

Proteus Laboratories

- ① **Amylux 7250**. Please find attached LT graphs.
IQC acceptable. Will monitor with new cycle.
- ② **AST > 2SP**. Root cause analysis should be done for AST
no performance for last 3 samples. (sent RIQAS email 30/12/20)
- ③ **CK > 2SD** Random error. Checked LT graphs. Will monitor
next sample.

MONTHLY CLINICAL CHEMISTRY

CYCLE 17 SAMPLE 12

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: 30/12/2020

Customer Care

From: Sean Dornan <Sean.Dornan@randox.com>
Sent: 20 January 2021 11:13
To: 'customercare@proteuslab.co.za'
Cc: Debbie Moosa
Subject: RE: AST with a consistent non conformance

Dear Gugu,

I have had a look at your report and suspect you may be in the wrong method group for AST and ALT. Could you forward the IFUs you are using for these parameters? I will then be able to confirm the correct group you should be in for both AST and ALT.

Kind Regards,
Sean Dornan

RIQAS Technical Support Scientist

T: +44 (0) 28 9445 4399 F: +44 (0) 28 9445 4398 Randox Laboratories Ltd, 55 Diamond Road, Crumlin, Co. Antrim, BT29 4QY, United Kingdom

-----Original Message-----

From: Debbie Moosa <Debbie.Moosa@randox.com>
Sent: 14 January 2021 10:06
To: RIQAS <mail@riqas.com>
Subject: FW: AST with a consistent non conformance

Dear RIQAS

Please see attached and below and assist further.

Kind Regards,

Debbie Moosa
Country Manager

Randox Laboratories Ltd.
Unit 17 LeoGem Commercial Park
90 Richards Drive
Midrand
T: +27 (011) 312 3590/5420 | F: +27 (011) 3124146
Cell: +27 (83) 442 0349 / +27 (71) 470 2025

-----Original Message-----

From: Customer Care <customercare@proteuslab.co.za>
Sent: 30 December 2020 13:06
To: Debbie Moosa <Debbie.Moosa@randox.com>
Subject: AST with a consistent non conformance

Good Debbie

Please advise our AST seems to be giving us a non-conformance for the last 3 samples. Sample 10 we had internet issues, therefore could not submit. But my LJ graphs (IQC) seems to be fine.

Please advise

Regards,
Gugu

-----Original Message-----

From: mail@riqas.com [mailto:mail@riqas.com]
Sent: 30 December 2020 08:36
To: customercare@proteuslab.co.za
Subject: RIQAS ROUTINE REPORT 524920A-MC-017-12-01.PDF

Dear Participant,

Please find attached your RIQAS routine report in PDF format.

Regards,

RIQAS Department

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This email has been checked for viruses by Avast antivirus software.
<https://www.avast.com/antivirus>

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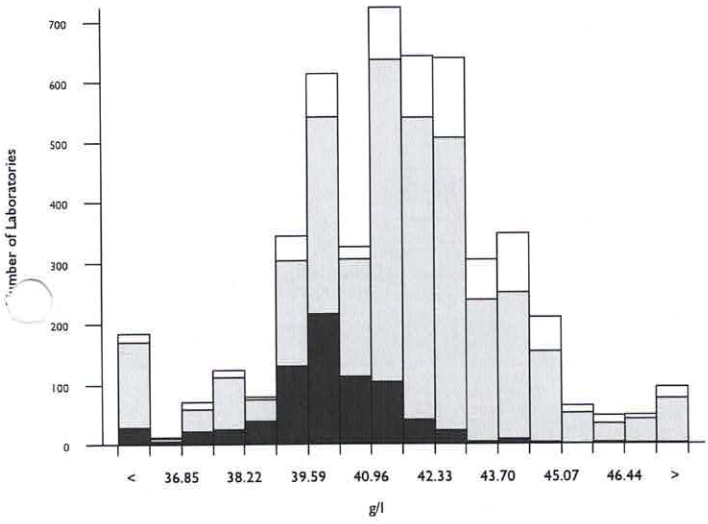
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Albumin, g/l

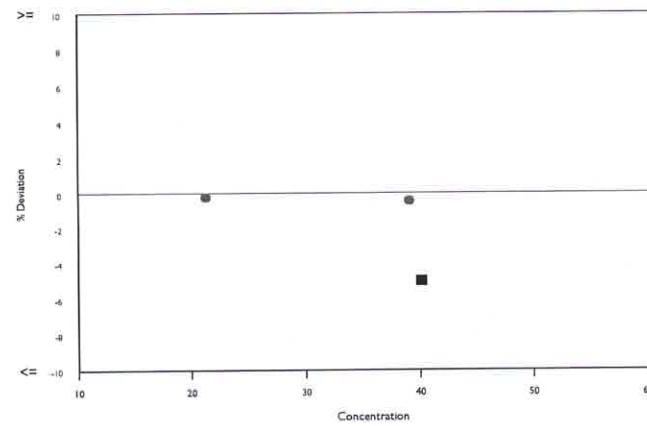
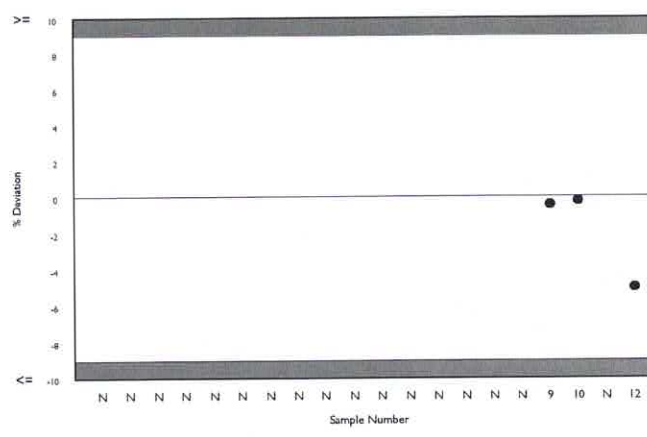
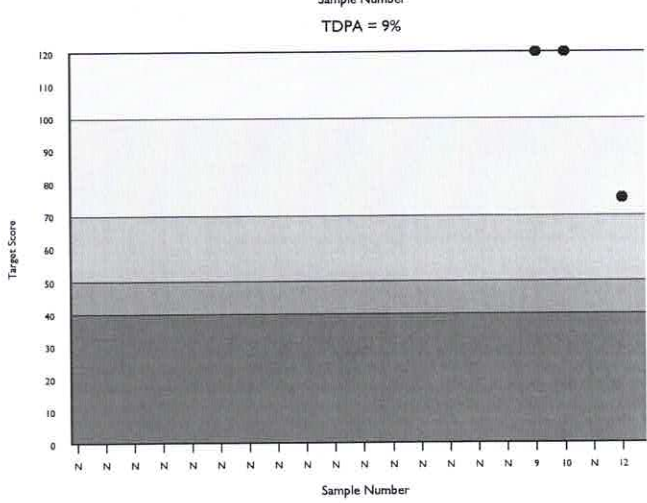
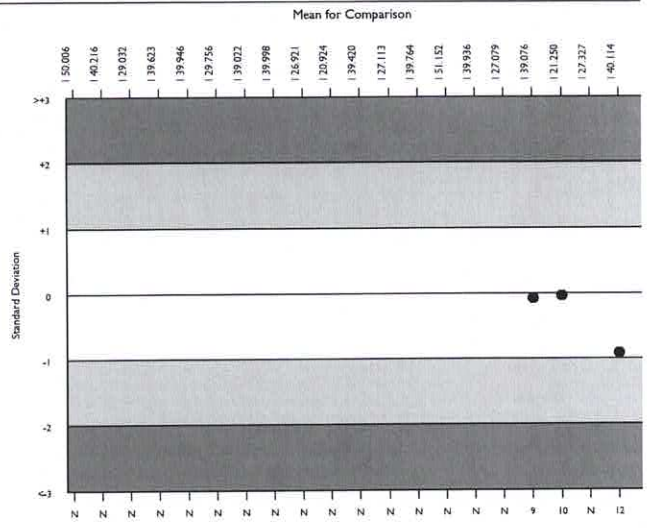
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4478	41.652	4.4	0.03	2.28	396
Bromocresol Green	3770	41.464	4.4	0.04	2.27	332
Beckman AU instruments	685	40.114	2.6	0.05	2.19	81

▲ Your Result	38.100	SDI	-0.92
		RMSDI	Too Few
■ Mean for Comparison	40.114	TS	75
		RMTS	Too Few
		%DEV	-5.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	9.00%



Method	N	Mean	CV%	U _m
Bromocresol Green	3770	41.464	4.4	0.04
Bromocresol Purple	483	42.983	3.1	0.08
Ortho Vitros MicroSlide Systems	134	40.319	2.9	0.12
Turbidimetric Assays	31	42.025	4.7	0.44
Agappe - Bromocresol Green	31	40.670	6.6	0.61
Other Dry Chemistry	20	46.200	5.8	0.75
Nephelometric Assays	4	40.825	1.1	0.27
Electrophoresis	3	41.533	3.3	0.98
Vitros DT60/DT60 II/DTSC II	2	40.500	1.7	0.62



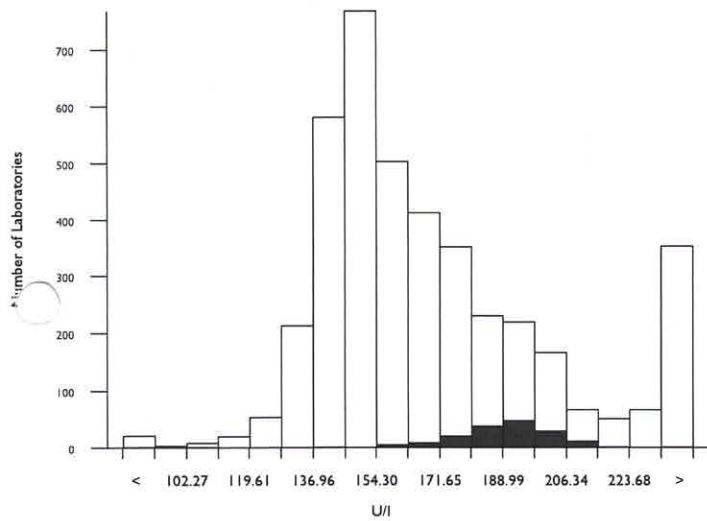
Alkaline Phosphatase, U/l @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	3700	162.979	14.2	0.48	18.53	376
Beckman AMP (Calibrator)	149	190.733	5.6	1.10	21.68	13
Beckman AU instruments	146	191.154	5.4	1.07	21.73	13

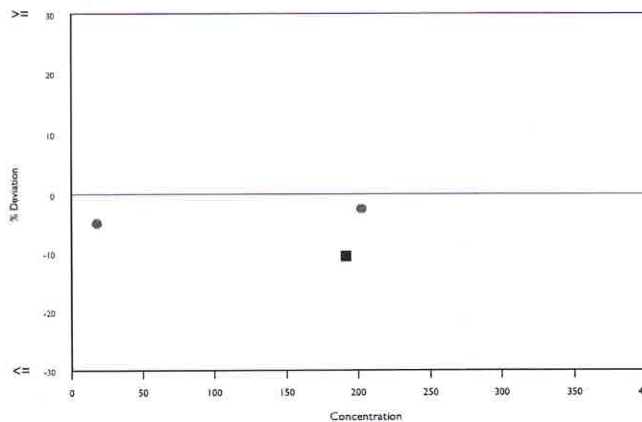
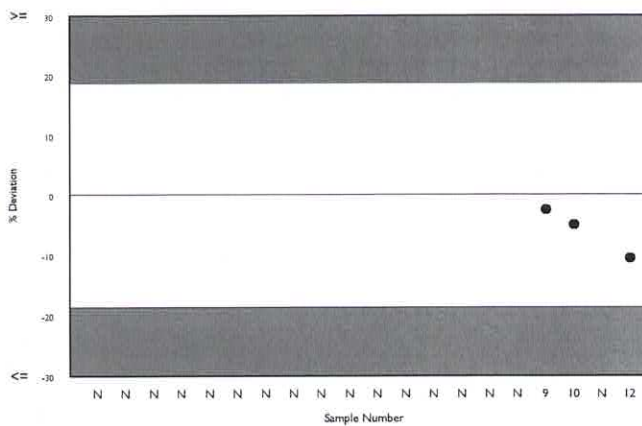
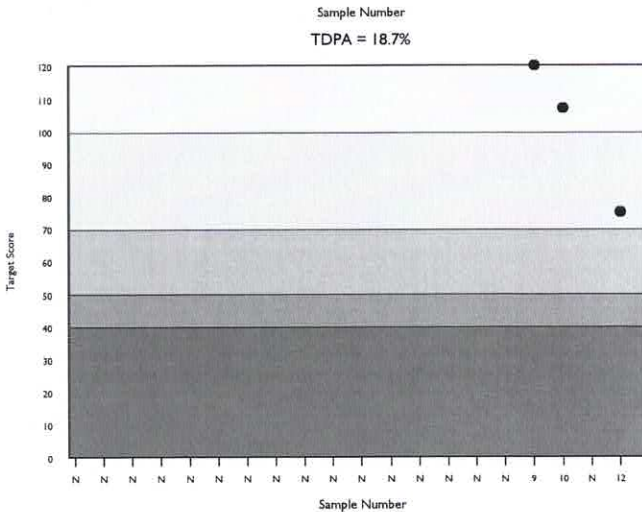
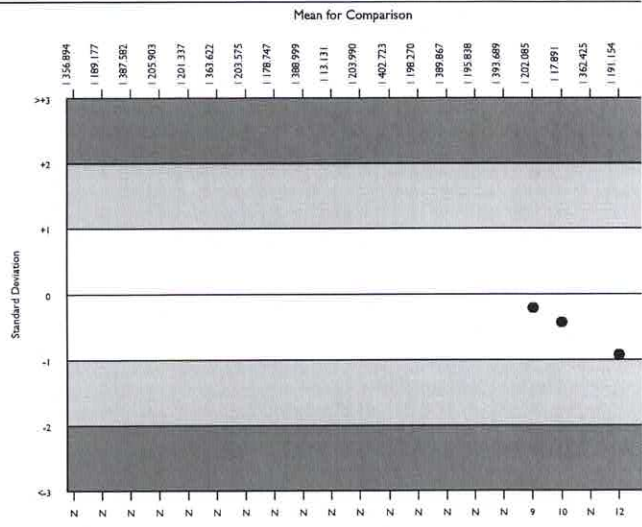
- All Methods
- Beckman AMP (Calibrator)
- Beckman AU instruments

▲ Your Result	171.000	SDI	-0.93
		RMSDI	Too Few
■ Mean for Comparison	191.154	TS	75
		RMTS	Too Few
		%DEV	-10.5
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	18.70%



Method	N	Mean	CV%	U _m
AMP optimised to IFCC	1450	169.807	10.6	0.59
Roche AMP buffer IFCC	1032	144.633	5.2	0.29
Diethanolamine buffer, DEA	417	244.432	13.6	2.04
Siemens/Dade Dimension AMP buffer	201	152.605	3.5	0.48
AMP non-optimised	159	171.622	9.3	1.58
Ortho Vitros MicroSlide Systems	161	151.393	7.1	1.07
Beckman AMP (Calibrator)	149	190.733	5.6	1.10
Colorimetric	73	155.619	12.2	2.78
Other AMP kits	62	159.934	6.4	1.64
Agappe - DGKC-SCE	22	213.661	8.5	4.83
Other Dry Chemistry	21	205.196	16.3	9.14
Beckman AMP (Extinction Coeff)	10	184.071	9.0	6.56
Fuji Dri-Chem JSCC	2	189.000	6.7	11.25
AMP optimised to NVKC/SFBC	4	215.500	26.1	35.15
Tris/carbonate buffer	4	152.750	9.0	8.64
Vitros DT60/DT60 II/DTSC II	2	160.000	10.6	15.00
AMPD optimised to JSCC	2	174.500	0.4	0.62



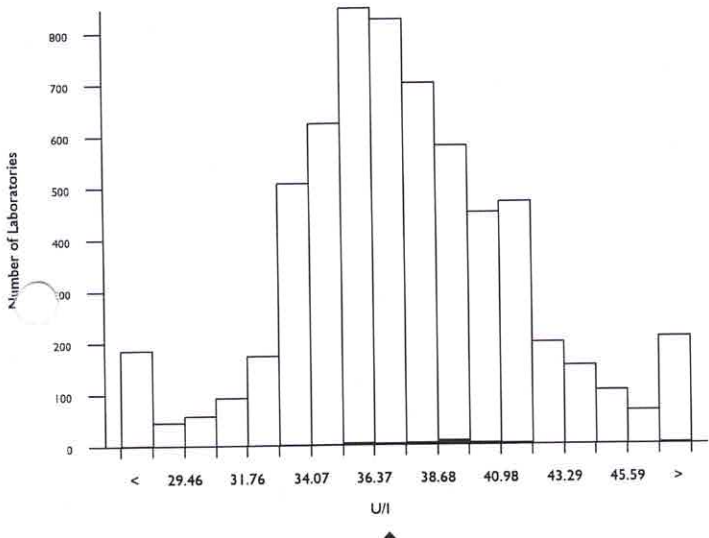
ALT (GPT), U/I @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5722	37.531	8.2	0.05	3.49	552
Beckman IFCC Ref. with PSP	27	38.563	4.8	0.44	3.59	5
Beckman AU instruments	23	38.160	4.3	0.42	3.55	2

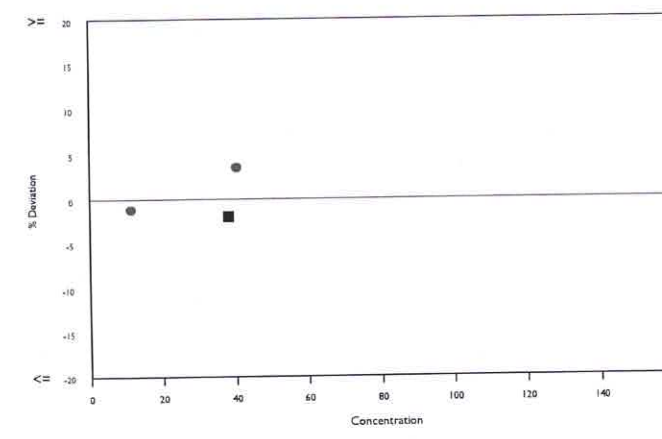
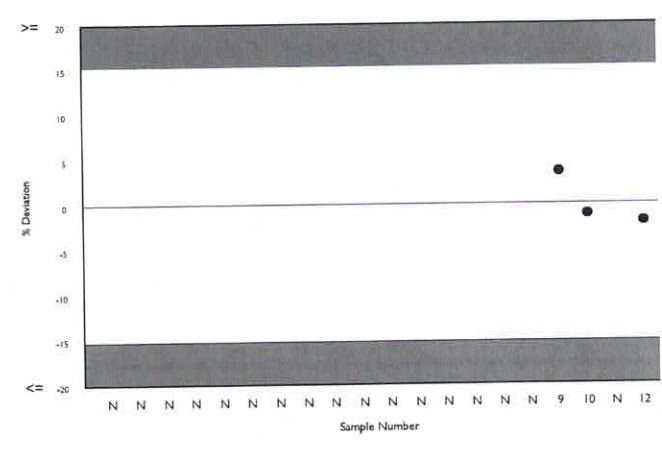
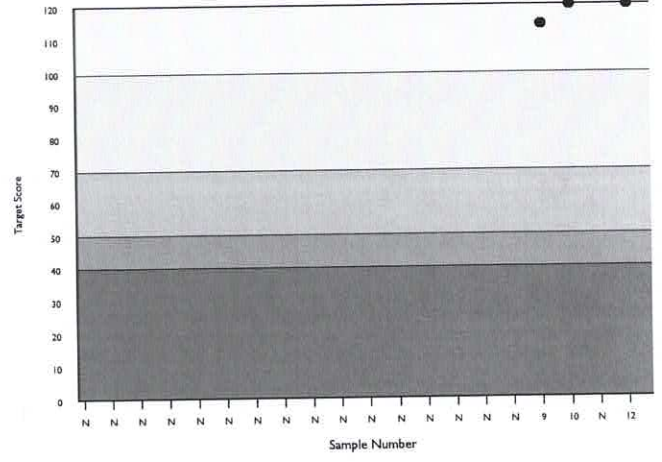
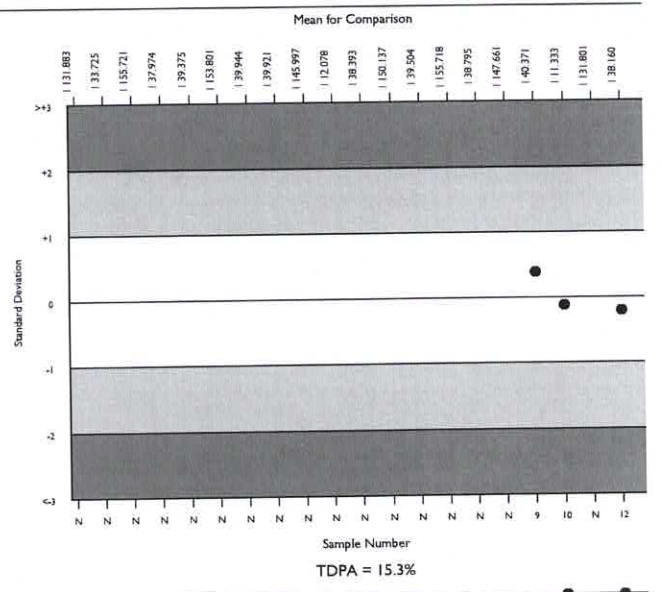
▲ Your Result	37.400	SDI	-0.21
		RMSDI	Too Few
■ Mean for Comparison	38.160	TS	120
		RMTS	Too Few
		%DEV	-2.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation: N/A

Acceptable limits of performance for RIQAS: 15.30%



Method	N	Mean	CV%	U _m
Tris buffer without PSP	4316	36.866	7.7	0.05
Tris buffer with PSP	455	40.137	9.6	0.23
Beckman Mod. IFCC Ref. without PSP	438	38.306	4.2	0.10
Siemens/Dade standard nonIFCC correlated	161	43.676	6.1	0.26
Ortho Vitros MicroSlide Systems	111	40.906	4.8	0.23
Ortho Vitros MicroSlide visible	49	40.025	4.5	0.32
Agappe - IFCC	41	39.357	5.0	0.39
Colorimetric	37	36.116	10.2	0.75
Other Dry Chemistry	30	38.321	7.4	0.65
Beckman IFCC Ref. with PSP	27	38.563	4.8	0.44
Phosphate buffer, DGKC	24	37.758	7.2	0.69
Tris buffer, SCE	23	37.766	11.7	1.15
Tris buffer with PSP, NVKC	16	37.938	10.6	1.26
Beckman (Extinction Coefficient)	4	38.550	7.0	1.69
Vitros DT60/DT60 II/DTSC II	2	40.000	3.5	1.25



