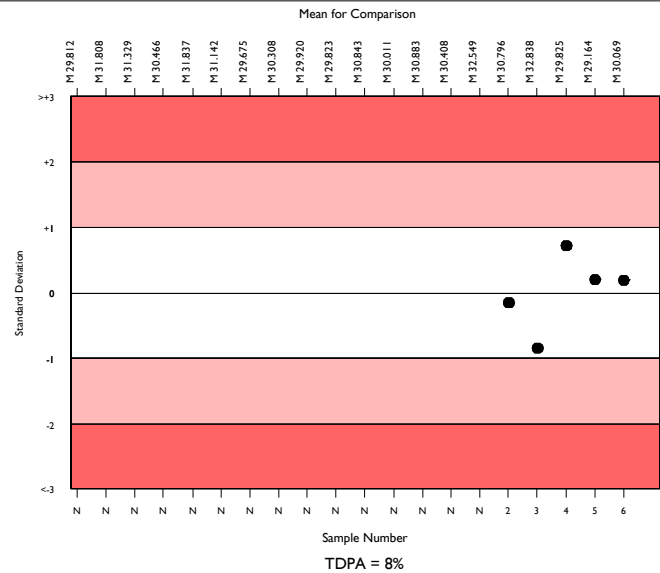
N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
7612	29.394	2.2	0.01	1.20	646
379	30.069	2.2	0.04	1.23	27

<b>▲ Your Result</b>	30.300	SDI	0.19
		RMSDI	Too Few
<b>■ Mean for Comparison</b>	30.069	TS	120
		RMTS	Too Few
		%DEV	0.8
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	8.00%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1831	29.306	1.4	0.01
Sysmex XN-L Series (330/350/450/550)	662	29.229	1.1	0.02
Mindray BC-6000/6200/6600/6800/6800Plus	392	29.447	1.4	0.03
Abbott Cell-Dyn Ruby	379	30.069	2.2	0.04
Beckman Coulter DxH 600/800/900 Series	368	29.135	1.3	0.03
Sysmex XP Series	329	29.208	2.1	0.04
Mindray BC 1000/2000/3000 series	291	29.100	3.0	0.06
Sysmex XS series	279	29.463	1.4	0.03
Nihon Kohden Celltac Alpha/plus	274	29.826	2.9	0.06
Siemens/Bayer Advia 120/2120	258	30.280	2.0	0.05
Sysmex XT series	166	29.229	1.7	0.05
Mindray BC 5100/5180/5300/5380/5390	156	29.469	1.7	0.05
Mindray BC 5000/5150/5140/5130/5120	146	29.496	2.4	0.07
ABX Micros/Minos/ABC VET	127	29.248	3.0	0.10
Mindray BC 10/20/30	119	30.116	2.7	0.09
Sysmex KX 21	114	29.363	2.4	0.08
Beckman Coulter DxH 500 Series	108	27.289	3.1	0.10
Horiba ABX Pentra 60/80/XLR	100	29.481	1.6	0.06
Horiba Yumizen H500/ 550	100	29.131	1.9	0.07
Boule Medonic/ Swelab 3-part diff	97	29.931	2.0	0.08
Nihon Kohden Celltac E/Es	90	29.537	2.4	0.10