Amylase, Pancreatic, U/I @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	274	65.874	7.2	0.36	7.21	35
Beckman Synchron/CX/LXi/DxC	7	60.082	2.9	0.83	6.57	3
Beckman AU instruments	7	60.082	2.9	0.83	6.57	3

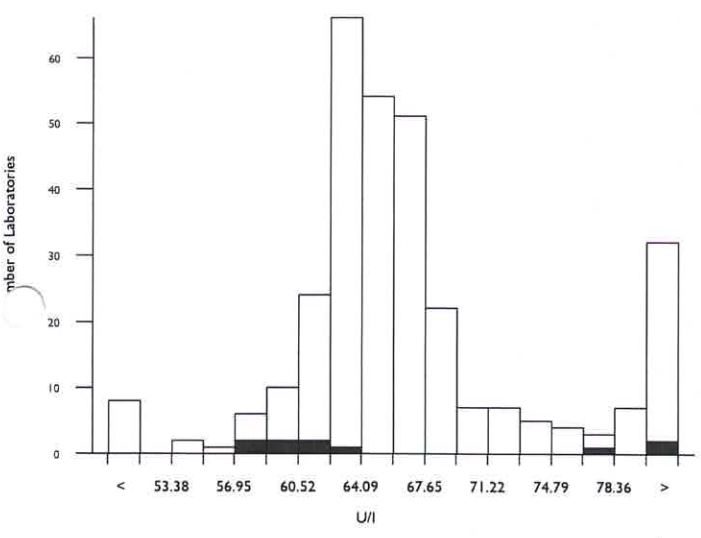
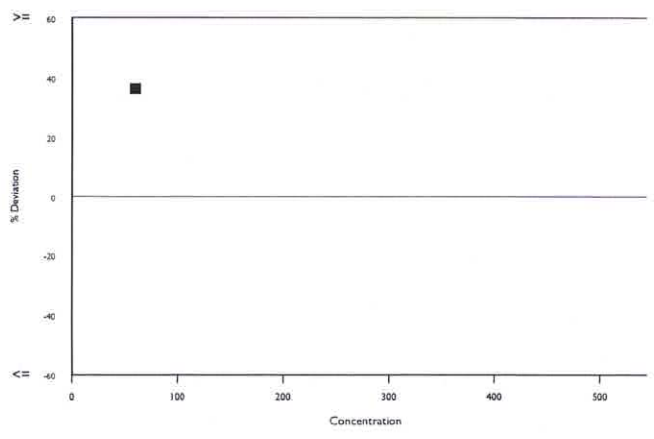
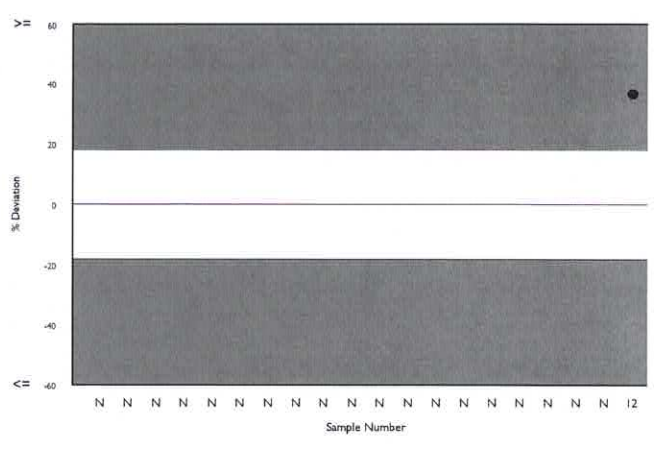
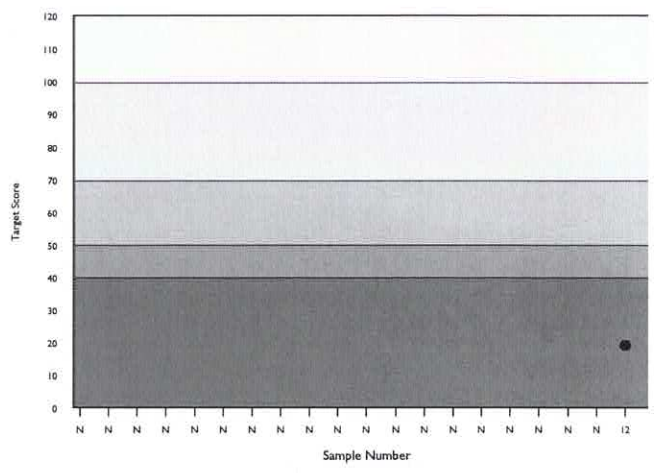
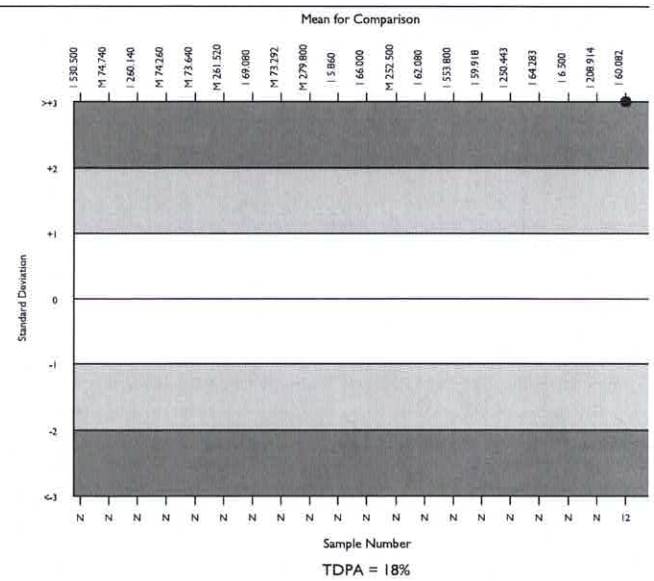
▲ Your Result	82.000	SDI	3.33
		RMSDI	Too Few
■ Mean for Comparison	60.082	TS	19
		RMTS	Too Few
		%DEV	36.5
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation: N/A

Acceptable limits of performance for RIQAS: 18.00%

SDI in bottom 5% of peer group

TS & %DEV outside limits



Method	N	Mean	CV%	U _m
Immunoinhibition, EPS substrate	130	66.797	8.5	0.62
Roche Liquid Stable pNPG7	110	64.803	2.8	0.22
Beckman Synchron/CX/LXi/DxC	7	60.082	2.9	0.83
Other Dry Chemistry	9	70.233	18.3	5.34
Amyloclastic Methods	8	64.295	30.3	8.61
Randox Liquid Stable pNPG7	5	77.240	5.9	2.53

AST (GOT), U/I @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5532	35.267	10.1	0.06	3.11	718
Beckman IFCC Ref. with P5P	20	45.322	18.4	2.33	4.62a	0
Beckman AU instruments	11	51.682	3.1	0.60	4.56	2

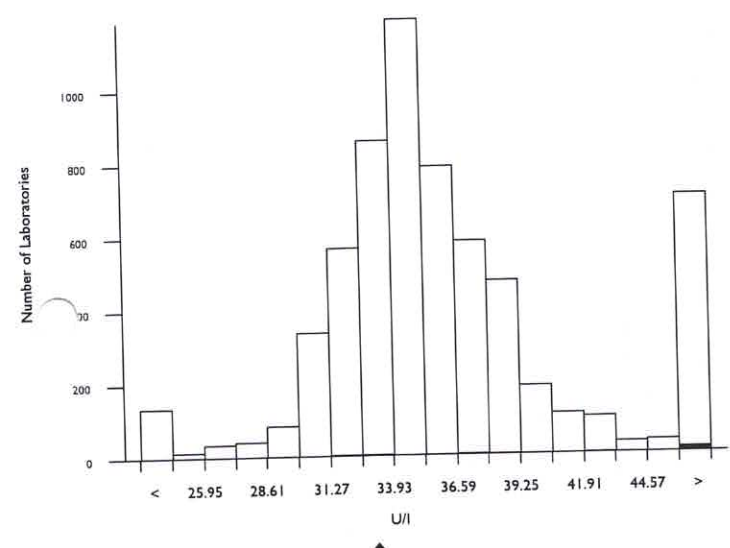
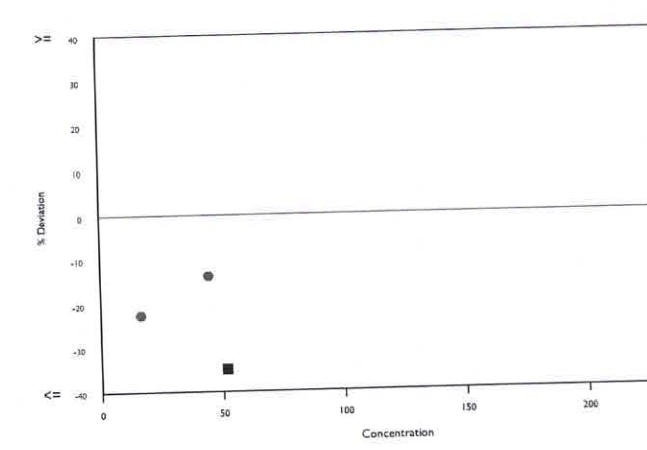
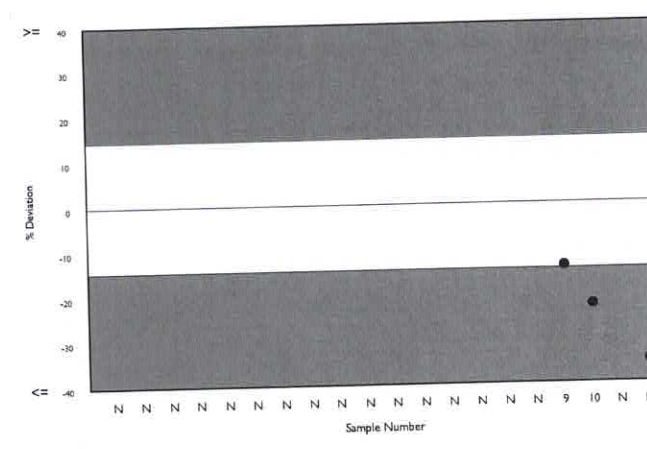
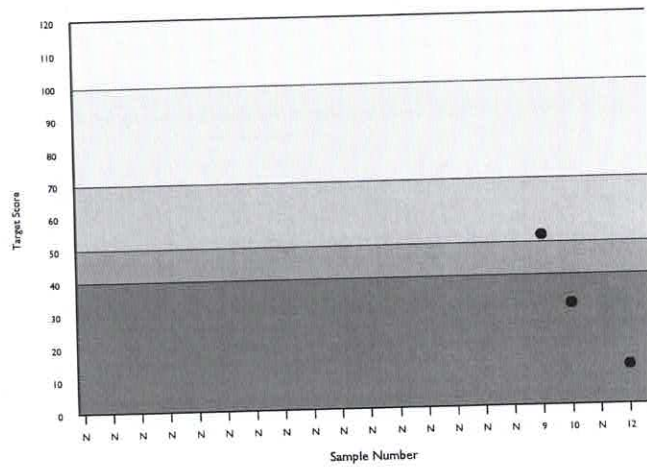
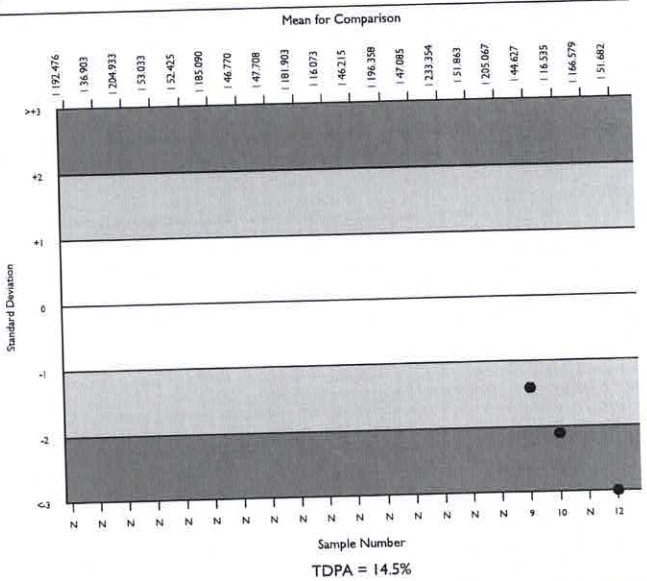
▲ Your Result	33.600	SDI	-3.97
		RMSDI	Too Few
■ Mean for Comparison	51.682	TS	12
		RMTS	Too Few
		%DEV	-35.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A

Acceptable limits of performance for RIQAS 14.50%

SDI in bottom 5% of peer group

TS & %DEV outside limits



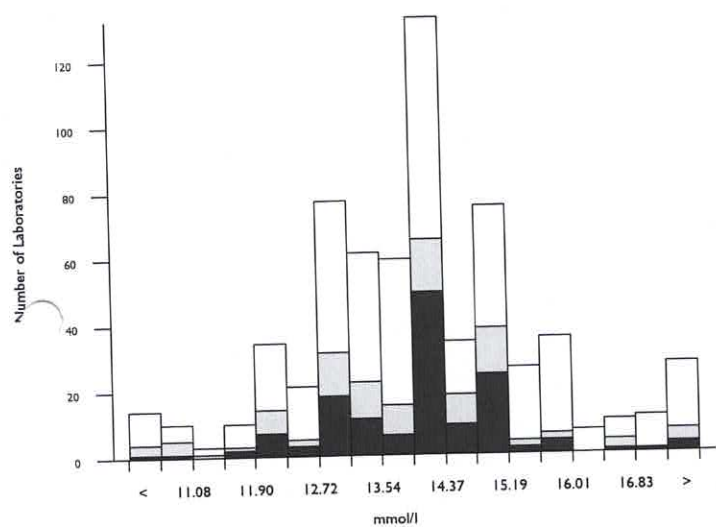
Method	N	Mean	CV%	U _m
Tris buffer without P5P	4318	34.574	7.1	0.05
Beckman Mod. IFCC Ref. without P5P	446	36.676	4.6	0.10
Tris buffer with P5P	399	47.107	16.7	0.49
Siemens/Dade standard non IFCC corr.	170	49.678	7.3	0.35
Ortho Vitros MicroSlide visible	160	51.971	4.4	0.22
Agappe - IFCC	45	35.598	9.8	0.65
Colorimetric	38	34.103	11.2	0.77
Other Dry Chemistry	26	35.327	8.3	0.72
Phosphate buffer, DGKC	24	35.467	8.3	0.76
Tris buffer, SCE	23	36.271	13.3	1.25
Tris buffer, SCE	20	45.322	18.4	2.33
Beckman IFCC Ref. with P5P	10	35.920	12.6	1.80
Tris buffer with P5P, NVKC	7	35.571	10.8	1.82
Beckman (Extinction Coefficient)	2	48.000	14.7	6.25
Vitros DT60/DT60 II/DTSC II				

Bicarbonate, mmol/l

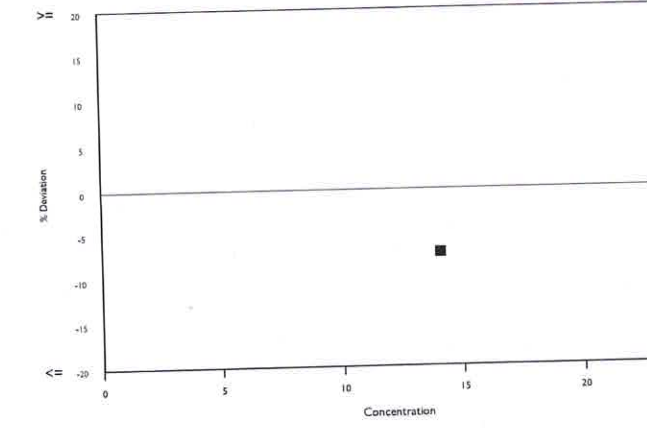
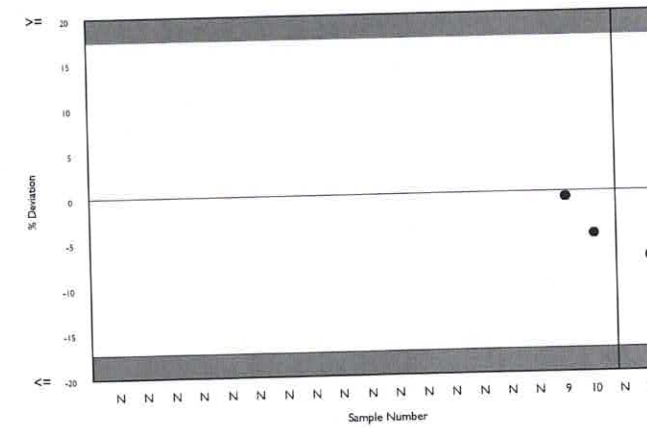
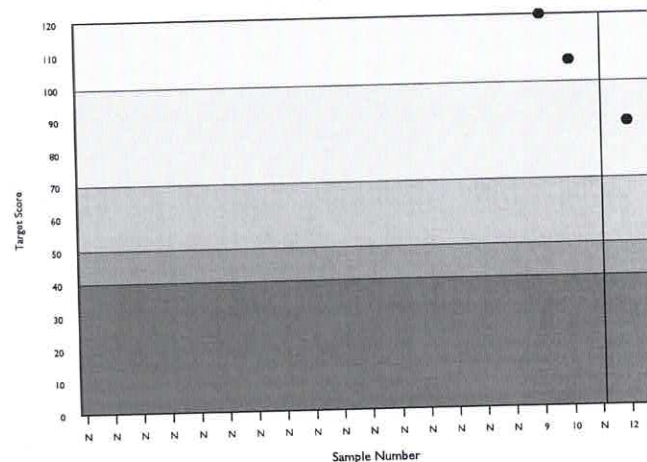
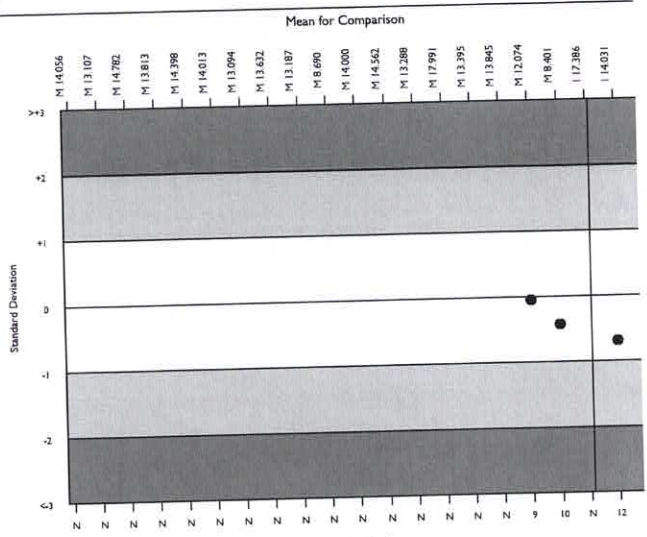
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	581	13.961	7.8	0.06	1.48	65
PEP Carboxylase	220	13.899	6.6	0.08	1.47	23
Beckman AU instruments	123	14.031	5.1	0.08	1.48	19

▲ Your Result	13.000	SDI	-0.69
		RMSDI	Too Few
■ Mean for Comparison	14.031	TS	87
		RMTS	Too Few
		%DEV	-7.3
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	17.40%



Method	N	Mean	CV%	U _m
Enzymatic	255	13.954	8.0	0.09
PEP Carboxylase	220	13.899	6.6	0.08
Ortho Vitros MicroSlide Systems	39	14.836	7.4	0.22
Colorimetric	23	13.434	7.3	0.26
Ion selective electrode	25	14.648	18.1	0.66
Other Dry Chemistry	13	14.254	14.3	0.71
Manometric	7	13.781	15.6	1.02
Differential rate pH change	6	13.500	10.1	0.69