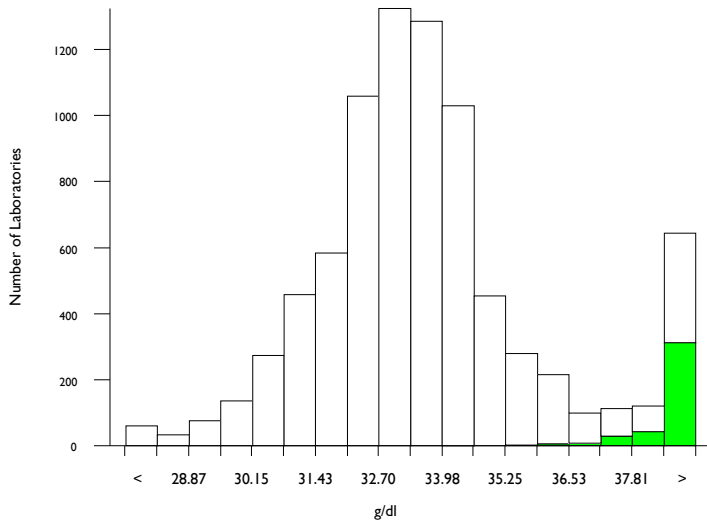
# MCHC, g/dl

- All Methods
- Abbott Cell-Dyn Ruby

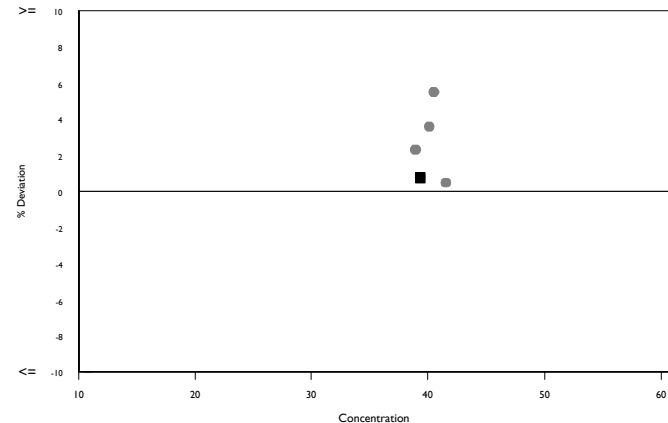
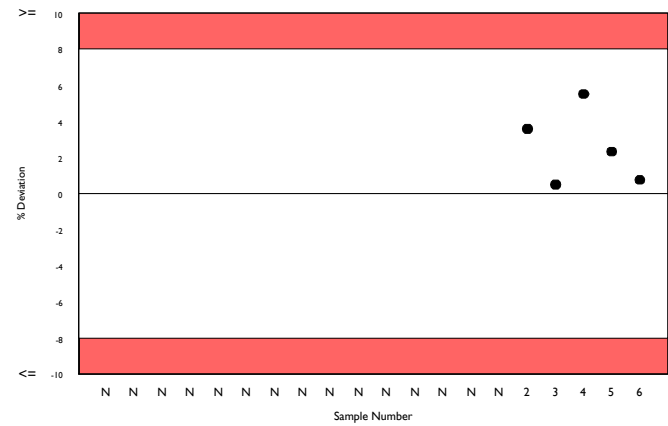
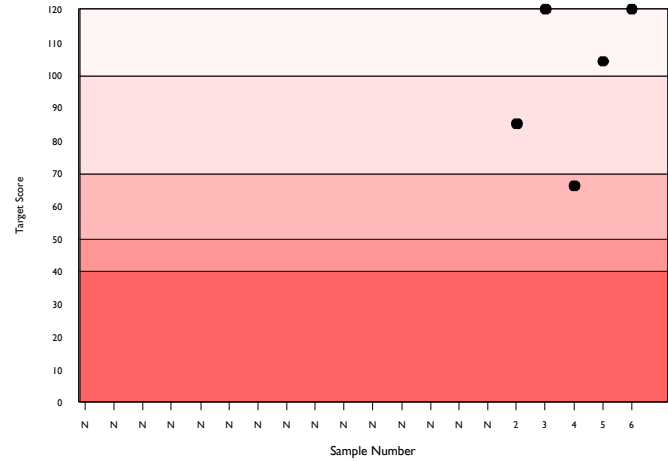
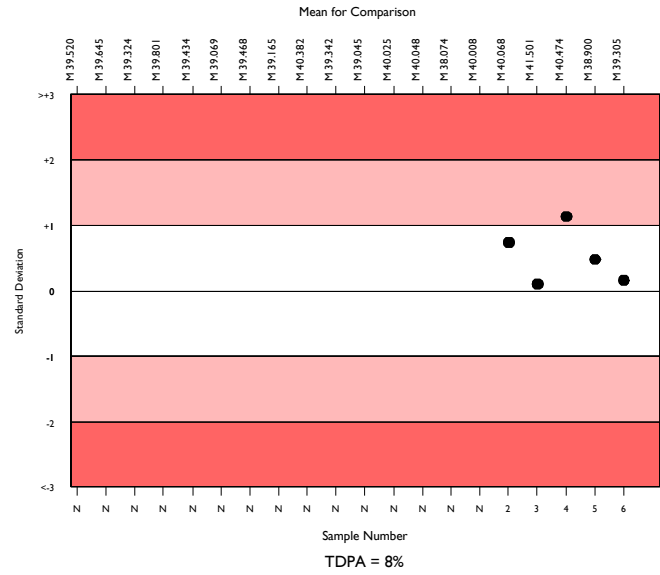
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	7514	33.346	5.1	0.02	1.62	723
Abbott Cell-Dyn Ruby	376	39.305	2.8	0.07	1.91	29

<span style="color: green;">▲</span> Your Result	39.600	SDI	0.15
		RMSDI	Too Few
<span style="color: green;">■</span> Mean for Comparison	39.305	TS	120
		RMTS	Too Few
		%DEV	0.8
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	8.00%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1827	33.574	2.2	0.02
Sysmex XN-L Series (330/350/450/550)	671	33.297	2.2	0.04
Mindray BC-6000/6200/6600/6800/6800Plus	394	30.992	1.8	0.04
Abbott Cell-Dyn Ruby	376	39.305	2.8	0.07
Beckman Coulter DxH 600/800/900 Series	365	32.345	1.7	0.04
Sysmex XP Series	326	35.140	3.2	0.08
Mindray BC 1000/2000/3000 series	286	32.782	3.5	0.08
Sysmex XS series	276	33.454	2.2	0.06
Nihon Kohden Celltac Alpha/plus	261	33.683	3.3	0.09
Siemens/Bayer Advia 120/2120	256	38.380	2.7	0.08
Sysmex XT series	160	33.379	2.6	0.08
Mindray BC 5100/5180/5300/5380/5390	158	31.811	3.3	0.10
Mindray BC 5000/5150/5140/5130/5120	144	32.376	2.4	0.08
ABX Micros/Minos/ABC VET	126	33.651	3.5	0.13
Mindray BC 10/20/30	118	33.343	3.0	0.11
Sysmex KX 21	115	34.981	3.5	0.14
Beckman Coulter DxH 500 Series	105	30.973	3.7	0.14
Horiba ABX Pentra 60/80/XLR	99	35.727	2.5	0.11
Horiba Yumizen H500/ 550	100	34.454	2.3	0.10
Boule Medonic/ Swelab 3-part diff	96	34.238	3.3	0.15
Nihon Kohden Celltac E/Es	88	32.672	2.8	0.12

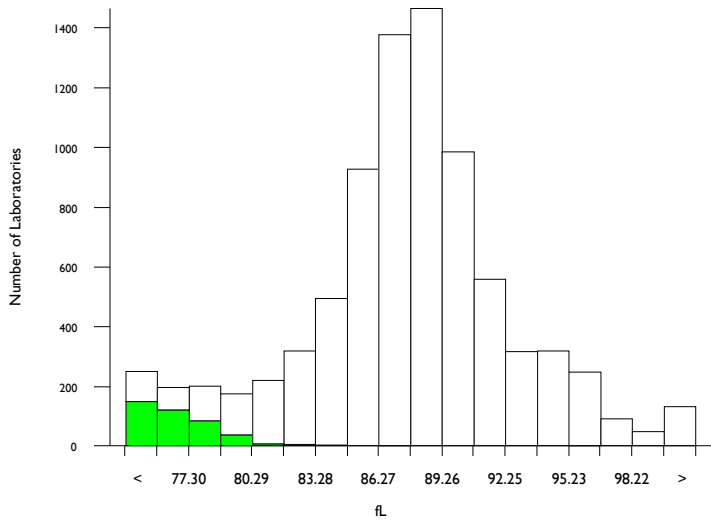


# MCV, fL

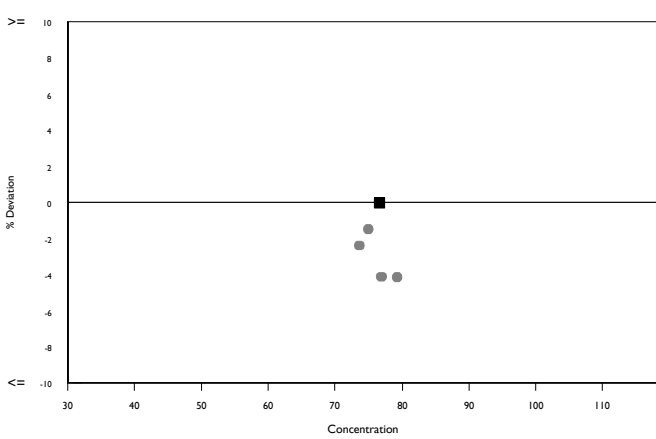
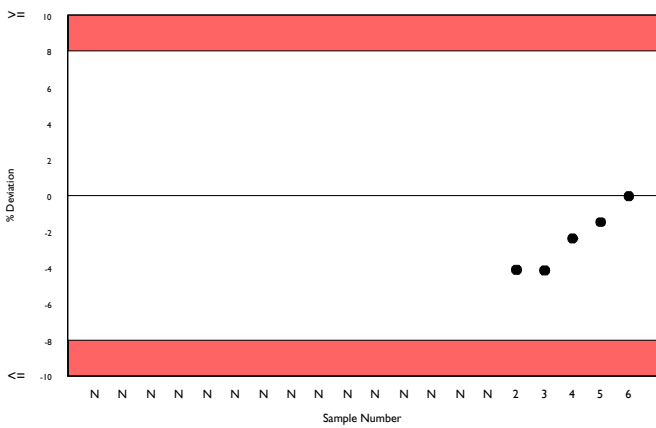
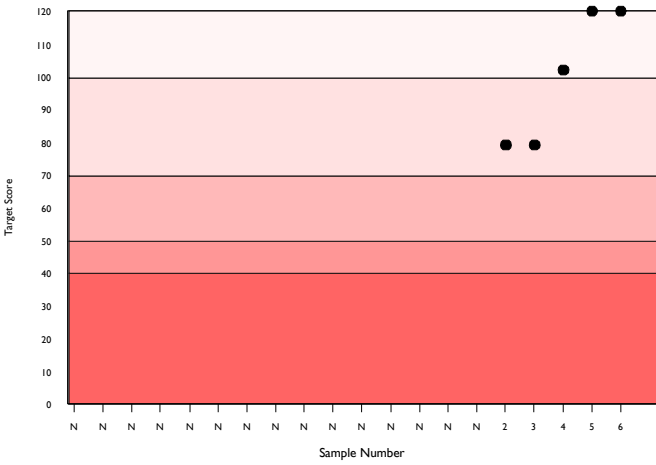
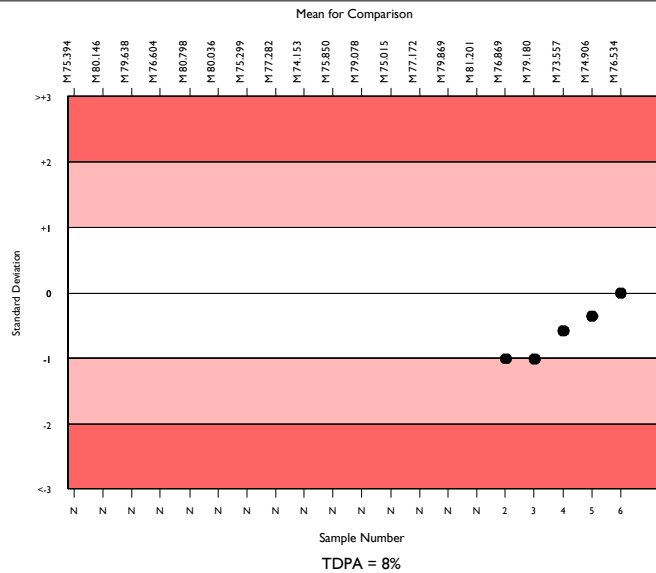
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	7675	87.767	4.5	0.06	3.58	638
Abbott Cell-Dyn Ruby	379	76.534	2.2	0.11	3.12	29

▲ Your Result	76.500	SDI	-0.01
		RMSDI	Too Few
■ Mean for Comparison	76.534	TS	120
		RMTS	Too Few
		%DEV	-0.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	8.00%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1819	87.282	1.8	0.05
Sysmex XN-L Series (330/350/450/550)	676	87.726	1.8	0.08
Mindray BC-6000/6200/6600/6800/6800Plus	392	95.023	1.4	0.08
Abbott Cell-Dyn Ruby	379	76.534	2.2	0.11
Beckman Coulter DxH 600/800/900 Series	366	89.934	1.2	0.07
Sysmex XP Series	330	82.981	2.4	0.14
Mindray BC 1000/2000/3000 series	295	88.836	3.0	0.20
Sysmex XS series	277	87.934	2.0	0.13
Nihon Kohden Celltac Alpha/plus	272	88.378	2.5	0.17
Siemens/Bayer Advia 120/2120	262	78.958	2.2	0.13
Sysmex XT series	161	87.526	2.0	0.17
Mindray BC 5100/5180/5300/5380/5390	159	92.311	2.6	0.24
Mindray BC 5000/5150/5140/5130/5120	145	91.215	2.2	0.20
ABX Micros/Minos/ABC VET	131	86.396	2.9	0.28
Mindray BC 10/20/30	114	90.040	1.8	0.19
Sysmex KX 21	108	83.558	2.6	0.27
Beckman Coulter DxH 500 Series	109	88.075	2.2	0.24
Horiba Yumizen H500/ 550	99	84.310	1.6	0.16
Horiba ABX Pentra 60/80/XLR	99	82.788	2.0	0.21
Boule Medonic/Swelab 3-part diff	96	87.151	2.4	0.27
Nihon Kohden Celltac E/Es	88	90.300	2.1	0.25