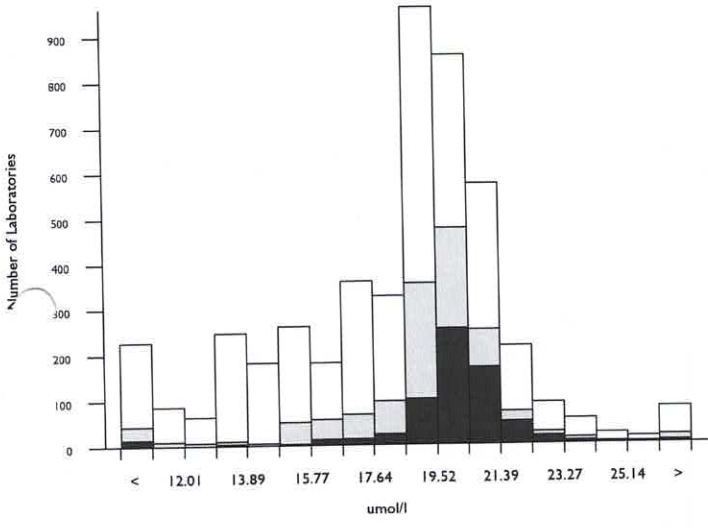
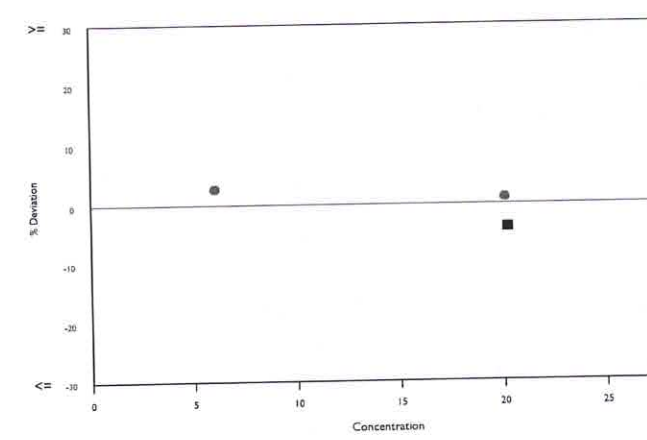
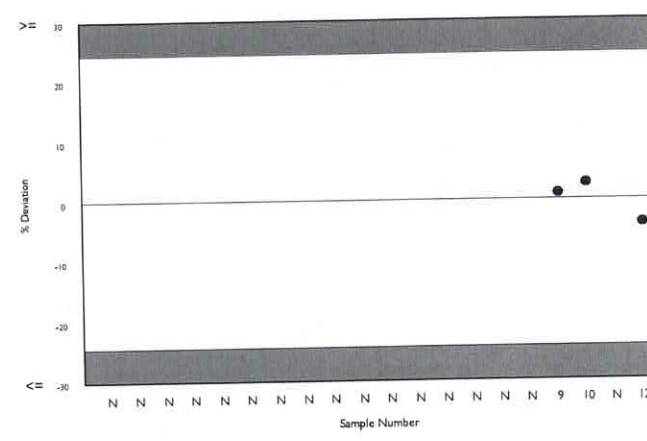
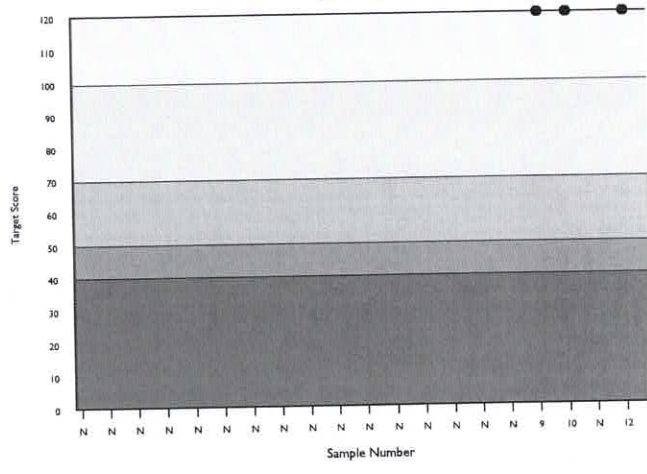
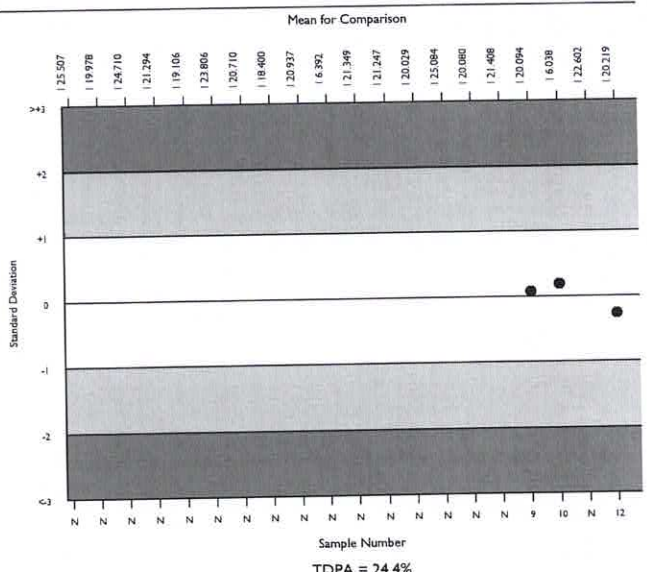


Bilirubin, Direct, umol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4365	18.583	13.5	0.05	2.76	423
Dichlorophenyl Diazonium	1360	19.714	6.2	0.04	2.92	196
Beckman AU instruments	595	20.219	4.4	0.05	3.00	71

▲ Your Result	19.400	SDI	-0.27
		RMSDI	Too Few
■ Mean for Comparison	20.219	TS	120
		RMTS	Too Few
		%DEV	-4.1
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	24.40%



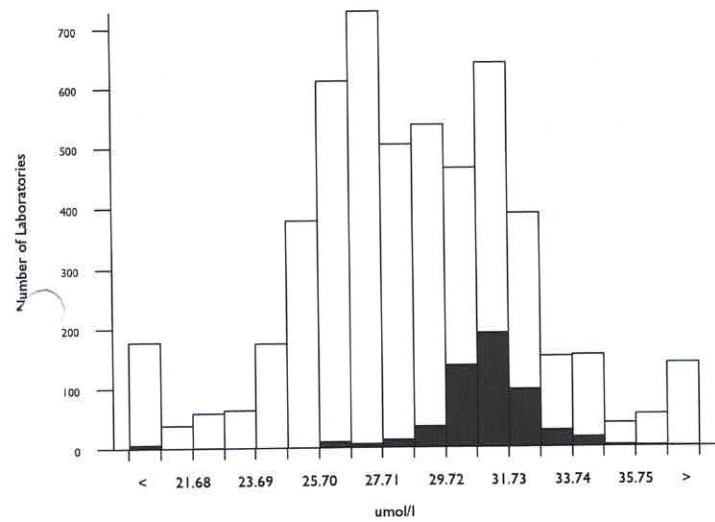
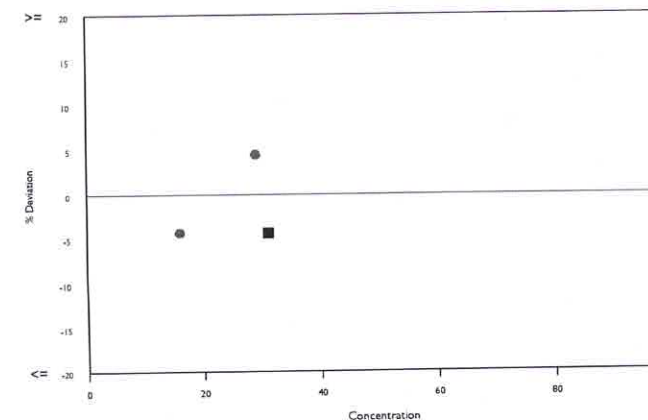
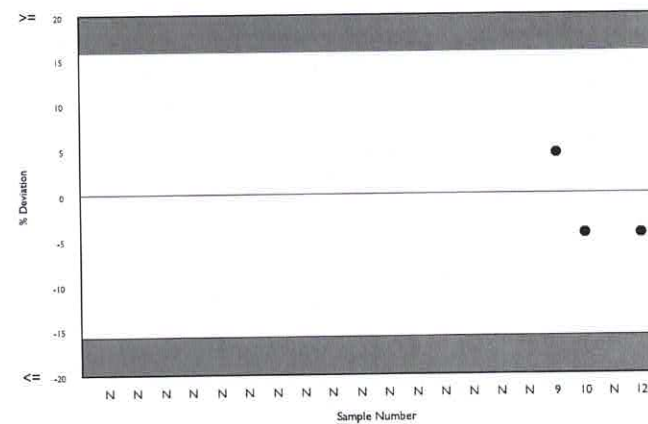
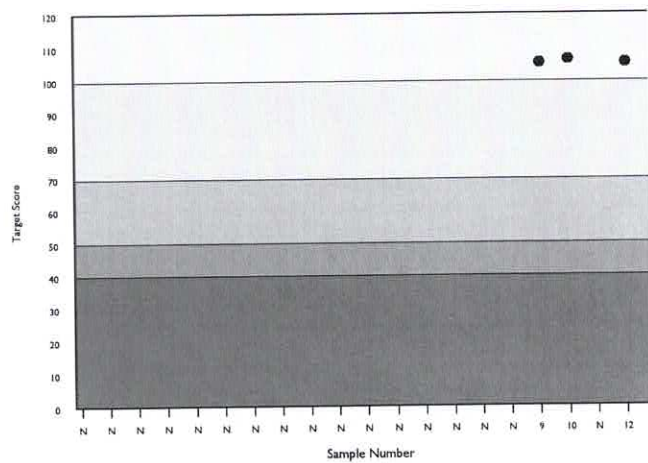
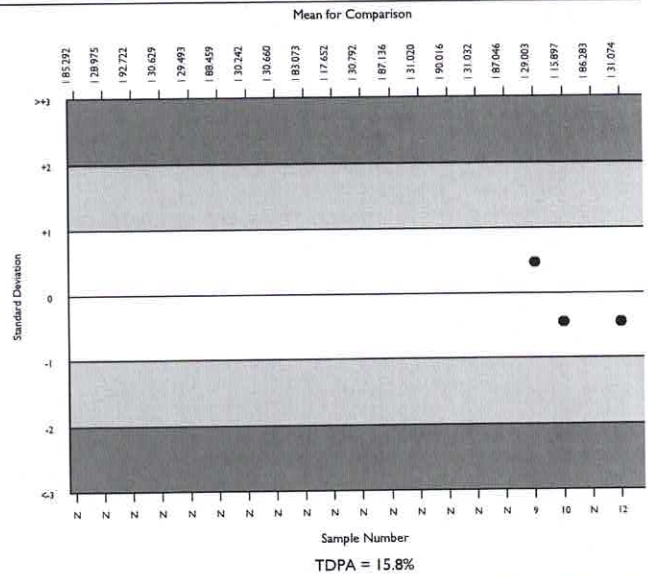
Method	N	Mean	CV%	U _m
Diazo with Sulphanilic Acid	1652	18.105	16.1	0.09
Dichlorophenyl Diazonium	1360	19.714	6.2	0.04
Diazo with Dichloroaniline	383	19.842	7.1	0.09
Diazo/ Sulphanilic Siemens Dimension	265	13.613	5.3	0.06
Oxidation to Biliverdin/Vanadate	215	19.261	7.5	0.12
Roche DPD Doumas standardised	148	17.694	10.7	0.19
Roche DPD JG standardised	132	19.175	4.6	0.10
Diazo/Sulphanilic Beckman DxC	76	16.289	16.9	0.39
Agappe - DIAZO	23	11.901	23.3	0.72
Other Dry Chemistry	23	16.712	9.8	0.43
Roche (US calibrator only)	3	21.267	15.2	2.33

Bilirubin, Total, umol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4851	28.721	9.3	0.05	2.76	449
DPD (Beckman AU)	491	31.067	3.3	0.06	2.98	52
Beckman AU instruments	484	31.074	3.2	0.06	2.98	50

▲ Your Result	29.700	SDI	-0.46
		RMSDI	Too Few
■ Mean for Comparison	31.074	TS	105
		RMTS	Too Few
		%DEV	-4.4
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	15.80%



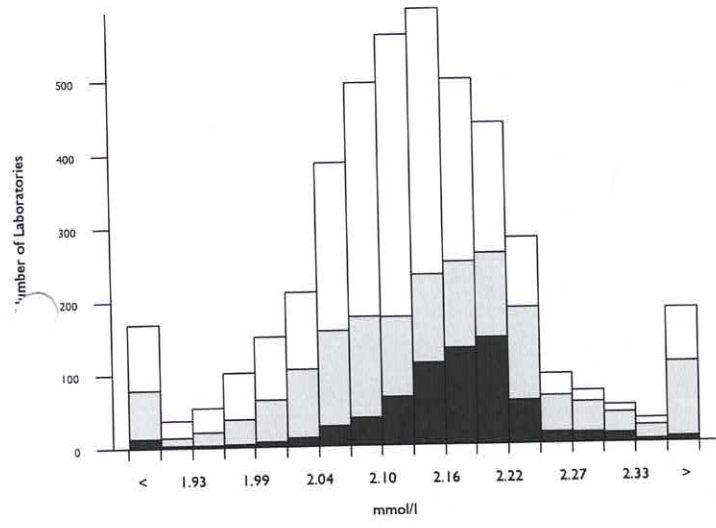
Method	N	Mean	CV%	U _m
Diazo with Sulphanilic Acid	1870	29.320	9.2	0.08
Dichlorophenyl Diazonium	1107	27.815	7.1	0.07
DPD (Beckman AU)	491	31.067	3.3	0.06
Diazonium ion	447	26.744	4.9	0.08
Diazo with Dichloroaniline	408	28.007	9.4	0.16
Oxidation to Biliverdin/Vanadate	234	31.772	6.1	0.16
Ortho Vitros MicroSlide System Total Bil	152	24.287	9.1	0.22
Other Dry Chemistry	28	25.889	6.3	0.39
Agappe - TAB	16	26.309	6.5	0.53
Nitrobenzenediazonium Salt	17	26.885	5.6	0.45
Agappe - DMSO	9	27.824	10.5	1.21
Direct Spectrophotometry	2	33.075	16.8	4.91
Vitros DT60/DT60 II Total Bil	2	27.360	8.8	2.14

Calcium, mmol/l

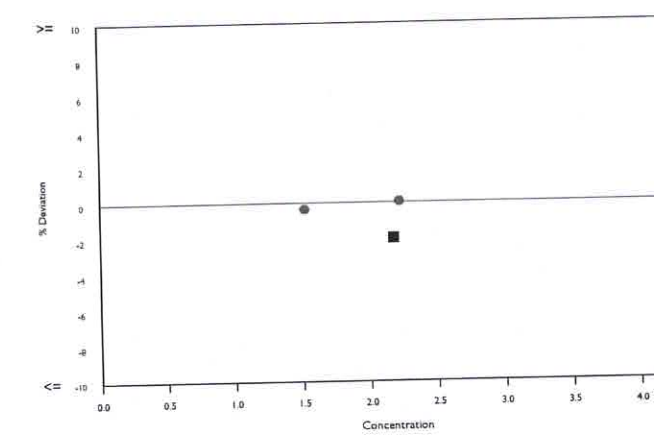
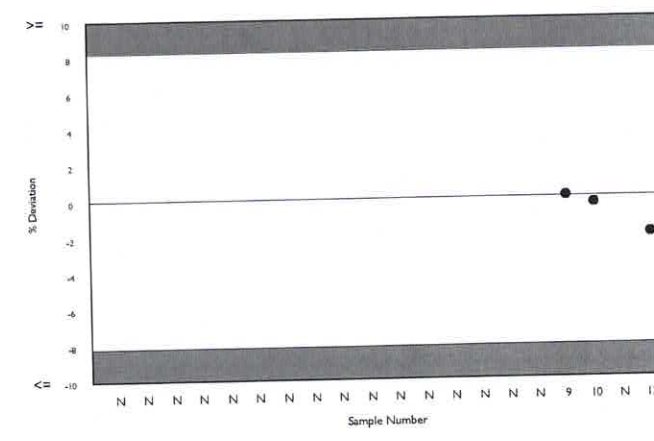
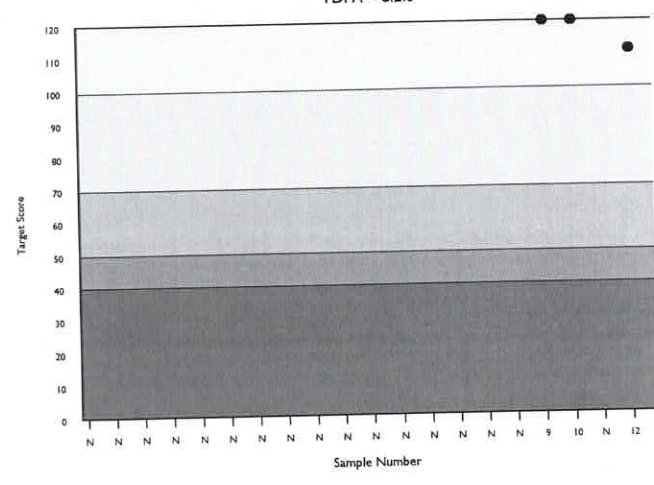
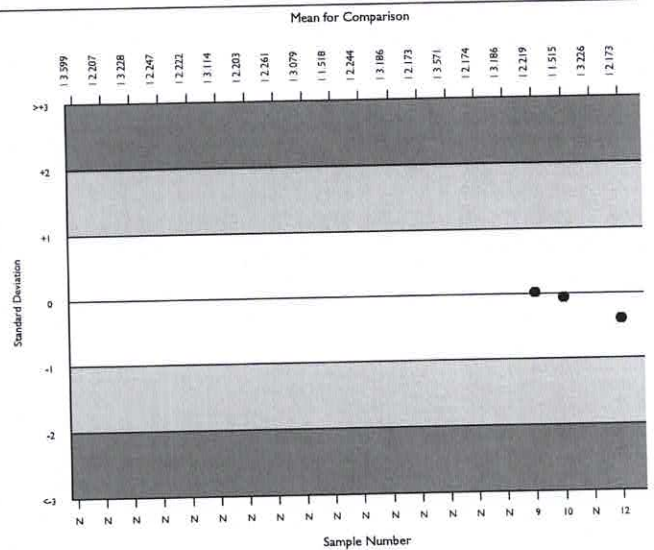
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	3984	2.135	3.6	0.00	0.11	423
Arsenazo	1856	2.152	4.0	0.00	0.11	198
Beckman AU instruments	608	2.173	2.3	0.00	0.11	64

▲ Your Result	2.130	SDI	-0.40
		RMSDI	Too Few
■ Mean for Comparison	2.173	TS	111
		RMTS	Too Few
		%DEV	-2.0
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 8.20%



Method	N	Mean	CV%	U _m
Arsenazo	1856	2.152	4.0	0.00
Cresolphthalein complexone	1095	2.107	3.6	0.00
NM-BAPTA	712	2.128	2.1	0.00
Ortho Vitros MicroSlide Systems	151	2.189	2.2	0.00
Ion selective electrode	81	2.119	3.9	0.01
Other Dry Chemistry	24	2.124	3.7	0.02
Agappe - ARSENAZO	20	2.062	3.4	0.02
Phosphonazo	19	2.148	4.0	0.02
Methylthymol blue	16	2.128	6.5	0.04
Agappe - OCPC	3	1.988	6.5	0.09
Atomic absorption	2	2.250	9.4	0.19
Vitros DT60/DT60 II/DTSC II	2	2.195	0.3	0.01



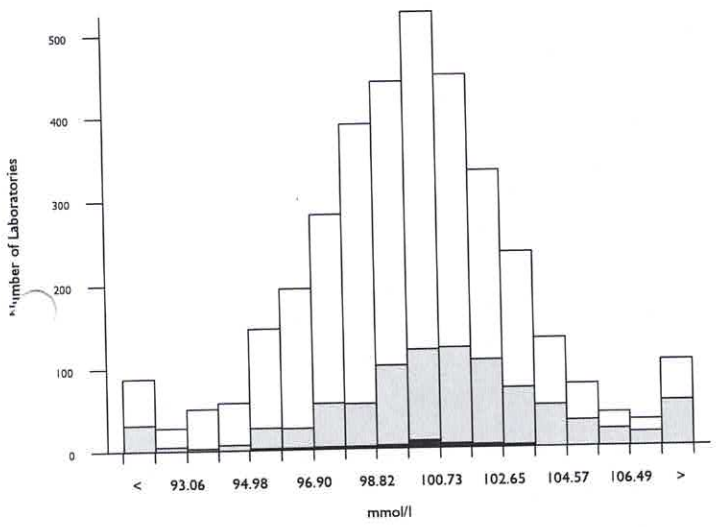
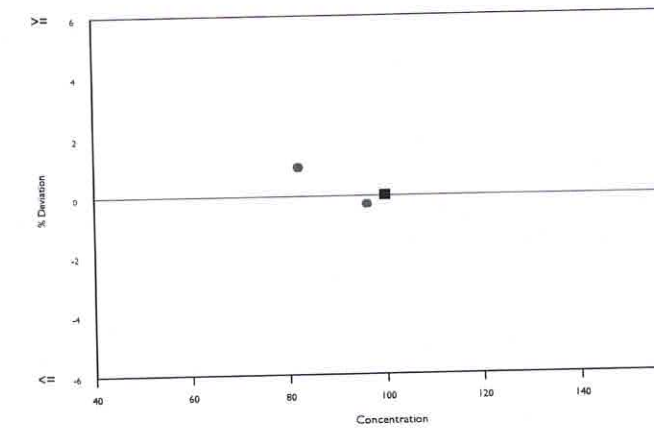
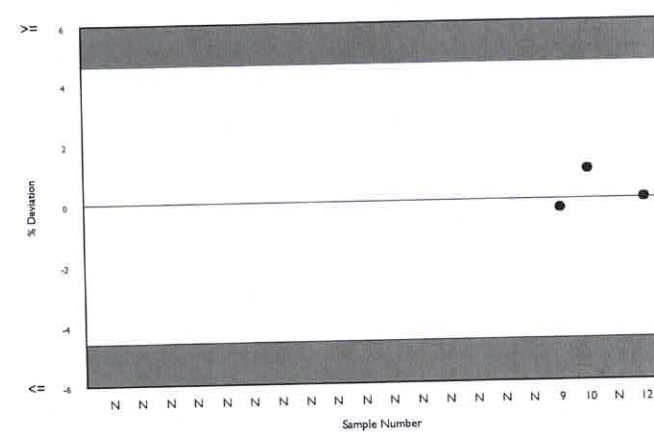
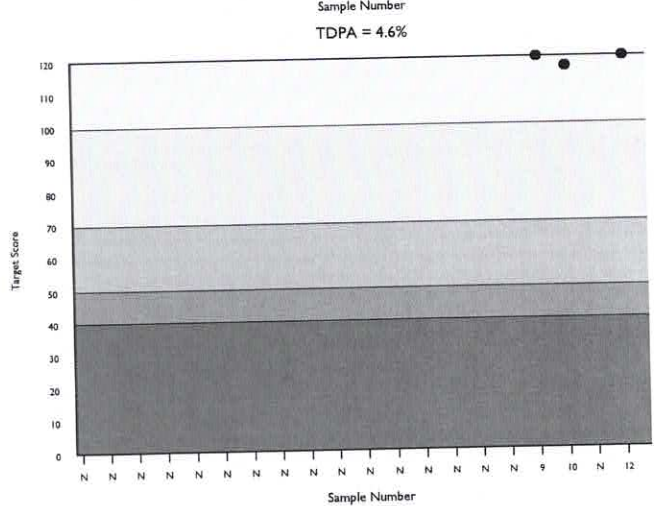
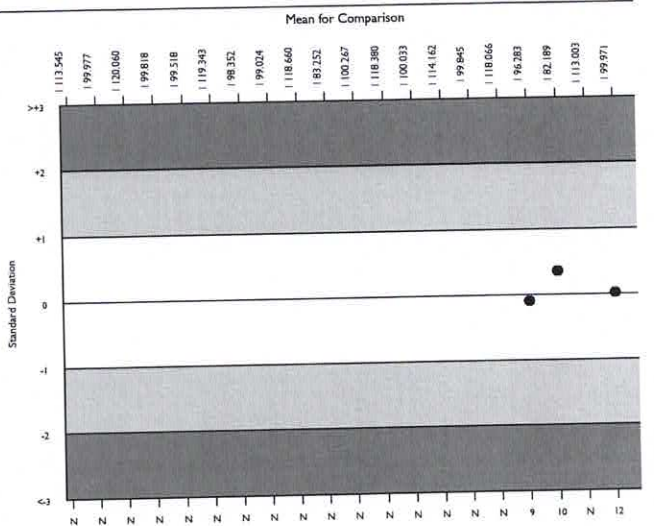
Chloride, mmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	3316	99.780	2.6	0.06	2.79	282
ISE, direct	817	100.787	2.8	0.12	2.82	89
Beckman AU instruments	33	99.971	1.9	0.41	2.80	2

▲ Your Result	100.000	SDI	0.01
		RMSDI	Too Few
■ Mean for Comparison	99.971	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 4.60%



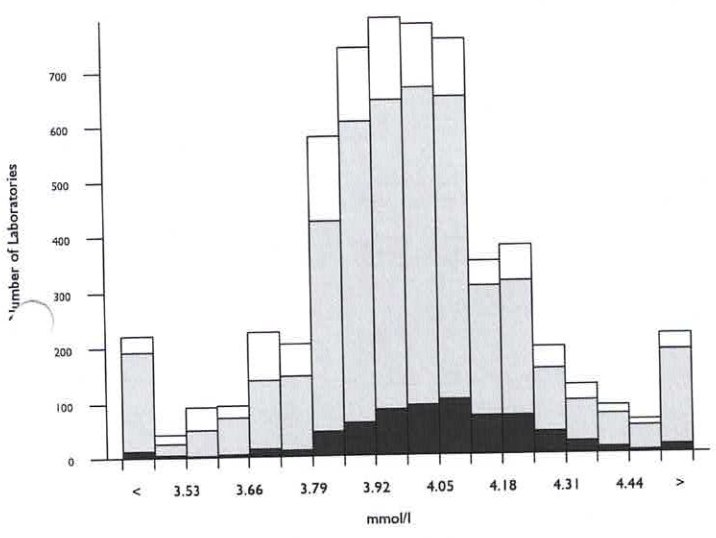
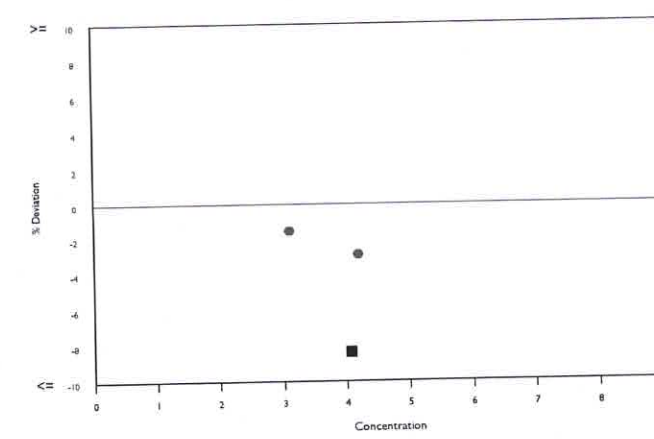
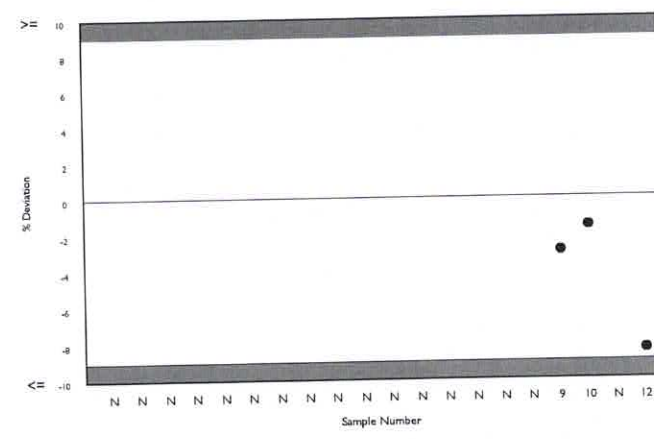
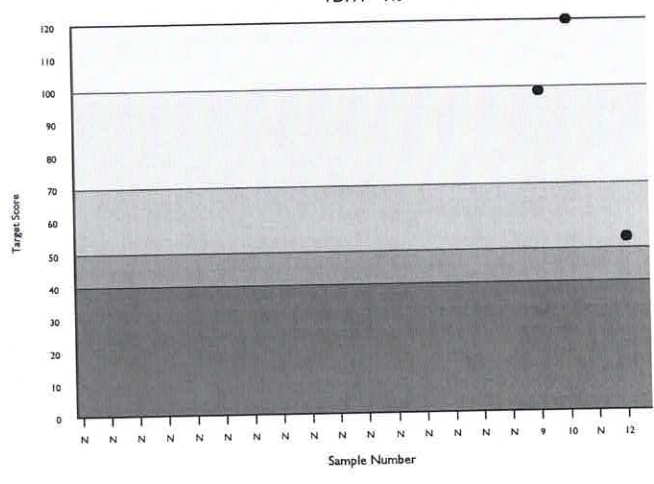
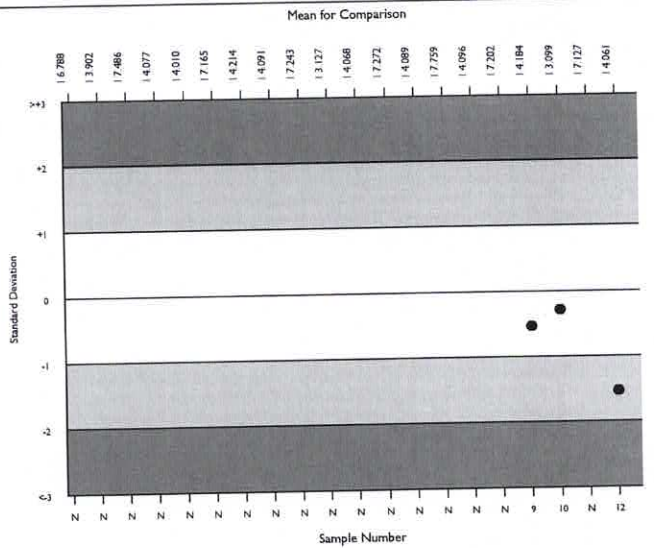
Method	N	Mean	CV%	U _m
ISE, indirect	2243	99.271	2.4	0.06
ISE, direct	817	100.787	2.8	0.12
Colorimetric	105	100.935	3.0	0.37
Ortho Vitros MicroSlide Systems	111	101.303	1.9	0.23
Other Dry Chemistry	21	102.938	2.4	0.68
Optical Fluorescence	9	111.833	2.1	0.97
Agappe - THIOCYANATE	6	101.050	1.2	0.60

Cholesterol, mmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5373	3.990	4.3	0.00	0.22	556
Cholesterol Oxidase - Abell Kendall	4313	4.001	4.2	0.00	0.22	474
Beckman AU instruments	610	4.061	3.7	0.01	0.22	55

▲ Your Result	3.720	SDI	-1.53
		RMSDI	Too Few
■ Mean for Comparison	4.061	TS	53
		RMTS	Too Few
		%DEV	-8.4
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	9.00%



Method	N	Mean	CV%	U _m
Cholesterol Oxidase - Abell Kendall	4313	4.001	4.2	0.00
Cholesterol Oxidase - IDMS	526	3.994	4.3	0.01
Siemens Dimension	225	3.750	3.4	0.01
Ortho Vitros MicroSlide Systems	155	3.966	3.3	0.01
Cholesterol Dehydrogenase	63	4.056	5.0	0.03
Agappe - CHOD-PAP	40	3.926	5.4	0.04
Other Dry Chemistry	32	4.033	6.4	0.06
Vitros DT60/DT60 II/DTSC II	2	3.874	0.9	0.03

CK, Total, U/l @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	2751	190.371	6.8	0.31	13.89	278
Beckman CK-NAC (IFCC)	456	200.301	5.8	0.69	14.61	41
Beckman AU instruments	441	200.555	5.7	0.68	14.63	43

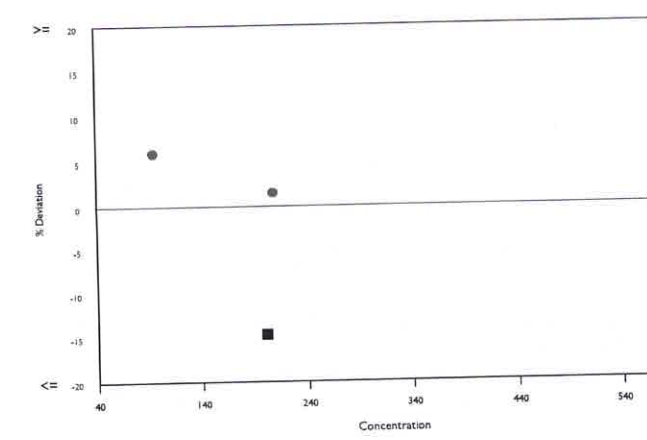
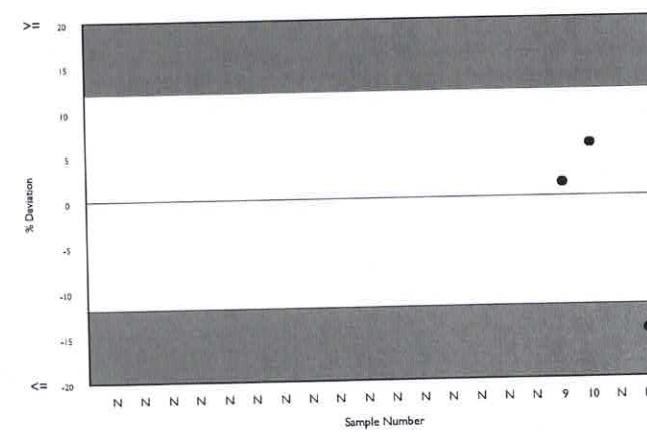
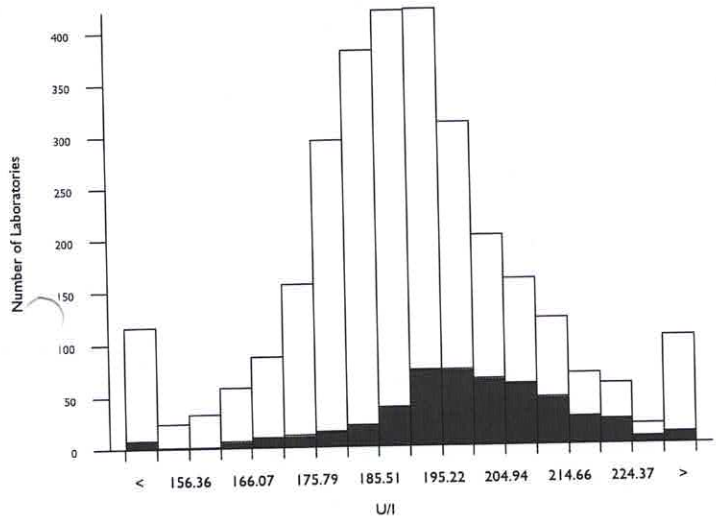
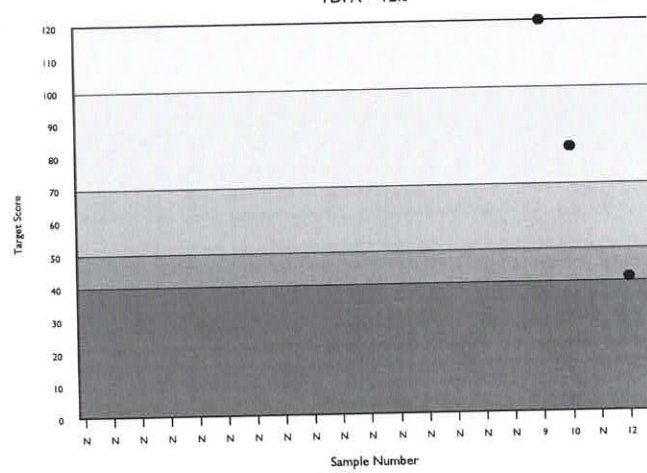
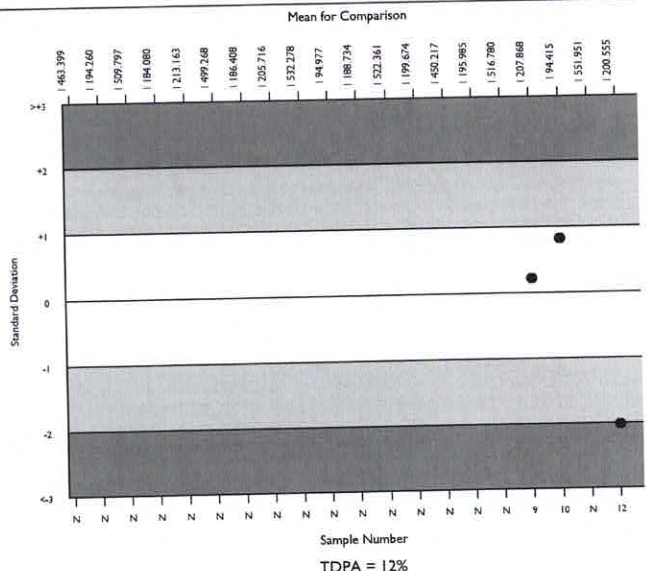
▲ Your Result	171.000	SDI	-2.02
		RMSDI	Too Few
■ Mean for Comparison	200.555	TS	41
		RMTS	Too Few
		%DEV	-14.7
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A

Acceptable limits of performance for RIQAS 12.00%

SDI in bottom 5% of peer group

TS & %DEV outside limits



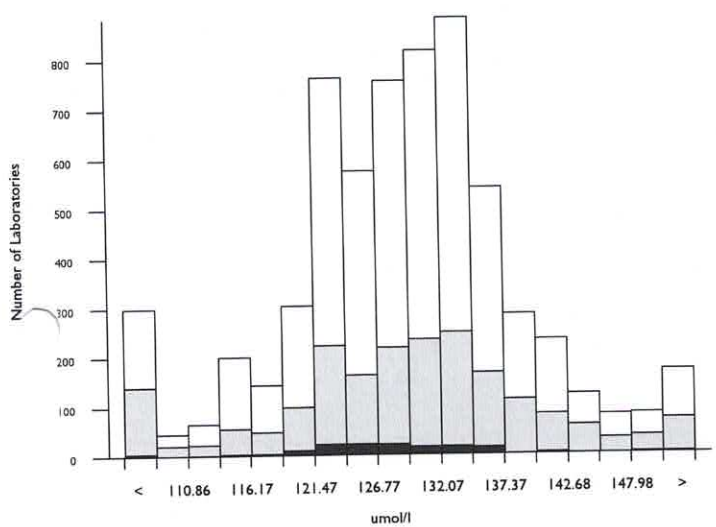
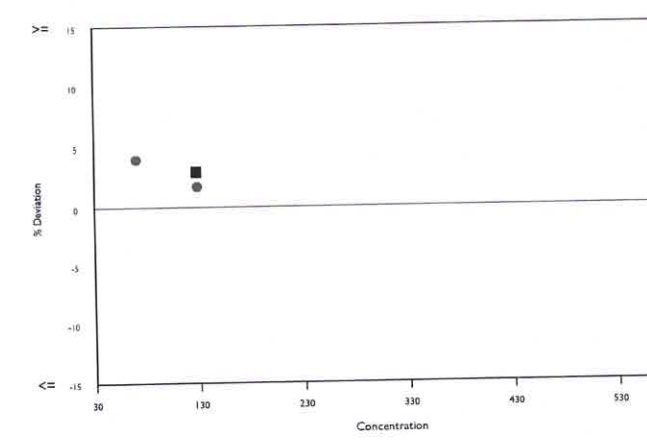
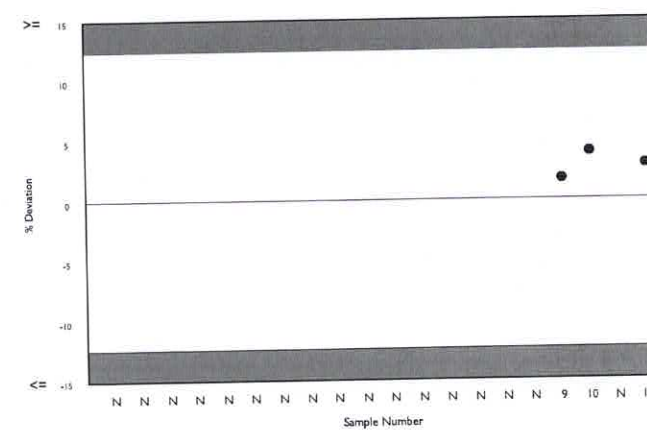
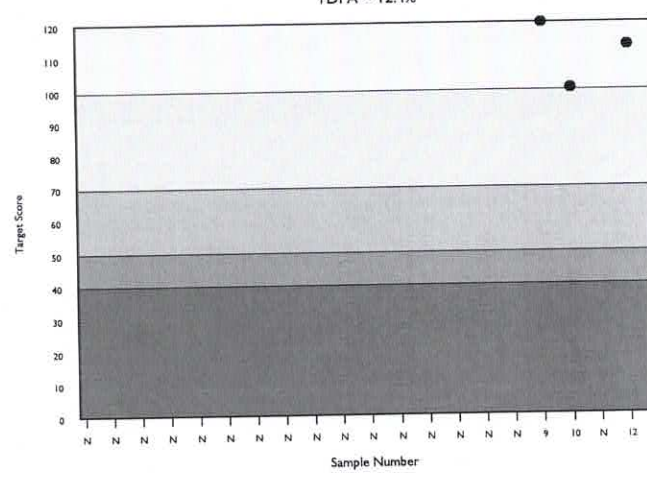
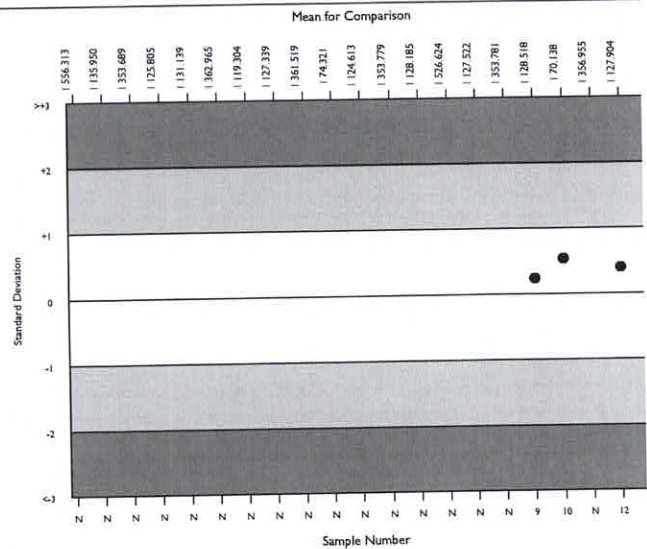
Method	N	Mean	CV%	U _m
CK-NAC (IFCC)	1577	188.295	6.0	0.36
Beckman CK-NAC (IFCC)	456	200.301	5.8	0.69
Abbott CK-NAC (IFCC)	217	192.243	5.2	0.85
CK-NAC substrate start (DGKC)	119	189.710	8.2	1.77
Ortho Vitros MicroSlide Systems	113	174.279	8.4	1.72
Creatine phosphate substrate start	97	186.738	5.6	1.32
CK-NAC serum start (DGKC)	75	189.566	10.4	2.85
Monothioglycerol	40	191.546	4.7	1.79
Agappe - IFCC/KINETIC	14	192.649	6.2	3.96
Other Dry Chemistry	14	254.804	8.7	7.38
Beckman CK-NAC (Extinction Coeff)	11	201.767	5.4	4.09
Dithioerythritol (DTE), IFCC correlated	7	179.129	20.2	17.09

Creatinine, umol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5743	129.426	5.5	0.12	9.76	611
Alkaline picrate no deproteinisation	1801	130.141	6.3	0.24	9.81	210
Beckman AU instruments	119	127.904	3.9	0.57	9.64	17

▲ Your Result	131.600	SDI	0.38
		RMSDI	Too Few
■ Mean for Comparison	127.904	TS	113
		RM _{TS}	Too Few
		%DEV	2.9
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	12.40%



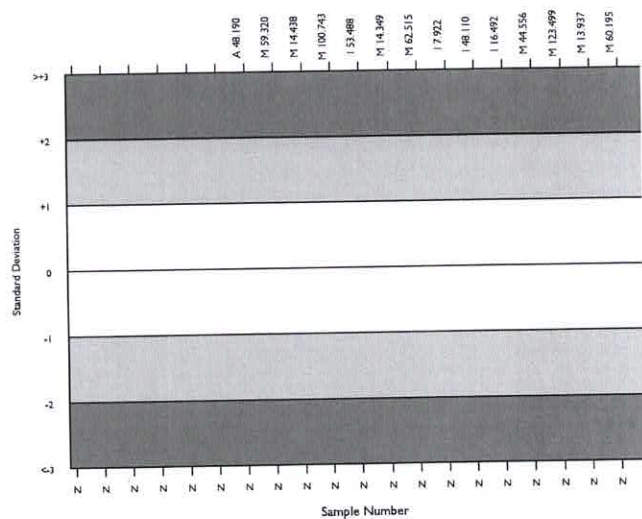
Method	N	Mean	CV%	U _m
Alkaline picrate no deproteinisation	1801	130.141	6.3	0.24
Jaffe rate blanked	1321	129.887	5.5	0.24
Jaffe rate blanked comp. (-26umol/l)	643	130.600	4.3	0.27
Jaffe rate comp. (-18umol/l)	395	125.673	4.7	0.37
Roche Creatinine Plus	278	131.586	3.8	0.38
Enzymatic UV method (340nm)	249	128.950	4.5	0.46
Creatinine PAP method	243	128.980	4.9	0.50
IDMS traceable	221	129.217	4.8	0.52
Other enzymatic methods	153	129.022	4.7	0.61
Alkaline picrate with deproteinisation	140	129.952	7.0	0.96
Vitros, IDMS traceable	134	122.838	2.9	0.38
Jaffe rate blanked comp. (-33umol/l)	56	132.184	5.3	1.17
Other Dry Chemistry	41	125.589	9.5	2.34
Agappe - JAFFE'S KINETIC	28	127.394	8.3	2.49
Agappe - ENZYMATIC	18	132.024	8.1	3.14
Vitros DT60/DT60 II/DTSC II	13	126.192	4.7	2.05

EGFR (Pilot), ml/min/1.73m2

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	60	61.268	11.4	1.12	6.96	8
MDRD Equation	26	60.195	11.5	1.70	6.93	4
Beckman AU instruments	4	56.835	20.0	7.09	13.38a	0