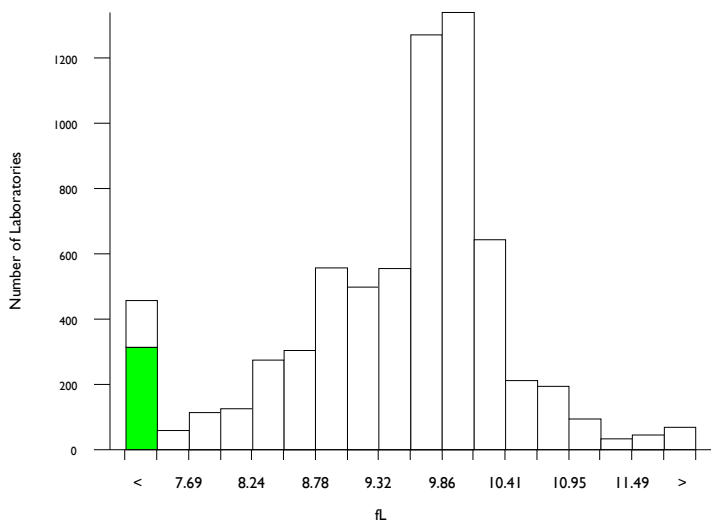


# Mean Platelet Volume, fL

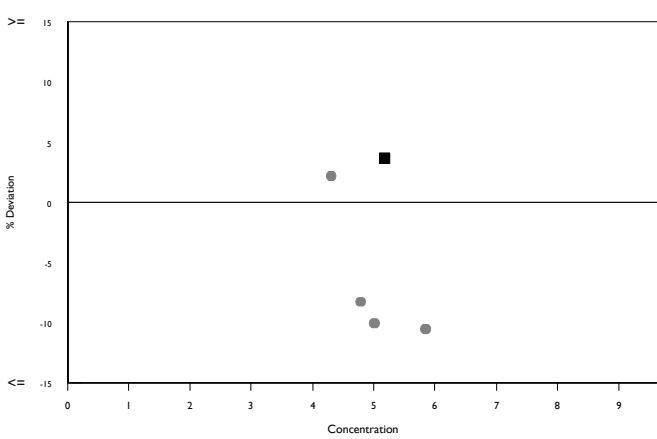
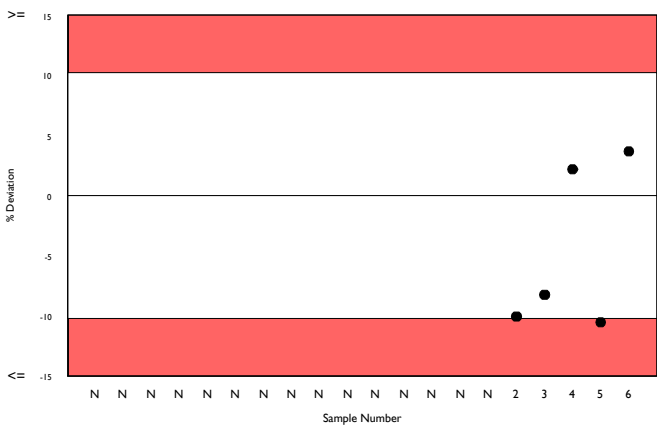
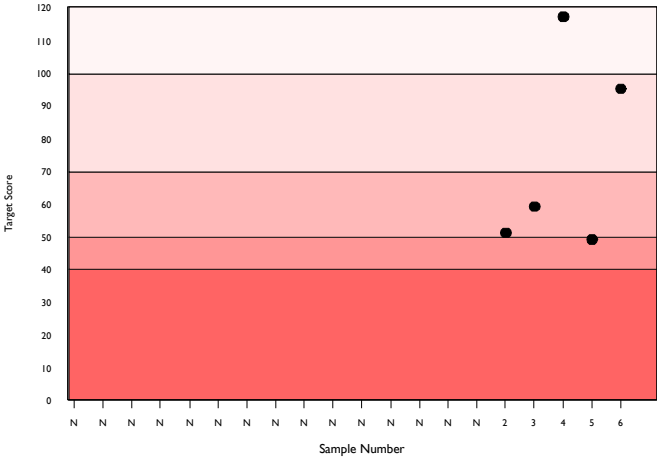
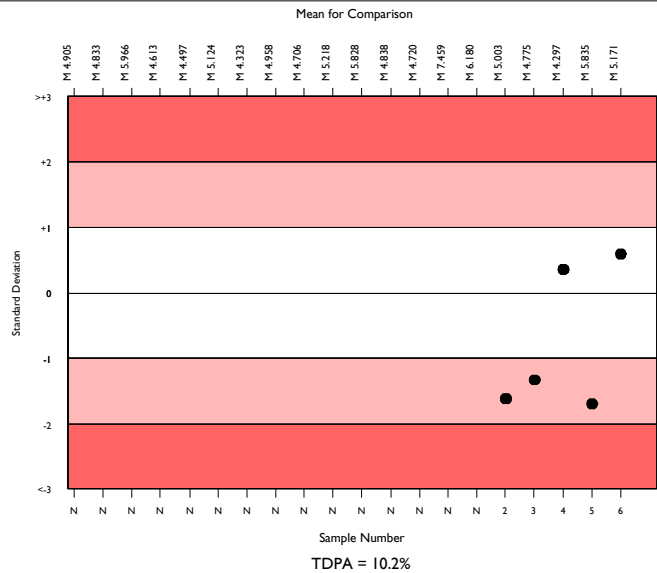
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	6291	9.597	7.5	0.01	0.60	550
Abbott Cell-Dyn Ruby	295	5.171	8.1	0.03	0.32	26

▲ Your Result	5.360	SDI	0.59
		RMSDI	Too Few
■ Mean for Comparison	5.171	TS	95
		RMTS	Too Few
		%DEV	3.7
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	10.20%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1526	9.836	2.4	0.01
Sysmex XN-L Series (330/350/450/550)	475	9.893	2.7	0.02
Mindray BC-6000/6200/6600/6800/6800Plus	360	10.371	3.6	0.02
Abbott Cell-Dyn Ruby	295	5.171	8.1	0.03
Beckman Coulter DxH 600/800/900 Series	296	8.771	2.6	0.02
Sysmex XP Series	271	9.518	3.0	0.02
Mindray BC 1000/2000/3000 series	273	9.212	5.9	0.04
Nihon Kohden Celltac Alpha/plus	237	8.651	5.9	0.04
Sysmex XS series	230	9.976	3.3	0.03
Siemens/Bayer Advia 120/2120	195	10.723	5.3	0.05
Sysmex XT series	136	9.667	2.8	0.03
Mindray BC 5000/5150/5140/5130/5120	131	10.120	2.7	0.03
Mindray BC 5100/5180/5300/5380	112	9.014	3.5	0.04
Mindray BC 10/20/30	97	9.828	2.5	0.03
ABX Micros/Minos/ABC VET	97	8.705	6.3	0.07
Sysmex KX 21	91	9.435	3.3	0.04
Beckman Coulter DxH 500 Series	82	9.111	3.4	0.04
Horiba Yumizen H500/ 550	88	10.480	4.9	0.07
Boule Medonic/ Swelab 3-part diff	86	8.934	5.2	0.06
Horiba ABX Pentra 60/80/XLR	82	9.638	3.5	0.05
Nihon Kohden Celltac E/Es	68	7.552	4.3	0.05

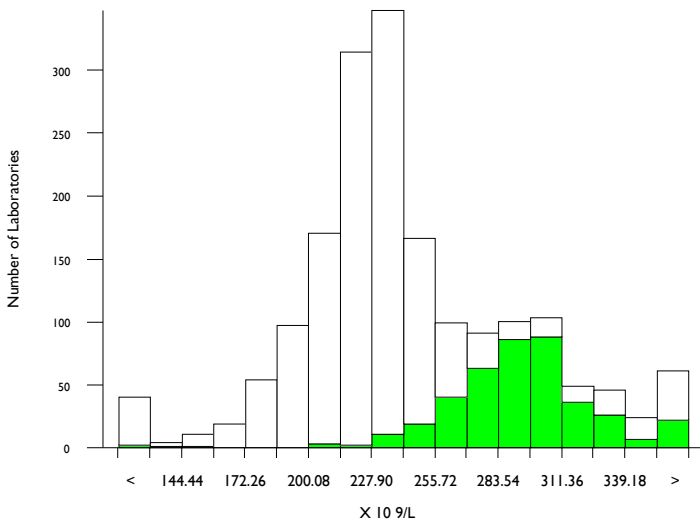


# Platelets (Optical Count), X 10<sup>9</sup>/L

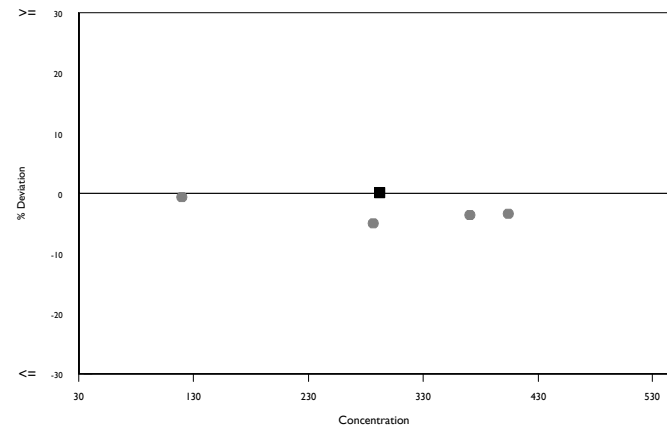
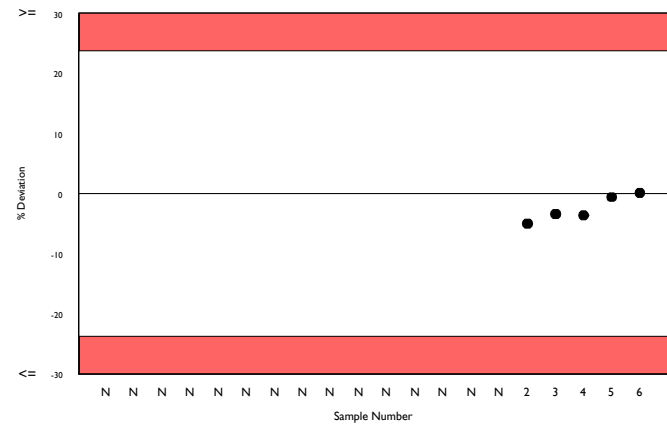
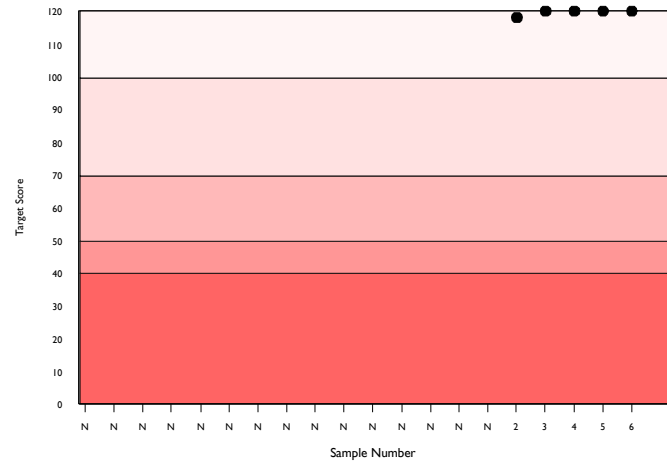
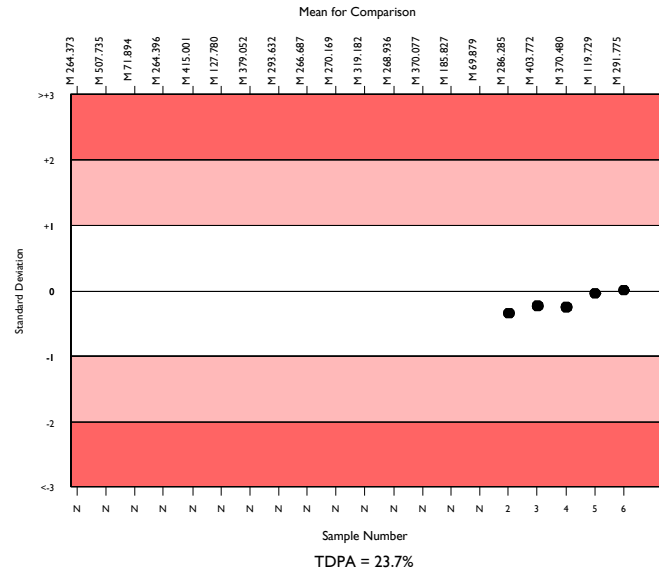
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	1645	241.814	15.3	1.14	34.84	151
Abbott Cell-Dyn Ruby	371	291.775	8.0	1.52	42.04	36