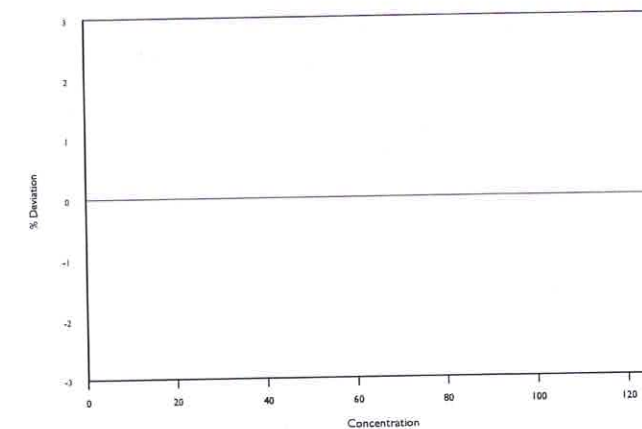
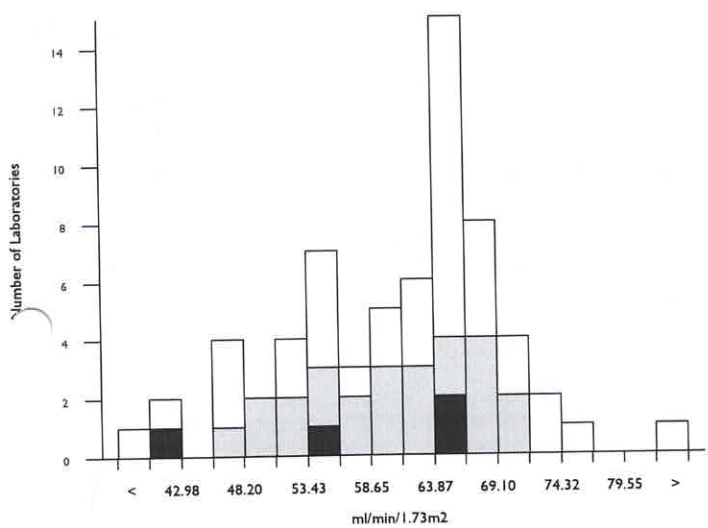
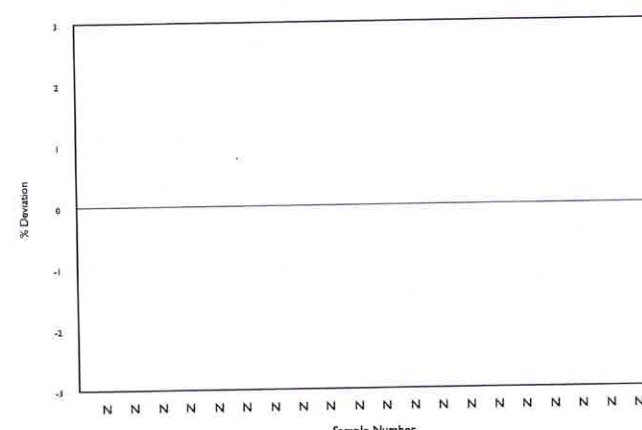
- All Methods
- MDRD Equation
- Beckman AU instruments

Mean for Comparison



▲ Your Result	No Result	SDI	
		RMSDI	Too Few
□ Mean for Comparison	60.195	TS	
		RMTS	N/A
		%DEV	
		RM%DEV	Too Few

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



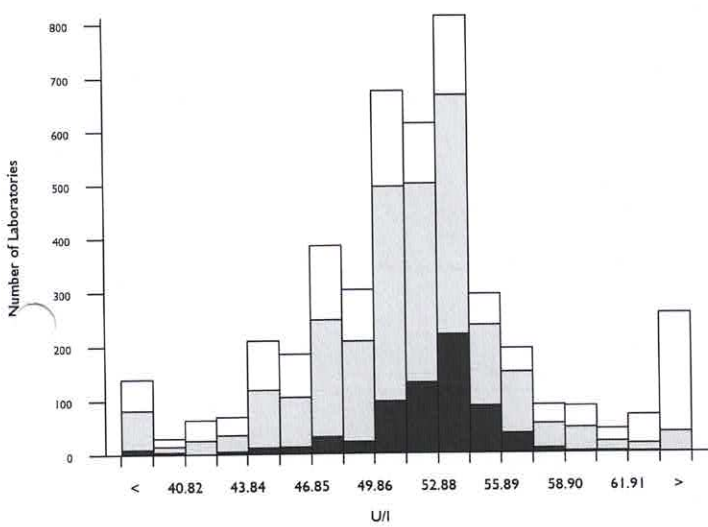
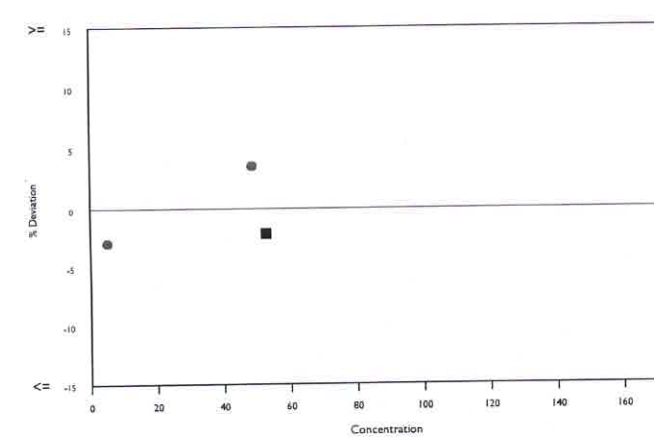
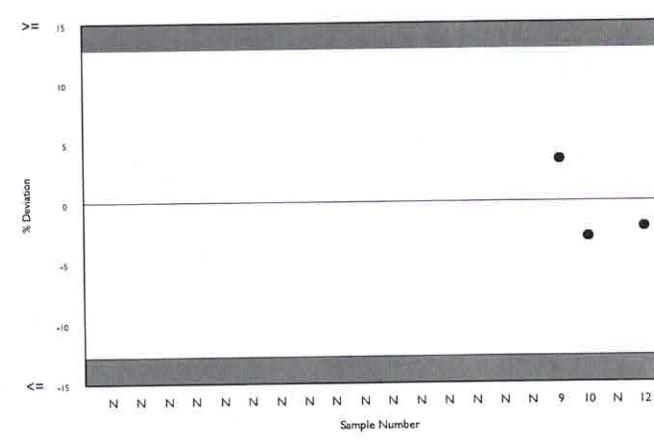
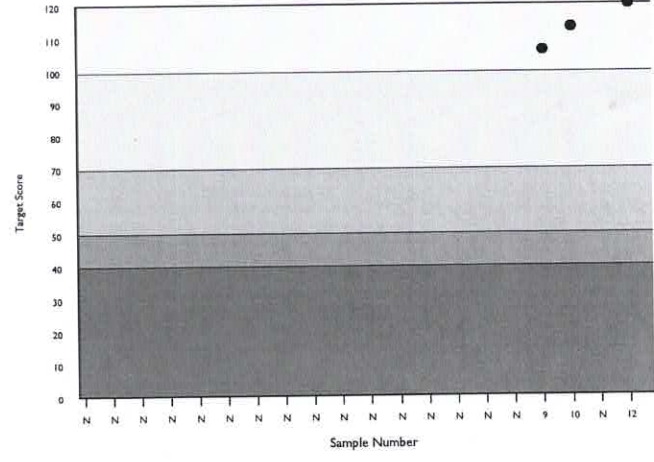
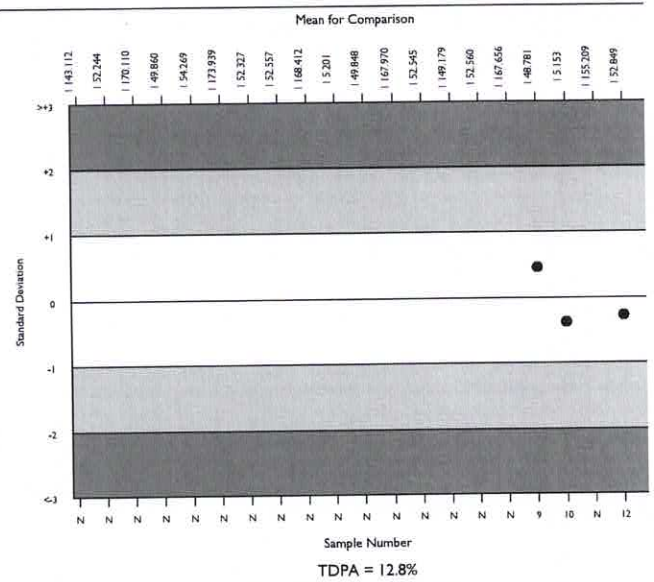
Method	N	Mean	CV%	U _m
CKD-EPI Equation	34	62.939	11.0	1.49
MDRD Equation	26	60.195	11.5	1.70

GGT, U/I @ 37°C

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4060	51.374	7.8	0.08	4.00	461
Gamma glut'3-carb'4-nitro(IFCC)	2805	51.628	6.1	0.07	4.02	260
Beckman AU instruments	620	52.849	3.8	0.10	4.11	69

▲ Your Result	51.700	SDI	-0.28
		RMSDI	Too Few
■ Mean for Comparison	52.849	TS	120
		RMTS	Too Few
		%DEV	-2.2
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 12.80%



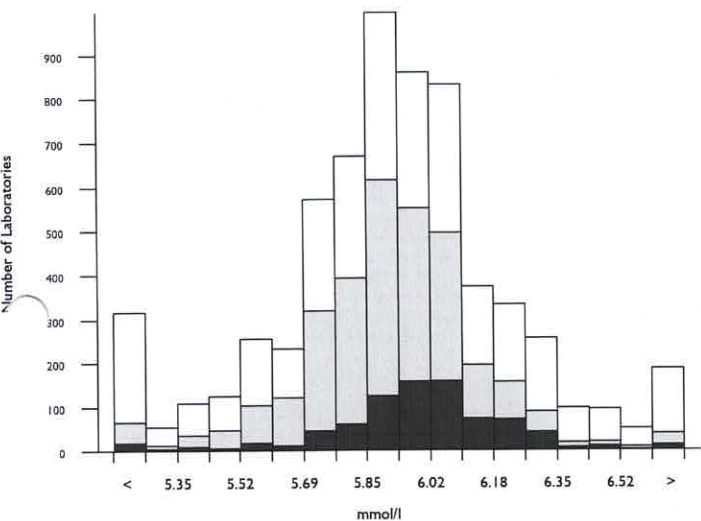
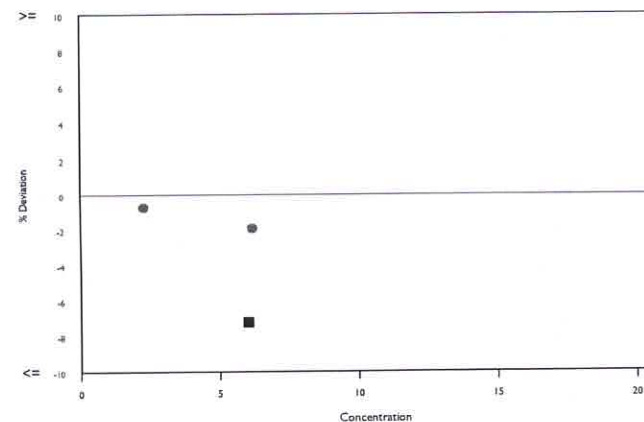
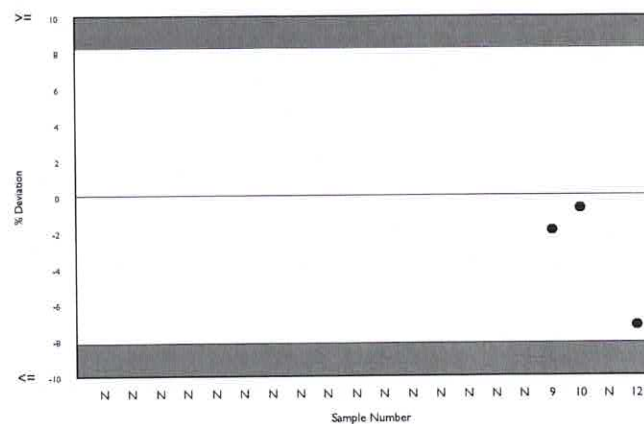
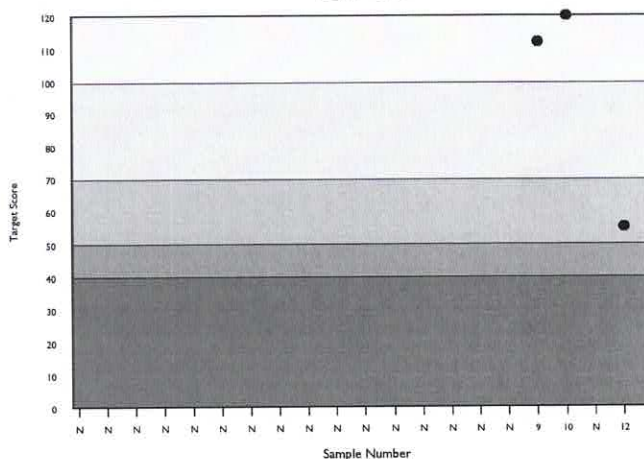
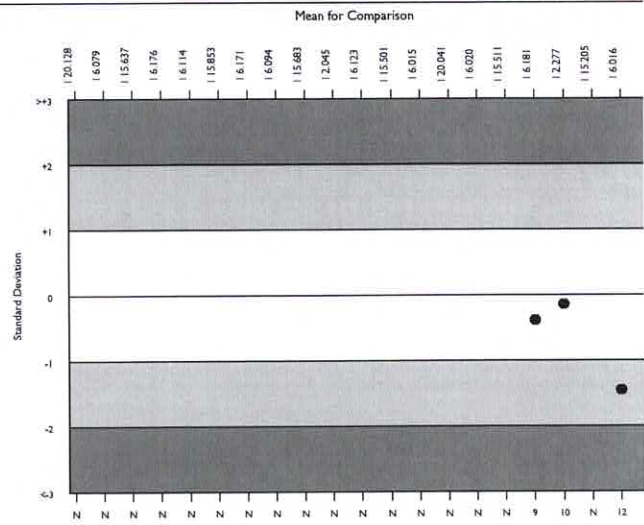
Method	N	Mean	CV%	U _m
Gamma glut'3-carb'4-nitro(IFCC)	2805	51.628	6.1	0.07
Gamma glut.-3-carb.-4-nitro.	779	49.559	7.8	0.17
Siemens Dimension	190	64.578	5.5	0.32
Ortho Vitros MicroSlide Systems	121	63.392	3.8	0.27
DCL, gamma glut-3-carb.-4-nitro.	75	51.086	5.9	0.44
Gamma glutamyl-4-nitroanilide	74	46.161	11.8	0.79
Beckman Szasz (Extinction Coeff.)	41	51.752	6.1	0.62
Agappe - SZASZ KINETIC	27	52.454	8.9	1.13
Other Dry Chemistry	17	47.441	9.6	1.38
Vitros, DT60/DT60 II/DTSC II	2	60.000	0.0	0.00

Glucose, mmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5791	5.939	3.7	0.00	0.30	607
Hexokinase	3027	5.939	2.8	0.00	0.30	248
Beckman AU instruments	741	6.016	2.6	0.01	0.30	80

▲ Your Result	5.580	SDI	-1.45
		RMSDI	Too Few
■ Mean for Comparison	6.016	TS	55
		RMTS	Too Few
		%DEV	-7.2
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 8.20%



Method	N	Mean	CV%	U _m
Hexokinase	3027	5.939	2.8	0.00
Glucose oxidase	2464	5.949	5.0	0.01
Ortho Vitros MicroSlide Systems	161	5.906	3.0	0.02
Glucose dehydrogenase	62	5.963	4.3	0.04
Agappe - GOD-PAP	39	5.874	4.6	0.05
Other Dry Chemistry	27	5.926	4.9	0.07
GOD/02-Beckman method	20	5.874	4.0	0.07
Oxygen electrode	15	5.851	2.2	0.04
Vitros, DT60/DT60 II	2	5.800	4.9	0.25

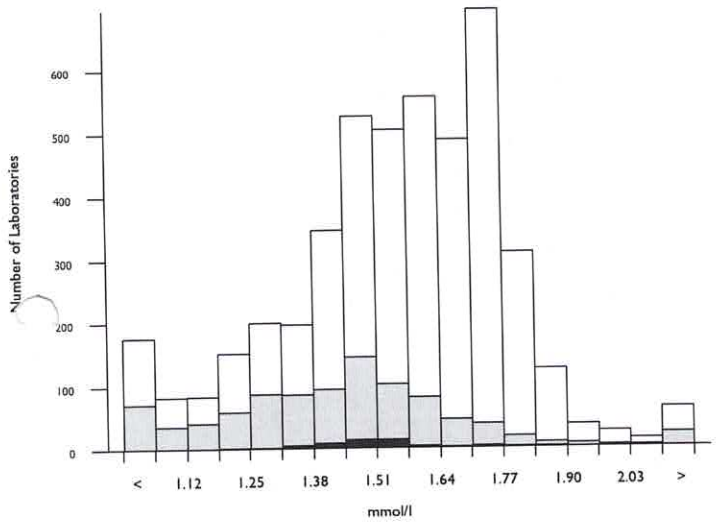
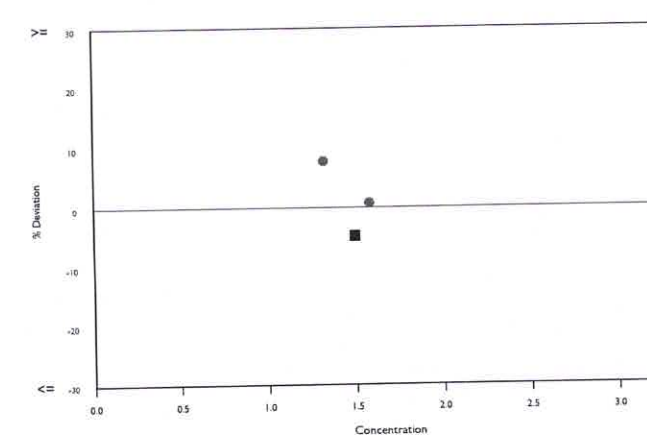
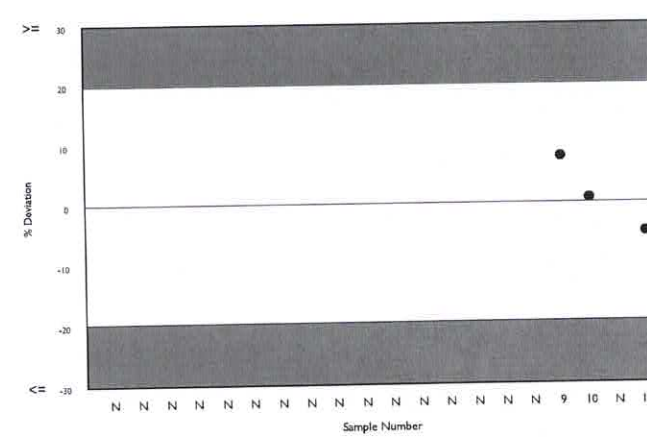
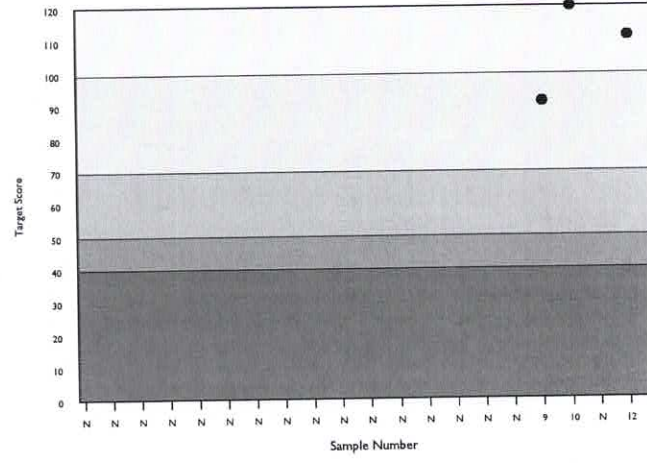
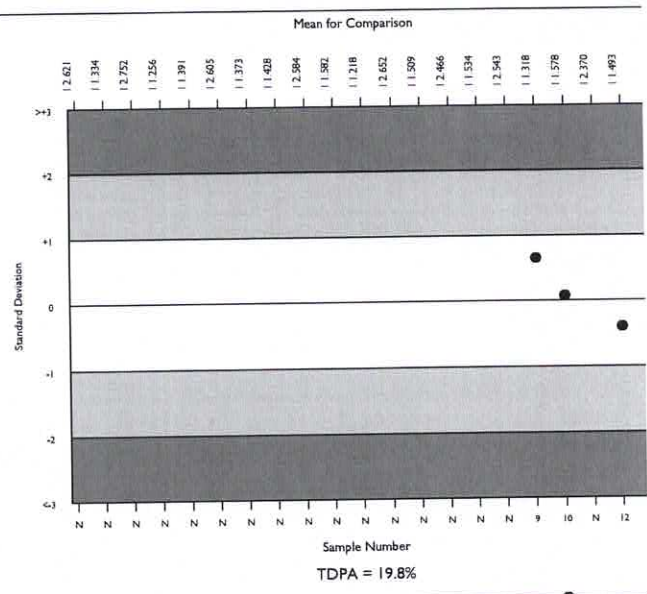
HDL-Cholesterol, mmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4184	1.580	10.9	0.00	0.19	382
Direct HDL, Clearance method	862	1.430	13.4	0.01	0.17	74
Beckman AU instruments	45	1.493	6.1	0.02	0.18	5

▲ Your Result	1.420	SDI	-0.41
		RMSDI	Too Few
■ Mean for Comparison	1.493	TS	111
		RMTS	Too Few
		%DEV	-4.9
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A