▲ Your Result	292.000	SDI	0.01
		RMSDI	Too Few
■ Mean for Comparison	291.775	TS	120
		RMTS	Too Few
		%DEV	0.1
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	23.70%



Method	N	Mean	CV%	U <sub>m</sub>
Manual Methods	343	223.879	9.1	1.37
Abbott Cell-Dyn Ruby	371	291.775	8.0	1.52
Siemens/Bayer Advia 120/2120	269	207.188	7.7	1.22
Sysmex XN Series PLT-O	157	271.771	21.3	5.77
Abbott Alinity iq	80	243.350	7.4	2.52
Mindray BC-6000/6200/6600/6800/6800Plus	73	238.329	6.4	2.24
Sysmex XN-L Series (330/350/450/550)	66	225.687	4.9	1.71
Sysmex XS Series	57	226.114	3.4	1.27
Sysmex XT Series	33	231.009	9.8	4.93
Beckman Coulter DxH 600/800/900 Series	28	237.511	3.9	2.16
Abbott Cell-Dyn 3200	25	233.592	12.7	7.45
Abbott Cell-Dyn Sapphire	15	266.133	7.8	6.73
Horiba Yumizen H500/ 550	12	276.083	17.0	16.95
Sysmex XN Series PLT-F	11	227.636	5.6	4.78
Sysmex KX2I	10	239.500	5.5	5.23
Horiba ABX Pentra 60/80/XLR	10	246.200	12.6	12.28
UDIHEM-D	8	235.000	9.2	9.55
Mindray BC760/780	8	231.500	3.7	3.76
Beckman Coulter DxH 500 Series	7	244.714	10.4	12.04
ABX Micros/Minos/ABC VET	6	216.333	9.9	10.94
Horiba Yumizen H1500/ 2500	7	255.814	6.2	7.53



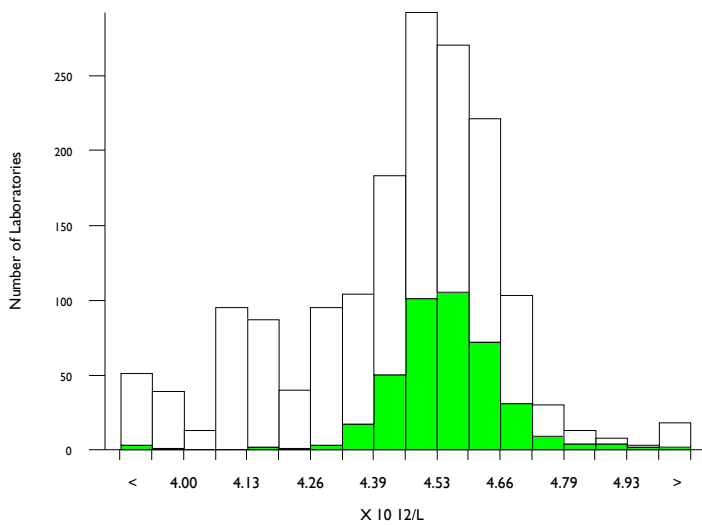


# RBC (Optical Count), X 10<sup>12</sup>/L

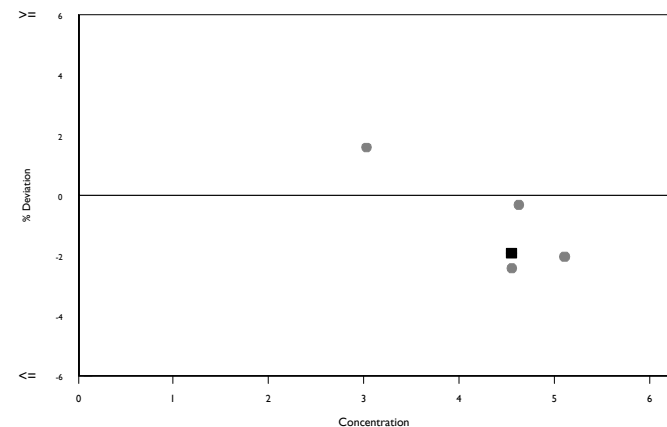
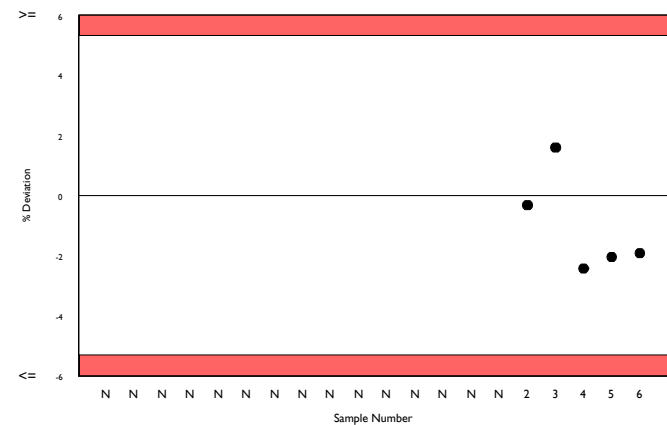
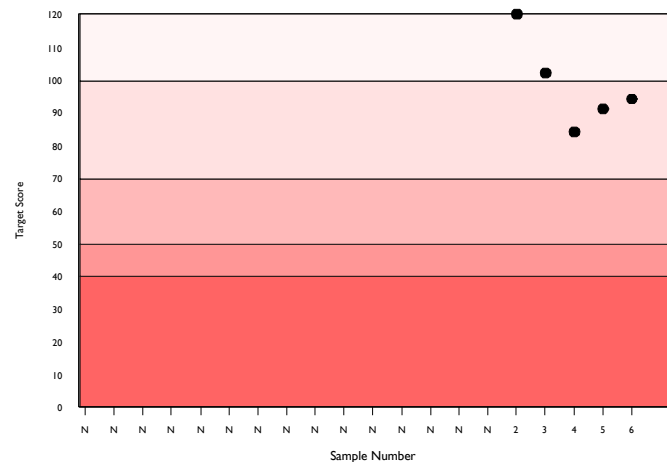
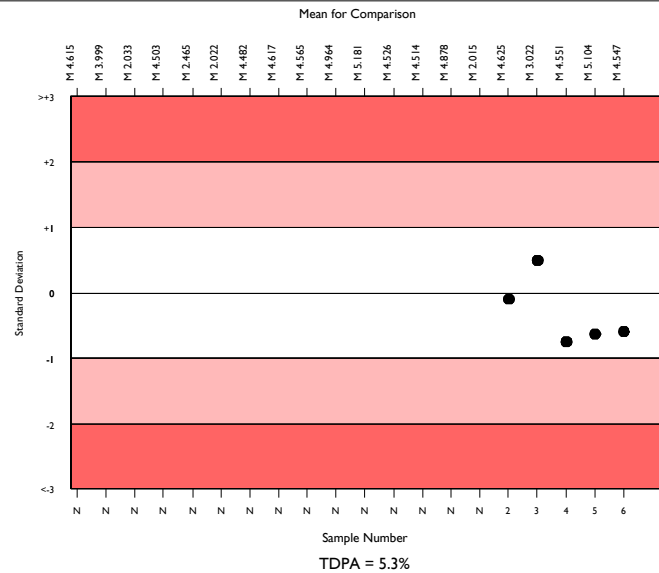
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	1546	4.466	4.0	0.01	0.14	119
Abbott Cell-Dyn Ruby	374	4.547	1.8	0.01	0.15	33

▲ Your Result	4.460	SDI	-0.60
		RMSDI	Too Few
■ Mean for Comparison	4.547	TS	94
		RMTS	Too Few
		%DEV	-1.9
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	5.30%



Method	N	Mean	CV%	U <sub>m</sub>
Abbott Cell-Dyn Ruby	374	4.547	1.8	0.01
Manual Methods	310	4.141	3.2	0.01
Siemens/Bayer Advia 120/2120	263	4.503	2.0	0.01
Sysmex XN Series	191	4.568	2.3	0.01
Abbott Alinity iq	80	4.379	1.8	0.01
Mindray BC-6000/6200/6600/6800/6800Plus	56	4.570	2.6	0.02
Sysmex XS Series	60	4.562	1.7	0.01
Sysmex XT Series	34	4.605	2.3	0.02
Abbott Cell-Dyn 3200	27	4.513	2.9	0.03
Beckman Coulter DxH 600/800/900 Series	25	4.495	0.8	0.01
Sysmex KX21	11	4.517	1.3	0.02
Horiba Yumizen H500/ 550	10	4.564	1.7	0.03
Horiba ABX Pentra 60/80/XLR	11	4.480	2.9	0.05
Abbott Cell-Dyn Sapphire	10	4.536	2.2	0.04
UDIHEM-D	7	4.699	1.5	0.03
Beckman Coulter DxH 500 Series	6	4.503	1.7	0.04
ABX Micros/Minos/ABC VET	5	4.546	2.0	0.05
ABX Pentra 120/Nexus Series	4	4.473	2.8	0.08
Avantor Benesphera H-51	3	4.653	0.7	0.02
B&E Scientific Hemax 530	2	4.510	10.7	0.42
MTI Diagnostics Auto Star Diff 5	2	4.640	3.7	0.15