Acceptable limits of performance for RIQAS 19.80%



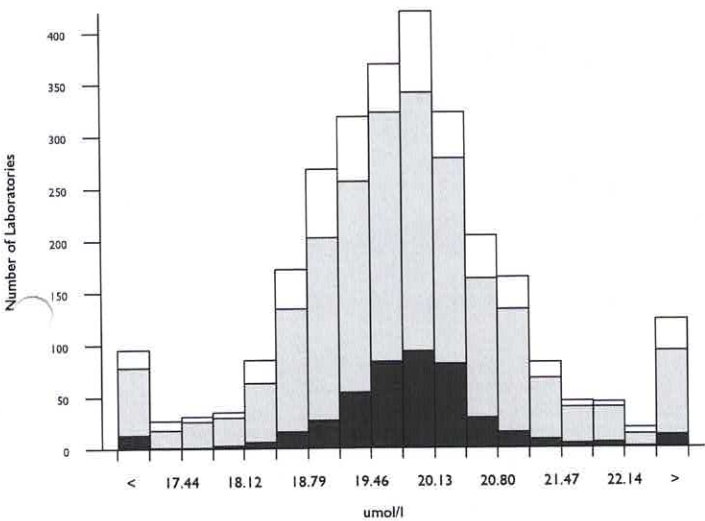
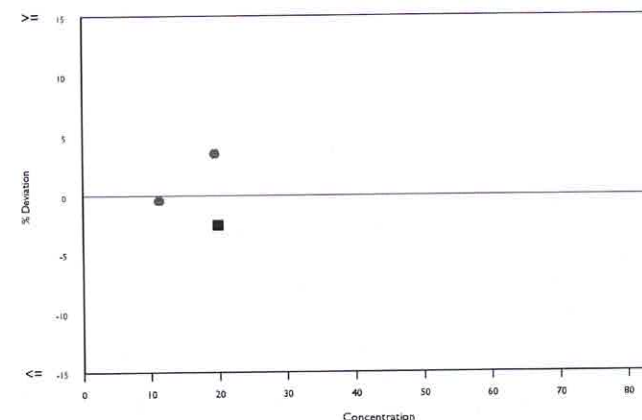
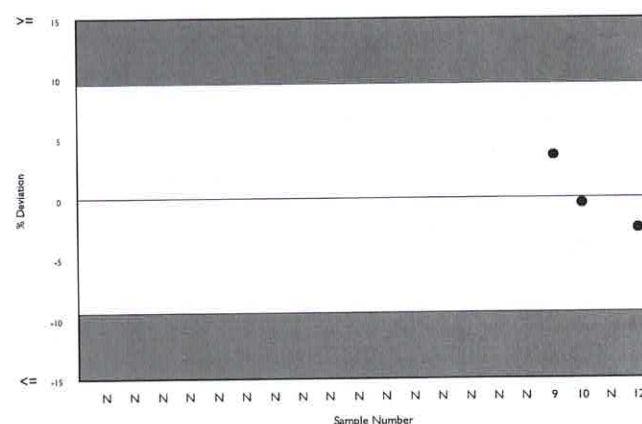
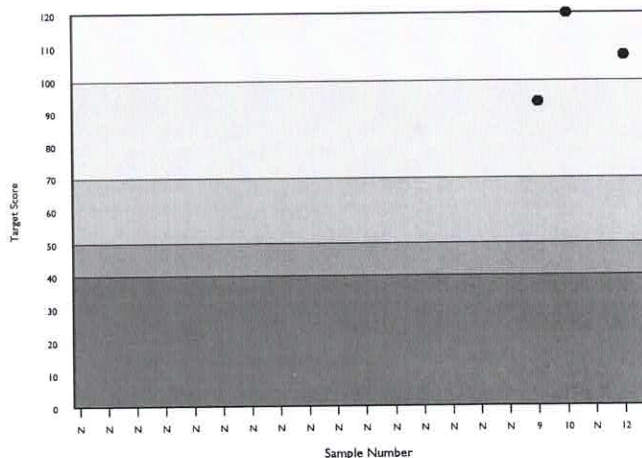
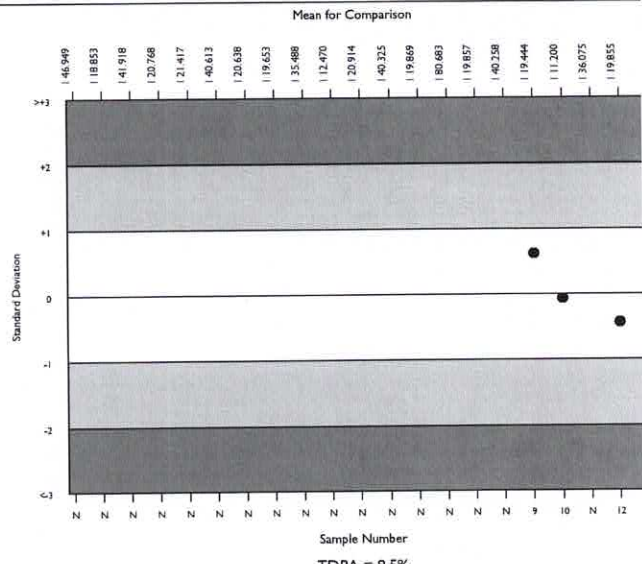
Method	N	Mean	CV%	U _m
Direct HDL, Roche 4th gen.	1075	1.743	3.5	0.00
Direct HDL, Immunoseparation	847	1.483	7.7	0.00
Direct HDL, Clearance method	862	1.430	13.4	0.01
Direct HDL, PEGME	421	1.523	14.0	0.01
HDL Ultra/Accel Selective Detergent	414	1.569	6.3	0.01
Direct HDL, PPD	290	1.588	8.6	0.01
Vitros dHDL, PTA/MgCl ₂ direct precip.	129	1.620	7.7	0.01
Other Dry Chemistry	32	1.726	9.4	0.04
Agappe - SELECTIVE INHIBITION	28	1.679	7.9	0.03
Vitros, Magnetic HDL	20	1.636	8.2	0.04
Vitros 5.1 FS Microtip assay	13	1.601	6.6	0.04

Iron, umol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	2563	19.799	4.5	0.02	1.14	260
Colorimetric without ppt.	2093	19.815	4.5	0.02	1.14	202
Beckman AU instruments	402	19.855	2.9	0.04	1.15	50

▲ Your Result	19.350	SDI	-0.44
		RMSDI	Too Few
■ Mean for Comparison	19.855	TS	107
		RMTS	Too Few
		%DEV	-2.5
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 9.50%



Method	N	Mean	CV%	U _m
Colorimetric without ppt.	2093	19.815	4.5	0.02
Colorimetric with ppt.	314	19.539	4.4	0.06
Ortho Vitros MicroSlide Systems	104	20.245	5.2	0.13
Other method with blank	28	19.723	3.0	0.14
Other method without blank	11	20.341	4.9	0.37
Other Dry Chemistry	8	19.392	4.9	0.42
Agappe - CHROMAZUROL	4	19.778	5.5	0.68
Optical Emission Spectroscopy	2	18.216	8.9	1.43

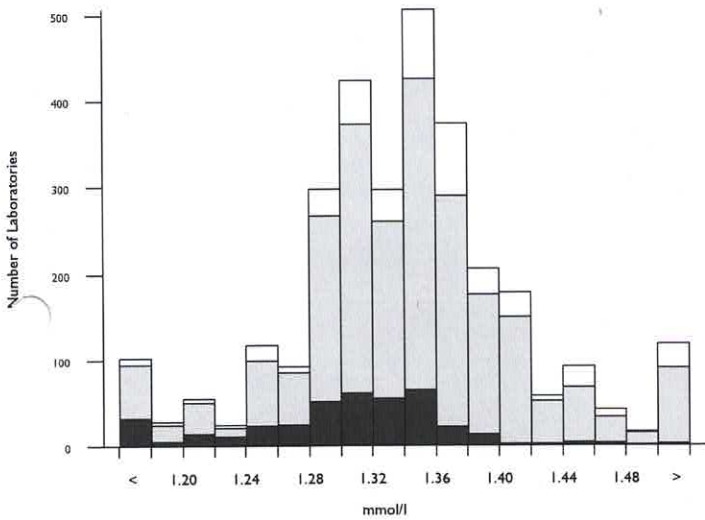
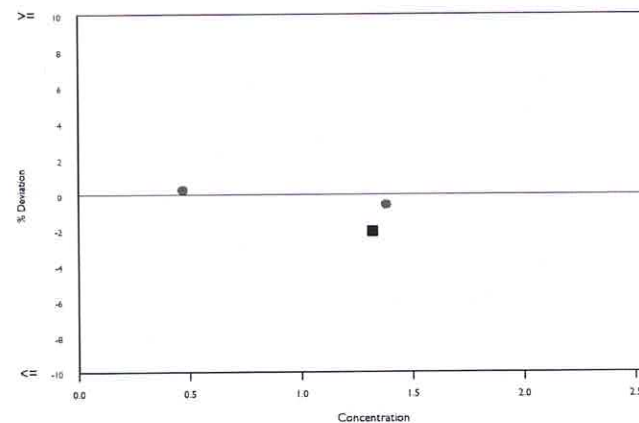
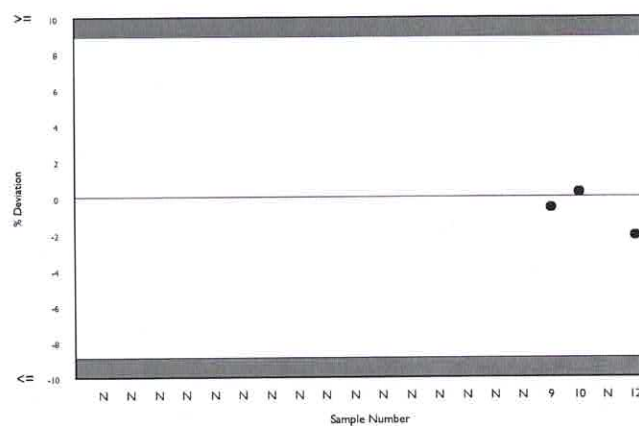
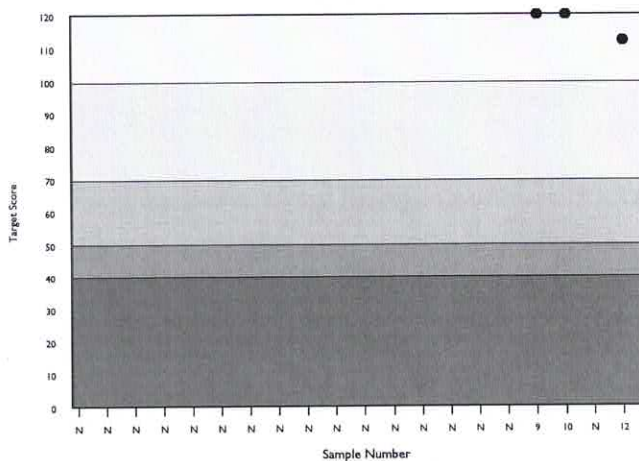
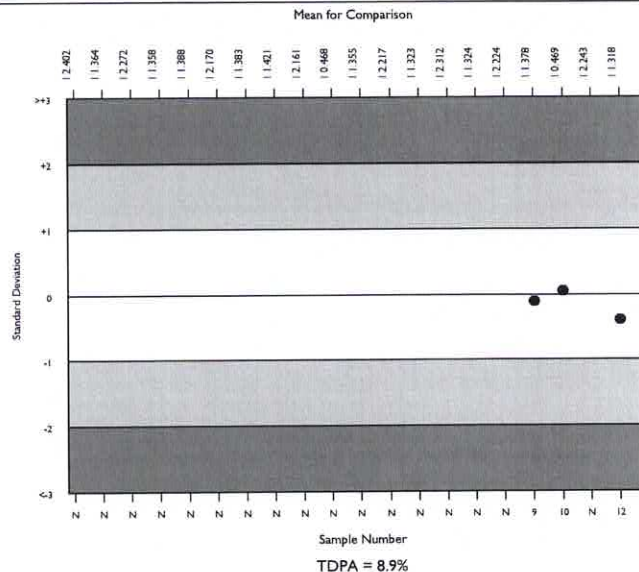
Phosphate, Inorganic, mmol/l

N Mean CV% U_m SDPA Exc.

All Methods	2760	1.350	3.9	0.00	0.07	263
Phosphomolybdate UV	2327	1.346	3.8	0.00	0.07	242
Beckman AU instruments	348	1.318	3.5	0.00	0.07	42

▲ Your Result	1.290	SDI	-0.39
		RMSDI	Too Few
■ Mean for Comparison	1.318	TS	112
		RMTS	Too Few
		%DEV	-2.1
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 8.90%



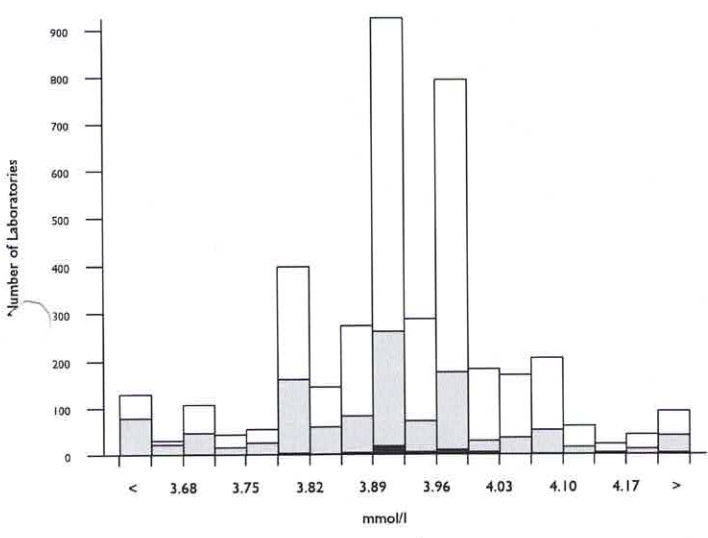
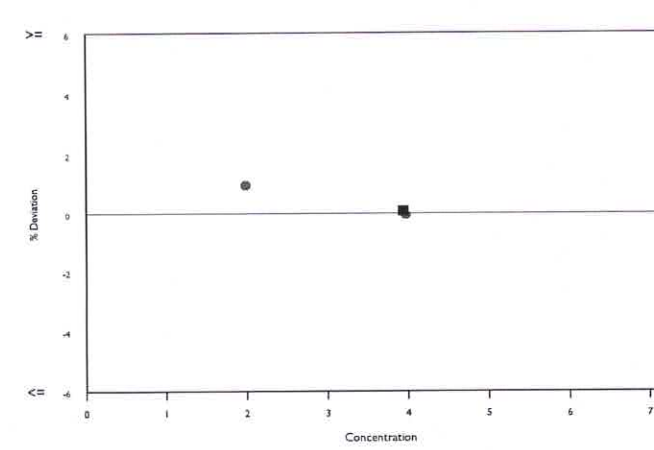
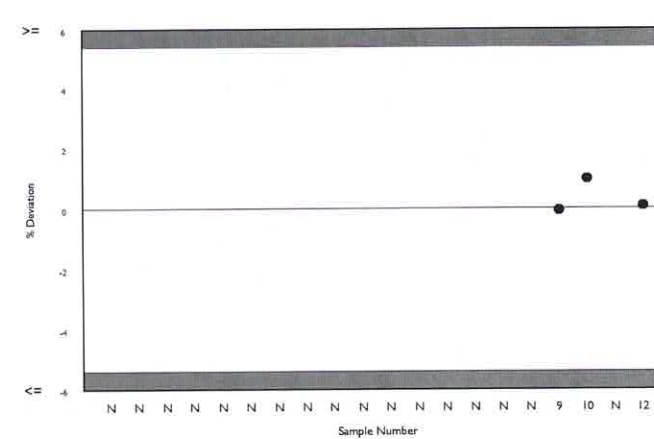
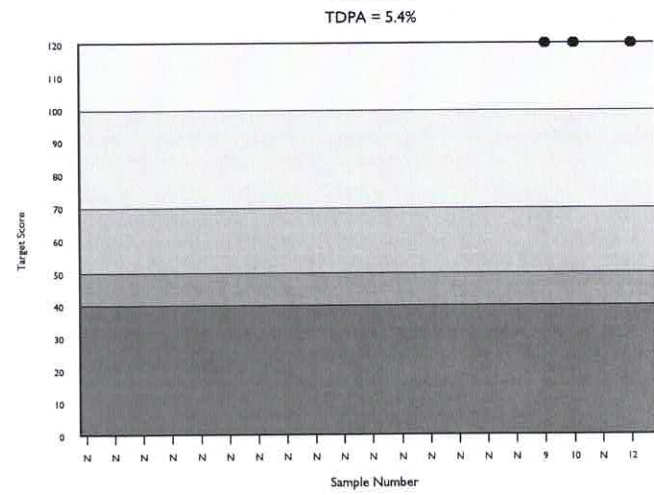
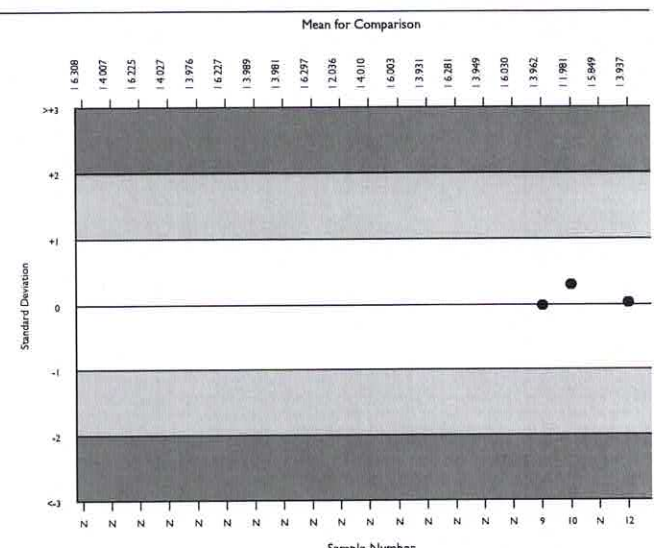
Method	N	Mean	CV%	U _m
Phosphomolybdate UV	2327	1.346	3.8	0.00
Phosphomolybdate enzymatic	205	1.343	3.5	0.00
Ortho Vitros MicroSlide Systems	128	1.389	3.2	0.00
Beckman PHOSm kit (365nm)	34	1.334	2.9	0.01
Other Dry Chemistry	18	1.438	3.6	0.02
Agappe - PHOSPHOMOLYBDATE	12	1.383	2.9	0.01
Other methods, no protein ppt	9	1.327	11.9	0.07
Vitros, DT60/DT60 II/DTSC II	3	1.394	2.2	0.02
Other methods, with protein ppt	3	1.369	3.4	0.03

Potassium, mmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	3633	3.930	2.4	0.00	0.13	320
ISE method - direct	1056	3.902	2.7	0.00	0.13	128
Beckman AU instruments	44	3.937	1.4	0.01	0.13	7

▲ Your Result	3.940	SDI	0.02
		RMSDI	Too Few
■ Mean for Comparison	3.937	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	5.40%



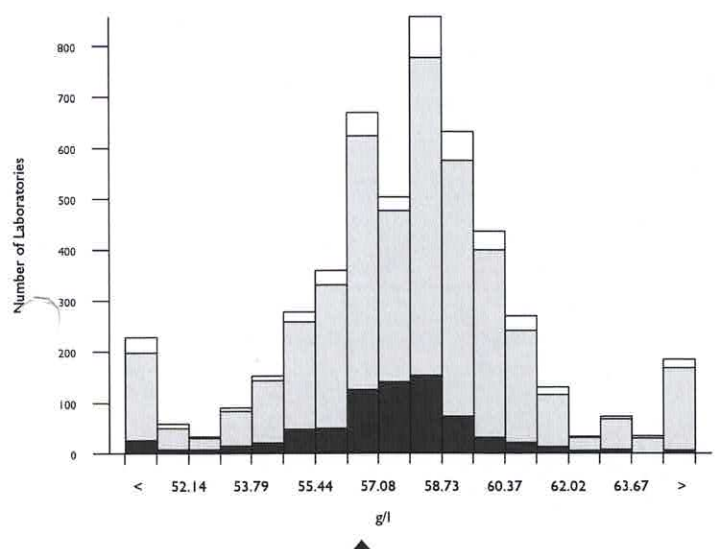
Method	N	Mean	CV%	U _m
ISE method - indirect	2311	3.941	2.1	0.00
ISE method - direct	1056	3.902	2.7	0.00
Ortho Vitros MicroSlide Systems	125	4.008	2.0	0.01
Colorimetric	42	3.893	2.9	0.02
Other Dry Chemistry	22	3.904	3.0	0.03
Flame photometry	19	3.960	4.0	0.05
Enzymatic	11	4.047	8.7	0.13
Optical Fluorescence	11	3.944	5.7	0.09
Turbidimetric	9	3.620	8.1	0.12
Vitros, DT60/DT60 II/DTE II	4	4.050	7.7	0.19
Agappe - ISE DIRECT	3	4.067	5.7	0.17

Protein, Total, g/l

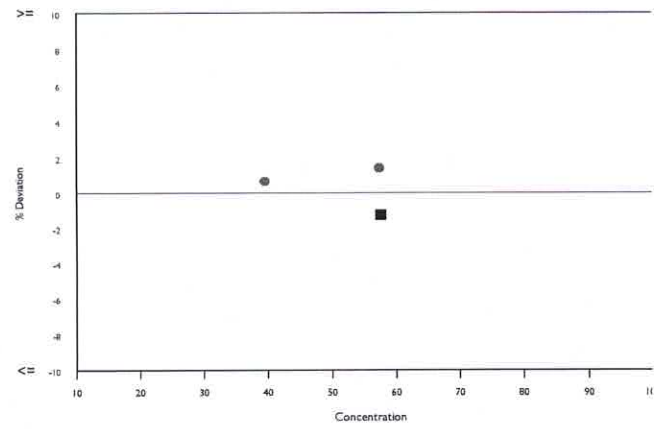
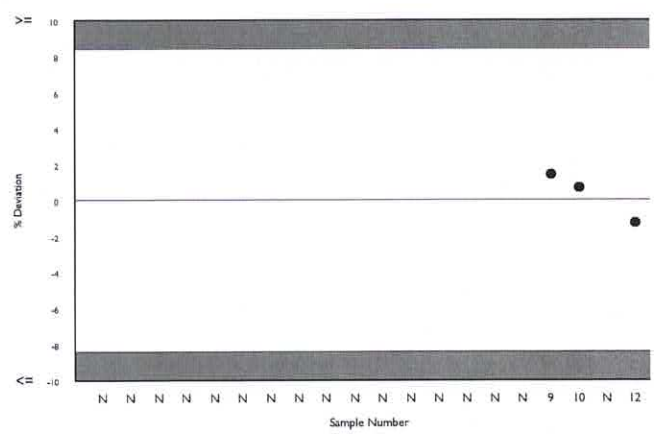
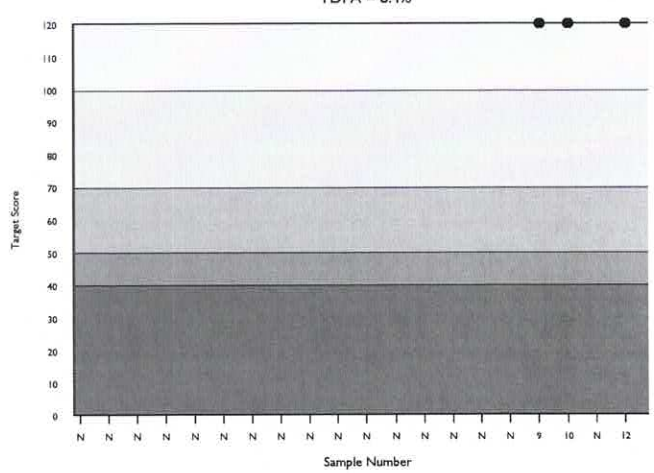
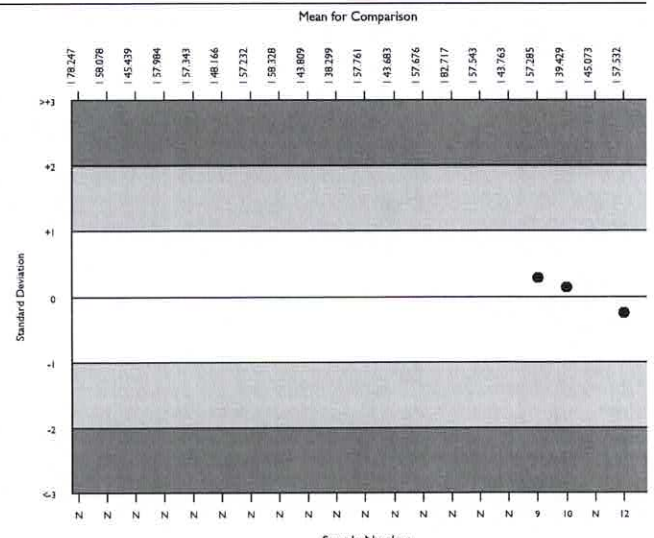
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	4576	57.911	3.8	0.04	2.96	429
Biuret reaction, end point	4202	57.899	3.8	0.04	2.96	382
Beckman AU instruments	668	57.532	2.7	0.07	2.94	73