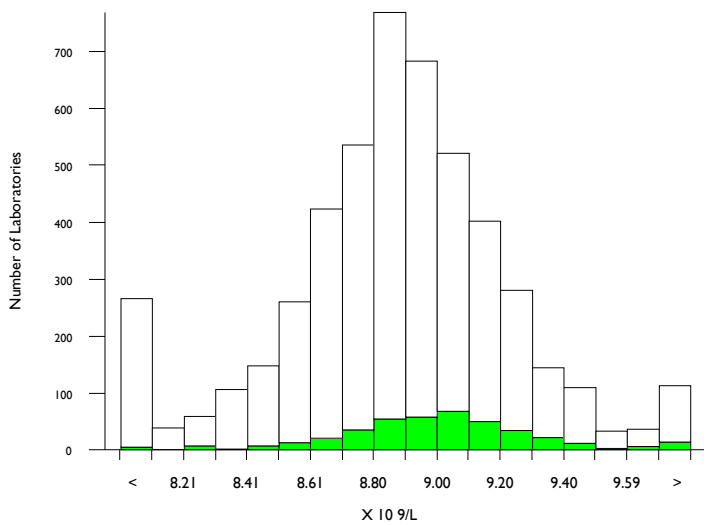


# WBC (Optical Count), X 10<sup>9</sup>/L

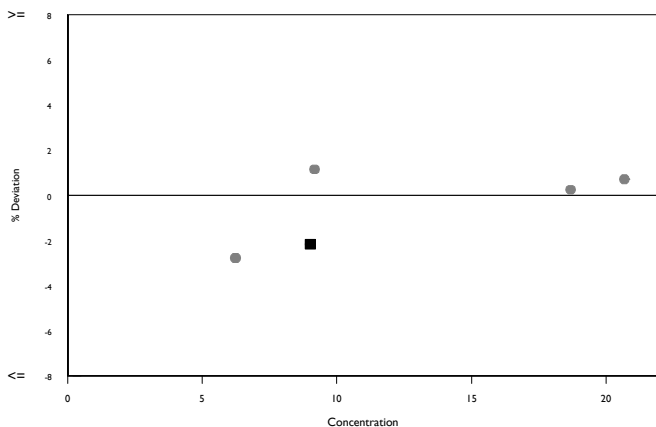
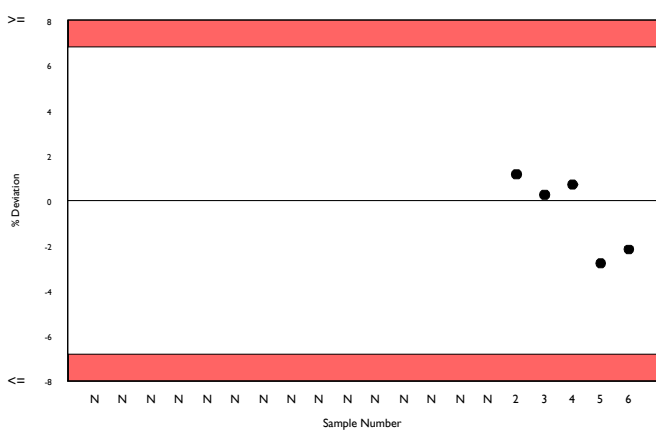
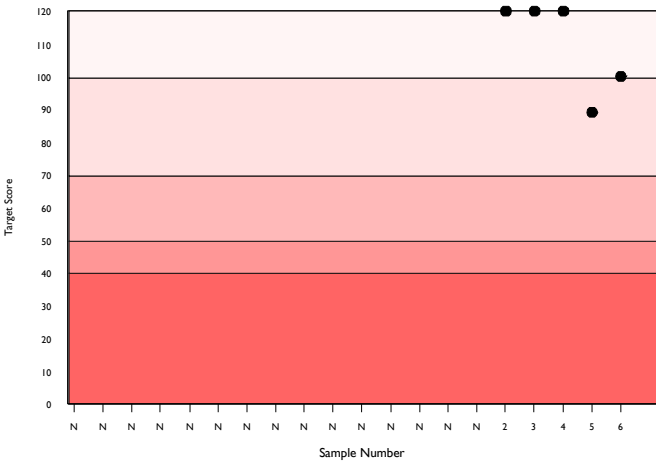
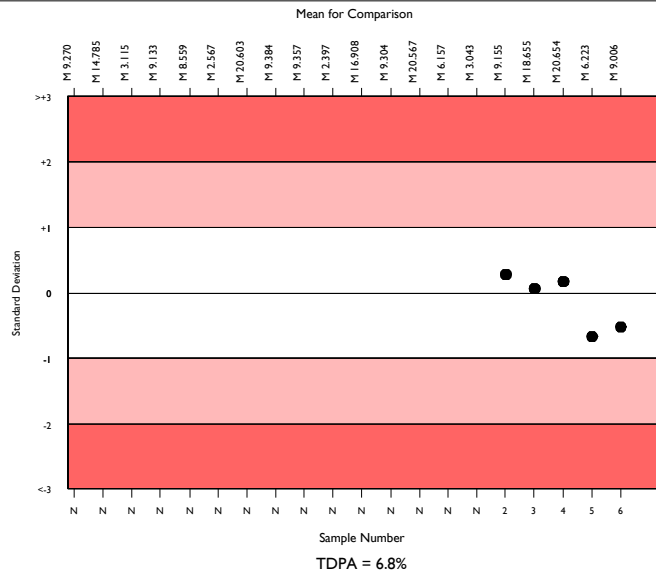
	N	Mean	CV%	U <sub>m</sub>	SDPA	Exc.
All Methods	4495	8.908	3.0	0.00	0.37	424
Abbott Cell-Dyn Ruby	377	9.006	2.5	0.01	0.37	33

▲ Your Result	8.810	SDI	-0.53
		RMSDI	Too Few
■ Mean for Comparison	9.006	TS	100
		RMTS	Too Few
		%DEV	-2.2
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	6.80%



Method	N	Mean	CV%	U <sub>m</sub>
Sysmex XN Series	1679	8.887	1.9	0.01
Manual methods	409	8.946	6.3	0.03
Sysmex XN-L Series (330/350/450/550)	427	9.091	2.1	0.01
Abbott Cell-Dyn Ruby	377	9.006	2.5	0.01
Mindray BC-6000/6200/6600/6800/6800Plus	372	8.713	2.1	0.01
Sysmex XS Series	277	9.121	2.6	0.02
Siemens/Bayer Advia 120/2120	260	8.478	3.1	0.02
Sysmex XT Series	154	8.957	2.6	0.02
Mindray BC 5000/5150/5140/5130/5120	131	8.868	2.2	0.02
Abbott Alinity hq	78	8.818	2.2	0.03
Mindray BC 5600/5800	52	8.931	3.3	0.05
Beckman Coulter DxH 600/800/900 Series	41	8.967	2.2	0.04
Abbott Cell-Dyn 3200	28	9.084	5.5	0.12
Mindray BC760/780	22	9.257	2.2	0.05
Horiba Yumizen H500/ 550	17	8.585	3.0	0.08
Horiba ABX Pentra 60/80/XLR	17	8.909	1.9	0.05
Sysmex KX21	14	8.736	2.3	0.07
Abbott Cell-Dyn Sapphire	15	9.113	2.4	0.07
Beckman Coulter DxH 500 Series	13	8.933	3.5	0.11
Shenzhen Dymind DF50	9	9.206	2.4	0.09
UDIHEM-D	7	8.824	8.3	0.35



Analyte	Mean for Comparison	Your Result	SDI	RMSDI	%DEV	RM%DEV	TS	RMTS	Performance
Haemoglobin	13.674	13.500	-0.50	Too Few	-1.3	Too Few	102	Too Few	
Haematocrit (HCT)	34.800	34.100	-0.49	Too Few	-2.0	Too Few	110	Too Few	
MCH	30.069	30.300	0.19	Too Few	0.8	Too Few	120	Too Few	
MCHC	39.305	39.600	0.15	Too Few	0.8	Too Few	120	Too Few	
MCV	76.534	76.500	-0.01	Too Few	-0.0	Too Few	120	Too Few	
Mean Platelet Volume	5.171	5.360	0.59	Too Few	3.7	Too Few	95	Too Few	
Platelets (Optical Count)	291.775	292.000	0.01	Too Few	0.1	Too Few	120	Too Few	
RBC (Optical Count)	4.547	4.460	-0.60	Too Few	-1.9	Too Few	94	Too Few	
WBC (Optical Count)	9.006	8.810	-0.53	Too Few	-2.2	Too Few	100	Too Few	

ORMSDI N/A

ORM%DEV N/A

ORMTS N/A

END OF REPORT