▲ Your Result	56.800	SDI	-0.25
		RMSDI	Too Few
■ Mean for Comparison	57.532	TS	120
		RMETS	Too Few
		%DEV	-1.3
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	8.40%



Method	N	Mean	CV%	U _m
Biuret reaction, end point	4202	57.899	3.8	0.04
Ortho Vitros MicroSlide Systems	146	58.559	3.2	0.20
Biuret reaction, kinetic	123	57.419	3.6	0.23
Biuret reaction, CX4/5/7	39	57.796	3.5	0.41
Agappe - BIURET	36	56.739	5.9	0.70
Other Dry Chemistry	24	60.288	3.4	0.52
Vitros, DT60/DT60 II	2	51.500	20.6	9.37

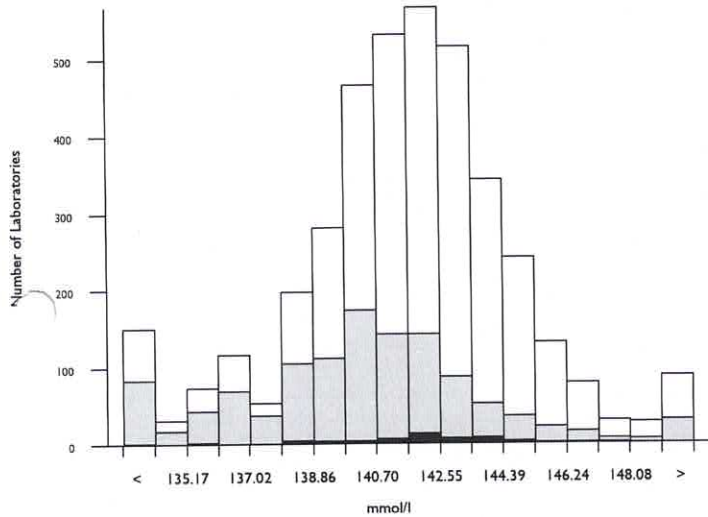


Sodium, mmol/l

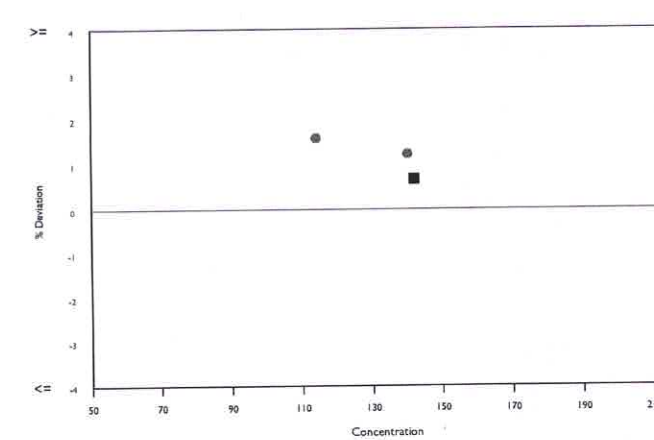
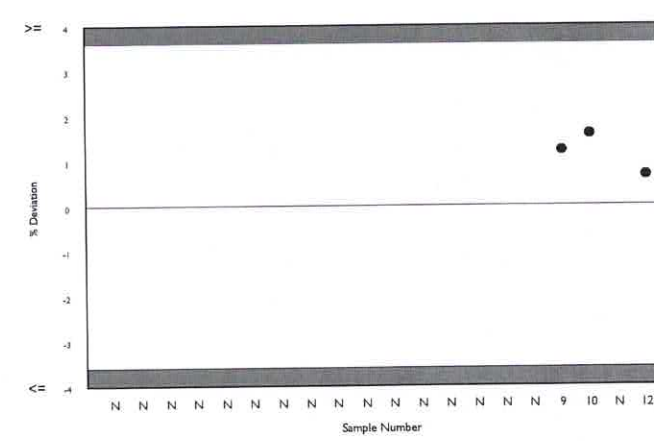
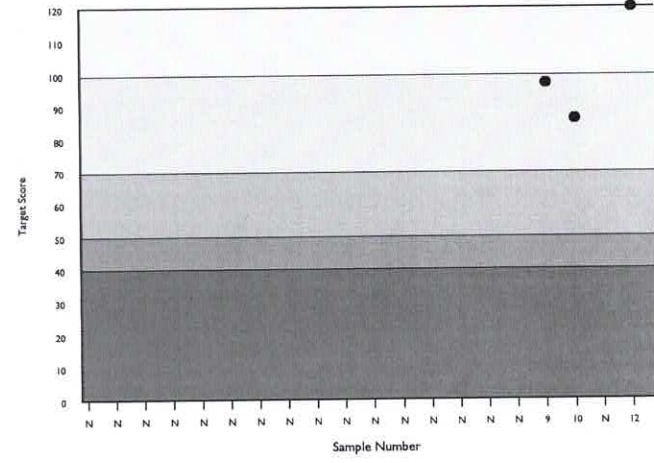
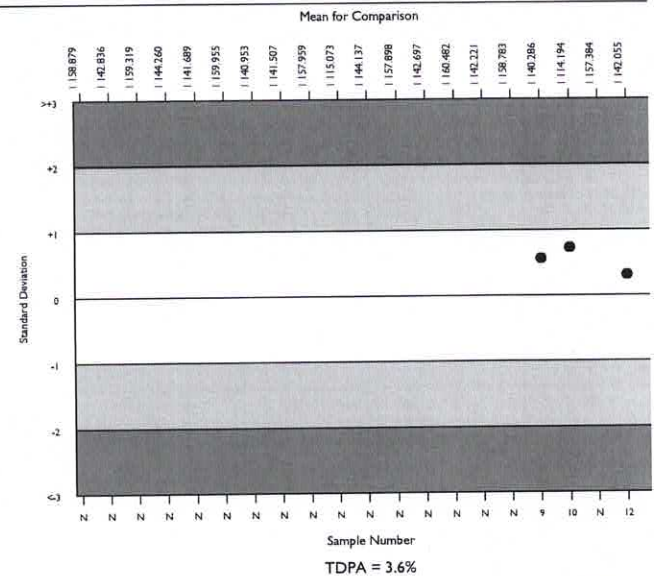
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	3597	141.631	1.7	0.05	3.10	327
ISE method - direct	1065	140.392	1.9	0.10	3.07	114
Beckman AU instruments	48	142.055	1.3	0.35	3.11	5

▲ Your Result	143.000	SDI	0.30
		RMSDI	Too Few
■ Mean for Comparison	142.055	TS	120
		RMTS	Too Few
		%DEV	0.7
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A
 Acceptable limits of performance for RIQAS 3.60%



Method	N	Mean	CV%	U _m
ISE method - indirect	2268	142.263	1.5	0.05
ISE method - direct	1065	140.392	1.9	0.10
Ortho Vitros MicroSlide Systems	124	141.819	1.5	0.24
Colorimetric	37	140.642	1.4	0.40
Other Dry Chemistry	21	141.429	1.8	0.70
Flame photometry	20	142.610	3.0	1.21
Optical Fluorescence	11	138.391	1.9	1.00
Enzymatic	9	141.300	8.5	5.03
Vitros, DT60/DT60 II/DTE II	4	138.800	1.1	0.92



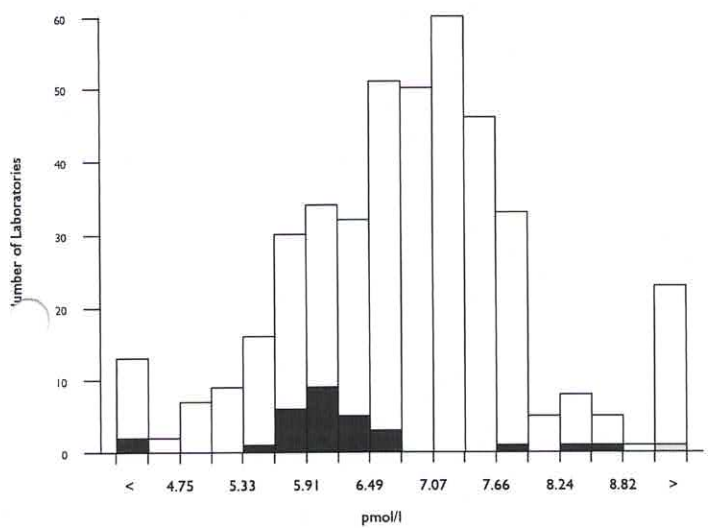
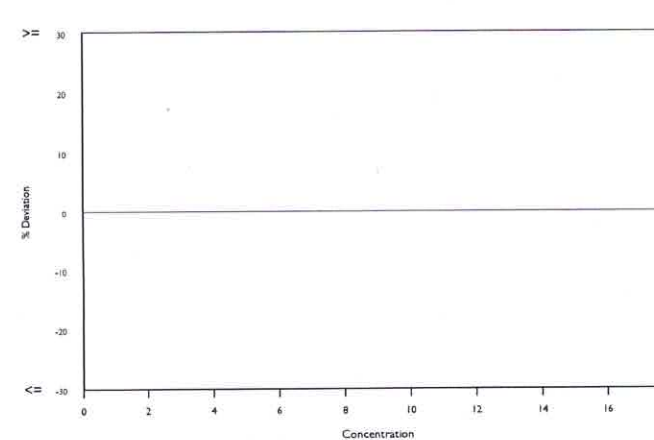
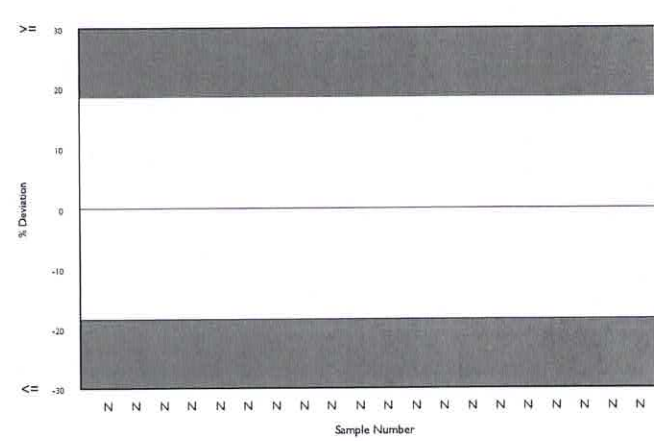
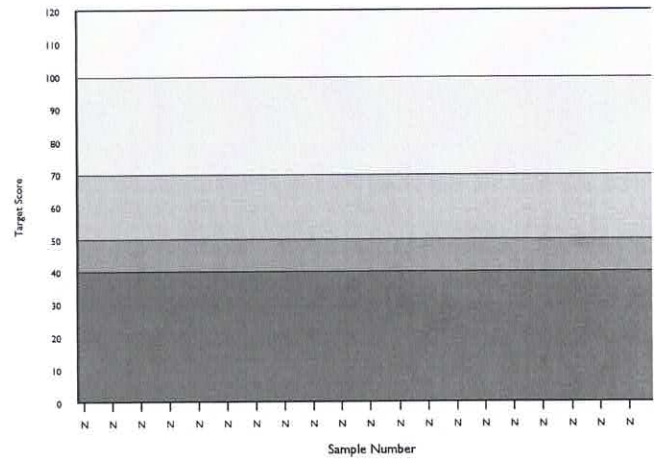
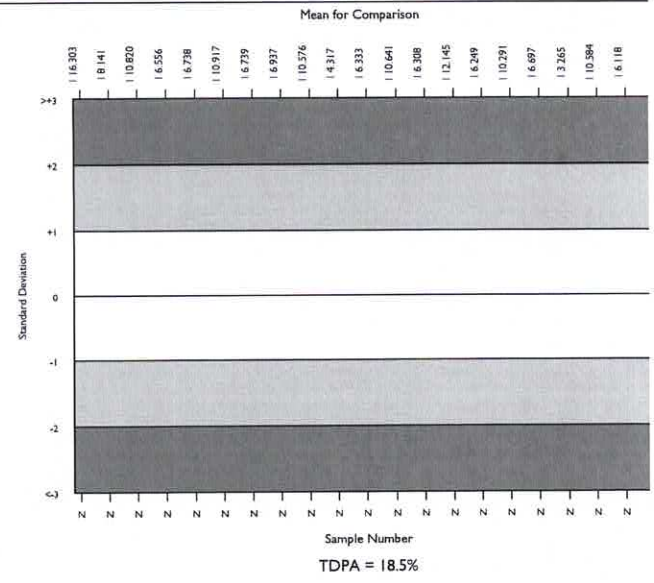
Free T3, pmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	381	6.790	11.4	0.05	0.76	44
Beckman Access/LXi725	24	6.118	4.8	0.07	0.69	6
Beckman Access Series	24	6.118	4.8	0.07	0.69	5

▲ Your Result	No Result	SDI	RMSDI	Too Few
■ Mean for Comparison	6.118	TS	RMTS	Too Few
		%DEV	RM%DEV	Too Few

Acceptable limits derived from Biological Variation N/A

Acceptable limits of performance for RIQAS 18.50%



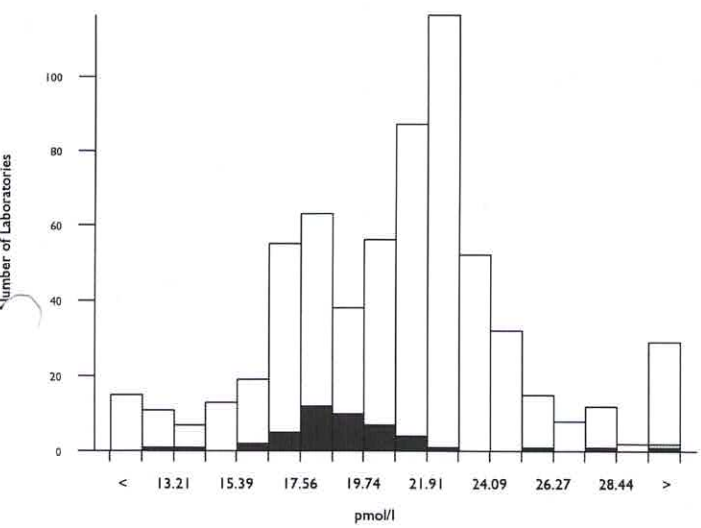
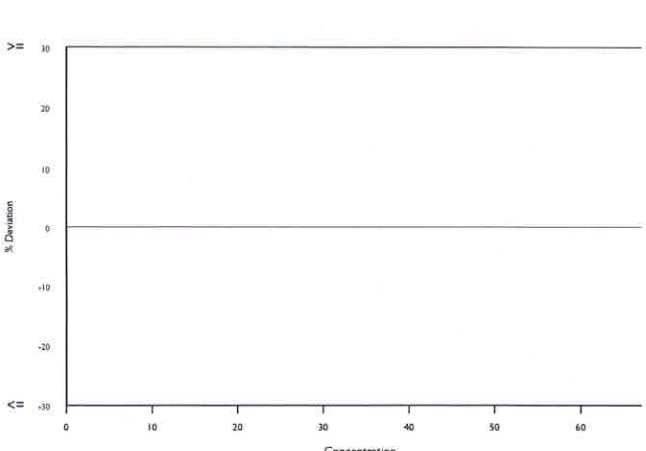
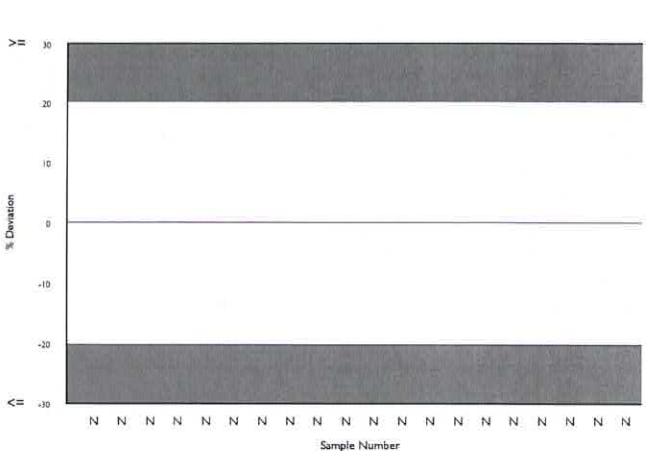
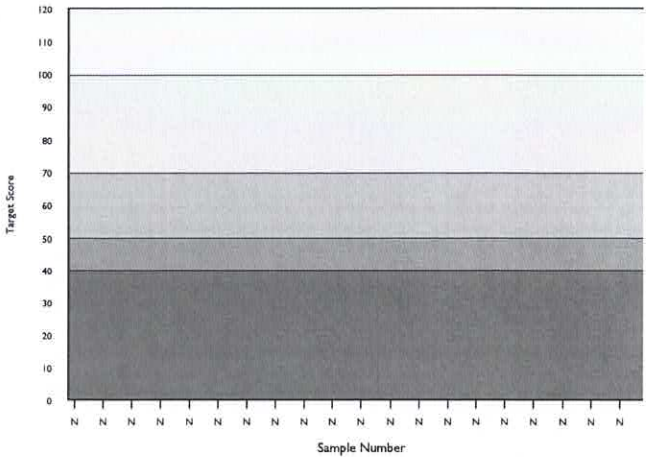
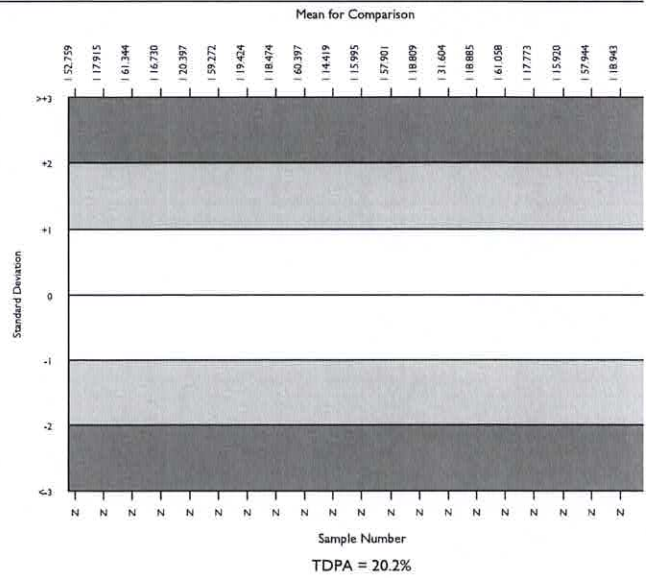
Method	N	Mean	CV%	U _m
Roche Cobas 4000/e411	79	7.133	5.5	0.06
Roche Cobas e601/602	53	7.303	4.0	0.05
Abbott Architect/ Alinity, 2 point cal	46	5.949	6.7	0.07
BioMerieux VIDAS	36	7.010	6.9	0.10
Beckman Access/LXi725	24	6.118	4.8	0.07
Abbott Architect/ Alinity, 6 point cal	19	5.991	5.2	0.09
Siemens Centaur XP/XPT/Classic	17	6.775	4.4	0.09
Tosoh AIA Series	16	7.048	8.9	0.20
Ortho Vitros 3600/5600/ECI/XT 7600	13	11.559	6.5	0.26
Siemens Dimension Exl LOCI	12	7.502	2.9	0.08
Beckman Dxl 600/800	9	5.629	4.1	0.10
Roche Elecsys	9	7.463	15.9	0.49
Roche Cobas e801	9	7.430	5.9	0.18
SNIBE Maglumi analysers	7	5.879	6.9	0.19
Siemens Centaur CP	8	7.086	4.8	0.15
Siemens/DPC Immulite 2000/2500	6	4.986	4.4	0.11
ELISA	5	6.737	19.5	0.74
Siemens/DPC Immulite 1000	3	4.936	20.4	0.73
Mindray CL-Series	3	6.991	7.3	0.37
DiaSorin Liaison XL	2	8.386	15.9	1.18
Siemens Atellica IM	2	7.558	4.3	0.29

Free T4, pmol/l

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	570	20.831	13.9	0.15	2.56	61
Beckman Access/LXi725	40	18.943	7.3	0.27	2.33	7
Beckman Access Series	40	18.943	7.3	0.27	2.33	6

▲ Your Result	No Result	SDI	Too Few
		RMSDI	
■ Mean for Comparison	18.943	TS	Too Few
		RMTS	
		%DEV	Too Few
		RM%DEV	

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	20.20%



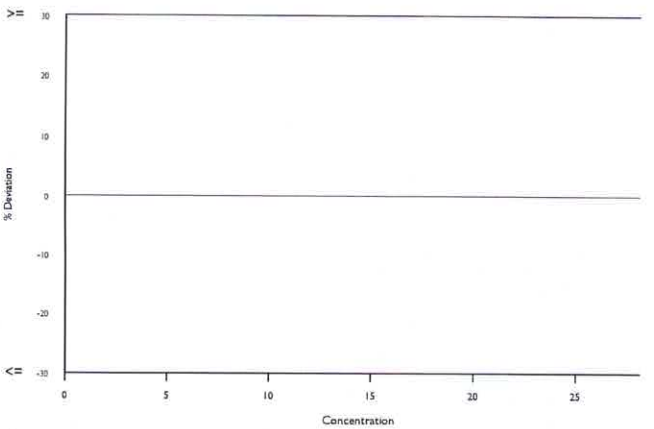
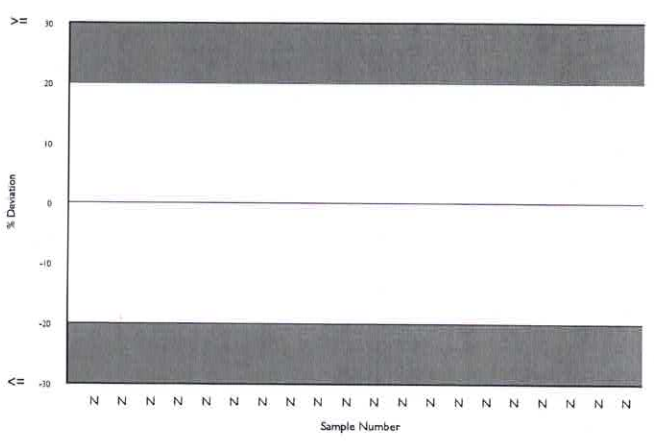
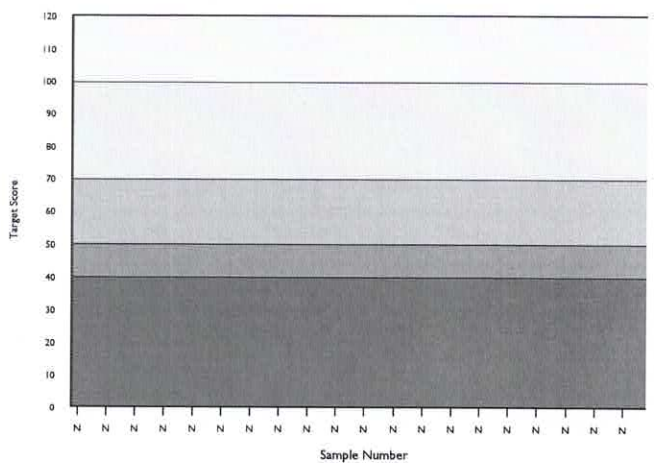
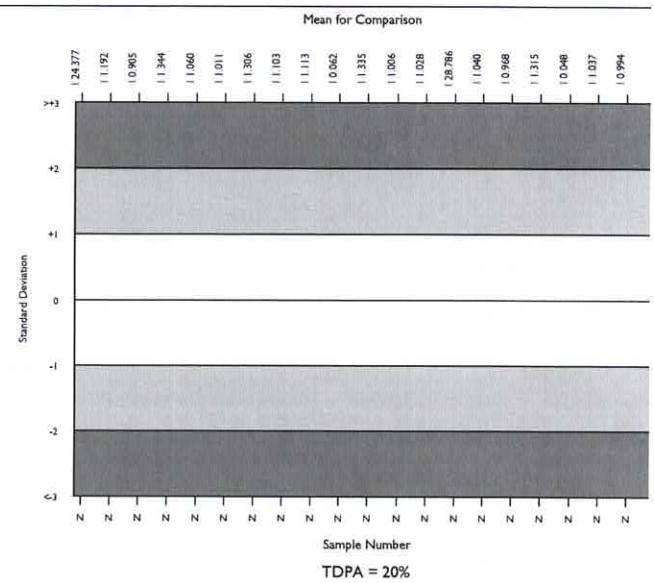
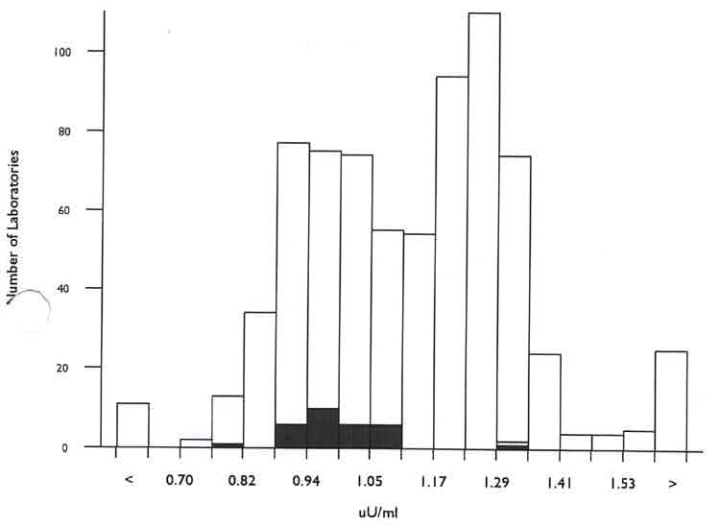
Method	N	Mean	CV%	U _m
Roche Cobas 4000/e411	104	22.542	5.2	0.14
Abbott Architect/ Alinity	76	17.601	4.2	0.11
Roche Cobas e601/ 602	72	22.398	3.6	0.12
bioMerieux, VIDAS-FT4N Kit	51	21.845	8.1	0.31
Beckman Access/LXi725	40	18.943	7.3	0.27
Monobind Inc ELISA / CLIA	26	14.322	13.1	0.46
Tosoh AIA Series	21	25.874	8.6	0.60
Siemens Centaur XP/XPT/Classic	24	19.131	9.5	0.46
ELISA	20	15.079	20.0	0.84
SNIBE Maglumi analysers	18	22.175	7.4	0.48
Ortho Vitros 3600/5600/ECI/XT/7600	15	38.117	6.8	0.84
Siemens/DPC Immulite 1000	16	22.690	14.8	1.05
Roche Elecsys	13	23.584	10.7	0.87
Siemens Dimension Exl LOCI	12	21.803	4.3	0.34
Beckman Dxl 600/800	13	18.301	11.9	0.76
Siemens/DPC Immulite 2000/2500	12	20.953	6.7	0.51
Roche Cobas e801	9	22.633	6.3	0.59
Siemens Centaur CP	6	18.888	2.5	0.24
Mindray CL-Series	5	16.916	16.4	1.55
Siemens Atellica IM	3	18.543	5.9	0.79
DiaSorin Liaison XL	2	19.256	3.9	0.66

TSH, uU/ml

	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	686	1.118	14.1	0.01	0.14	51
Beckman Access/LXi725 hyper TSH 3rd gen.	28	0.994	6.7	0.02	0.12	3
Beckman Access Series	28	0.994	6.7	0.02	0.12	2

▲ Your Result	No Result	SDI	Too Few
		RMSDI	Too Few
■ Mean for Comparison	0.994	TS	Too Few
		RMTS	Too Few
		%DEV	Too Few
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	20.00%



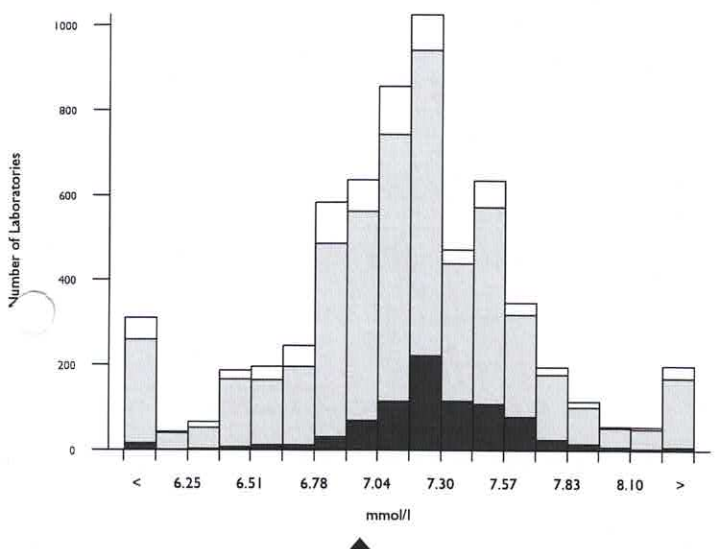
Method	N	Mean	CV%	U _m
Roche Cobas 4000/e411	116	1.273	4.5	0.01
Abbott Architect/ Alinity	96	0.917	5.5	0.01
Roche Cobas e601/ 602	68	1.268	3.5	0.01
Biomerieux VIDAS TSH	45	1.155	9.0	0.02
ELISA	34	1.112	13.7	0.03
Monobind Inc ELISA / CLIA	30	1.174	11.6	0.03
Beckman Access/LXi725 hyper TSH 3rd gen.	28	0.994	6.7	0.02
Tosoh AIA Series	25	1.022	12.8	0.03
SNIBE Maglumi analysers	24	1.183	4.5	0.01
Ortho Vitros 3600/5600/ECi/XT 7600	21	1.039	10.7	0.03
Beckman DXI600/800/ Access 2 (3rd IS)	16	0.998	8.6	0.03
Roche Elecsys	15	1.284	5.8	0.02
Siemens/DPC Immulite 1000	15	1.097	12.0	0.04
Beckman Access/LXi725 Fast TSH 2nd gen.	16	0.961	8.8	0.03
Siemens Centaur XP/XPT/Classic	10	1.040	5.7	0.02
Siemens Dimension Exl LOCI	12	0.995	5.4	0.02
Siemens/DPC Immulite 2000/2500	13	1.144	6.9	0.03
bioMerieux, VIDAS TSH3 Ultrasensitive	9	1.091	7.2	0.03
Siemens Centaur XP/XPT/ClassicTSH3-Ultra	10	1.005	7.3	0.03
Roche Cobas e801	10	1.177	2.7	0.01
Siemens Centaur CP	7	0.999	24.8	0.12

Urea, mmol/l

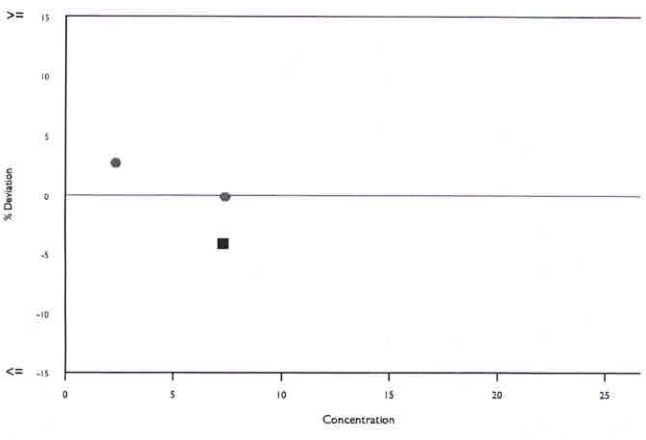
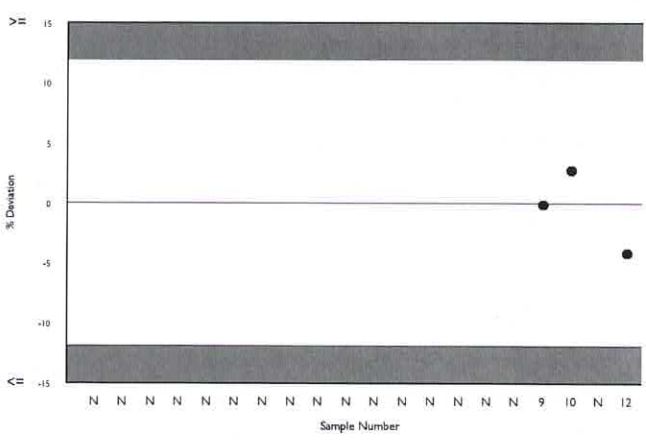
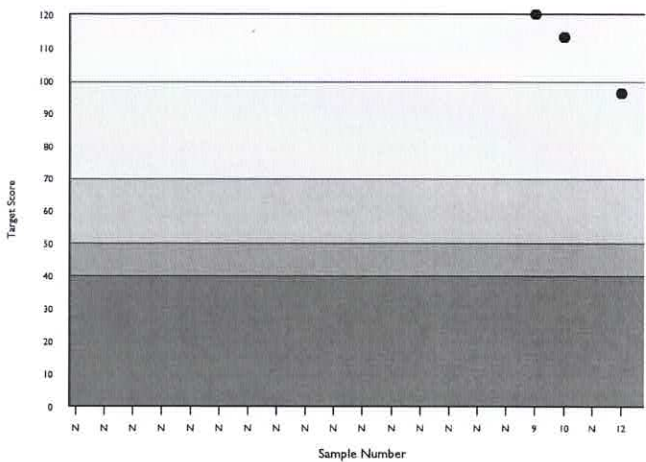
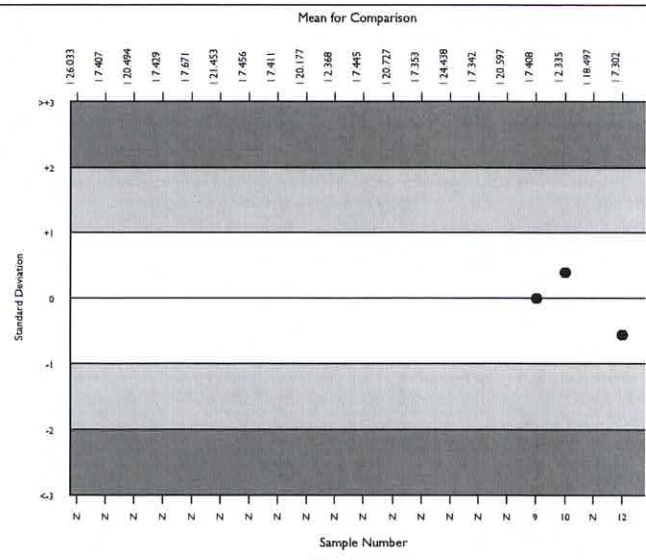
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5609	7.177	4.9	0.01	0.52	603
Urease, kinetic	4955	7.187	4.9	0.01	0.52	528
Beckman AU instruments	771	7.302	3.2	0.01	0.53	78

▲ Your Result	7.000	SDI	-0.57
		RMSDI	Too Few
■ Mean for Comparison	7.302	TS	96
		RMTS	Too Few
		%DEV	-4.1
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	11.90%



Method	N	Mean	CV%	U _m
Urease, kinetic	4955	7.187	4.9	0.01
Urease, end point	289	7.141	5.3	0.03
Ortho Vitros MicroSlide Systems	157	6.908	2.9	0.02
Urease, hypochlorite	87	7.111	5.5	0.05
Agappe - UREASE GLDH	41	7.224	9.3	0.13
Other Dry Chemistry	26	7.250	4.5	0.08
Beckman - Conductivity	27	7.115	5.8	0.10
Agappe - BERTHELOT	4	7.202	2.0	0.09
O-Phthalaldehyde	4	8.427	28.5	1.50
Diacetyl monoxime	3	7.055	5.6	0.28
Vitros DT60/DT60 II	2	6.919	0.4	0.02

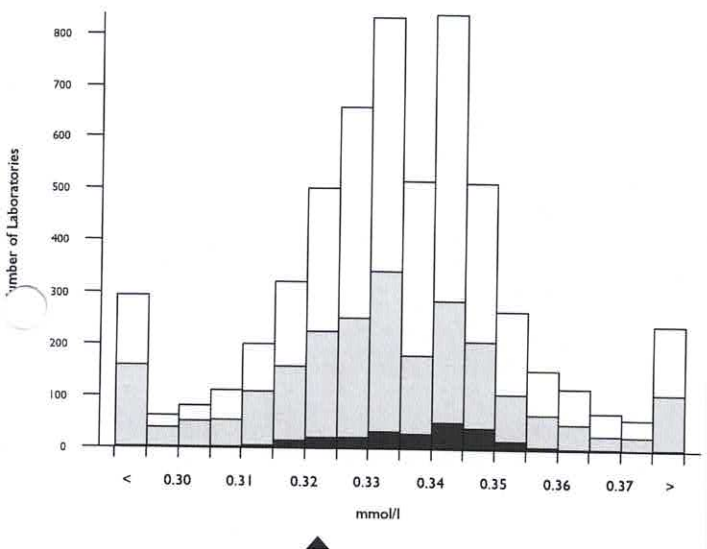


Uric Acid (Urate), mmol/l

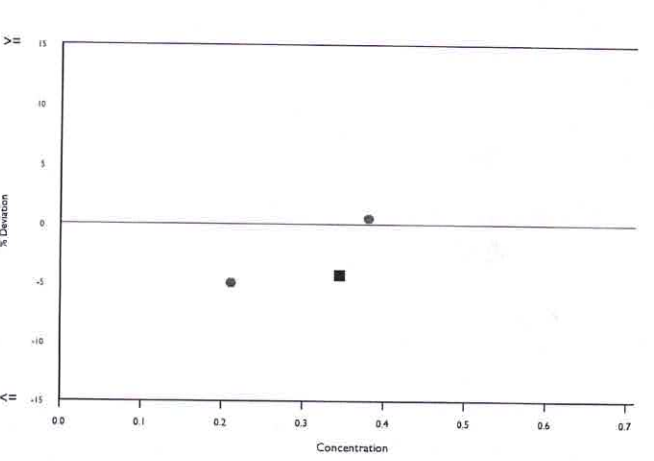
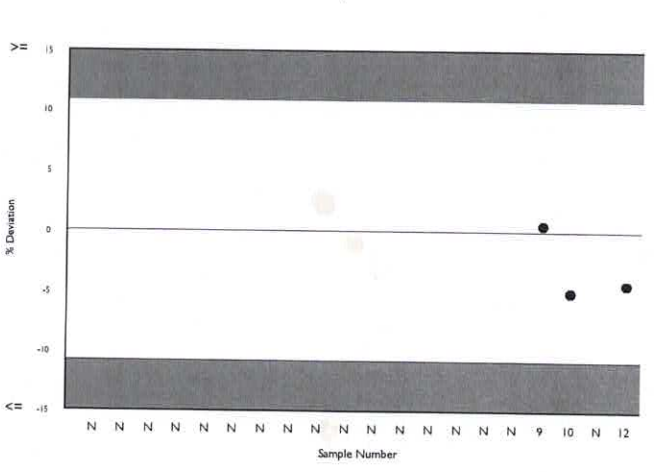
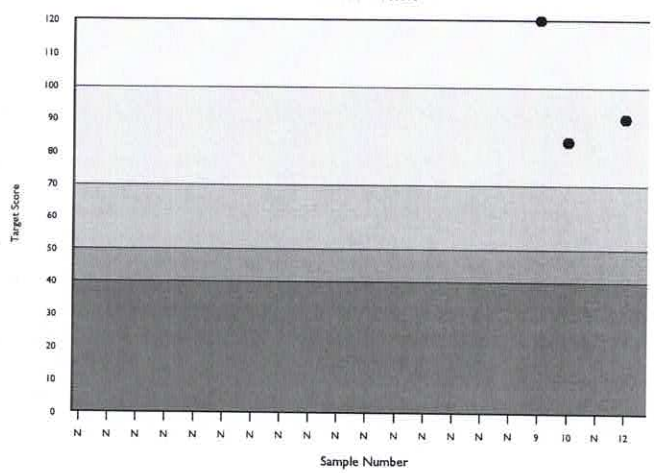
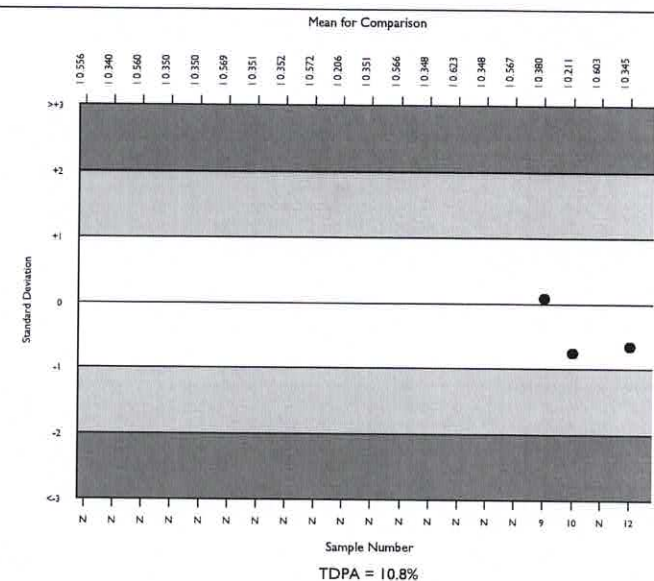
	N	Mean	CV%	U _m	SDPA	Exc.
All Methods	5202	0.342	4.1	0.00	0.02	629
Uricase perox. no ascorb. ox.	2187	0.341	4.8	0.00	0.02	262
Beckman AU instruments	234	0.345	3.0	0.00	0.02	20

▲ Your Result	0.330	SDI	-0.66
		RMSDI	Too Few
■ Mean for Comparison	0.345	TS	90
		RMTS	Too Few
		%DEV	-4.3
		RM%DEV	Too Few

Acceptable limits derived from Biological Variation	N/A
Acceptable limits of performance for RIQAS	10.80%



Method	N	Mean	CV%	U _m
Uricase perox. no ascorb. ox.	2187	0.341	4.8	0.00
Uricase Perox. with ascorb. ox	1550	0.345	3.7	0.00
Uricase Perox. with ascorb. ox @ 546nm	942	0.341	3.8	0.00
Ortho Vitros MicroSlide Systems	154	0.335	3.0	0.00
Uricase @ 293 nm	156	0.345	2.3	0.00
Uricase, catalase 340nm.	133	0.347	2.5	0.00
Other Dry Chemistry	25	0.369	4.3	0.00
Agappe - URICASE - TOPS	19	0.326	11.6	0.01
Agappe - URICASE - PAP	19	0.342	6.9	0.01
Reduction methods	15	0.346	5.5	0.01
Vitros DT60/DT60 II	4	0.336	3.6	0.01



Raw data

Patient Name _____ Age _____ Month _____ Serum _____
 Doctor/ward _____ S.ID S 12 CY 17

Test	Result	Reference Range	Units	Flags	Test	Result	Reference Range	Units	Flags
Na	143	136	mmol/L		K	3.94	3.50	mmol/L	
Cl	100	97	mmol/L		CO2	13	22	mmol/L	n, L
UREA	7.0	2.5	mmol/L	n, H	TP	56.8	60.0	g/L	n, L
TBIL	29.7	2.0	umol/L	n, H	DBIL	19.4	0.0	umol/L	n, H
ALP	171	40	IU/L	n, H	GGT	51.7	5.0	IU/L	n, H
AST	33.6	10.0	IU/L	n	ALT	37.4	10.0	IU/L	n
CHOL	3.72	3.00	mmol/L	n	TG	1.01	0.00	mmol/L	n
HDL	1.42	1.00	mmol/L	n	LDL	2.17	0.00	mmol/L	n
GLUC	5.58	3.50	mmol/L	n, H	URIC	0.330	0.140	mmol/L	n
CA	2.13	2.10	mmol/L	n	MG	0.81	0.70	mmol/L	n
PHOS	1.29	0.80	mmol/L	n	CRP	1.46	0.00	mg/L	n
CK	171	-9999999	IU/L	n	ALB	38.1	-999999.9	g/L	n
FE	19.35	5.00	umol/L	n	TRF	21.35	22.61	umol/L	n, L
RF	10.20	-99999.99	IU/mL	n	Crea-E	131.6	-999999.9	umol/L	n
Amy	82	-9999999	U/L	n	SYPH		-9999999.9	U	n, G
Anton	30	5	15	n, H, J					

1963/03/17
Markhobare
Francis
02/21/20
MD

Device No.2121907

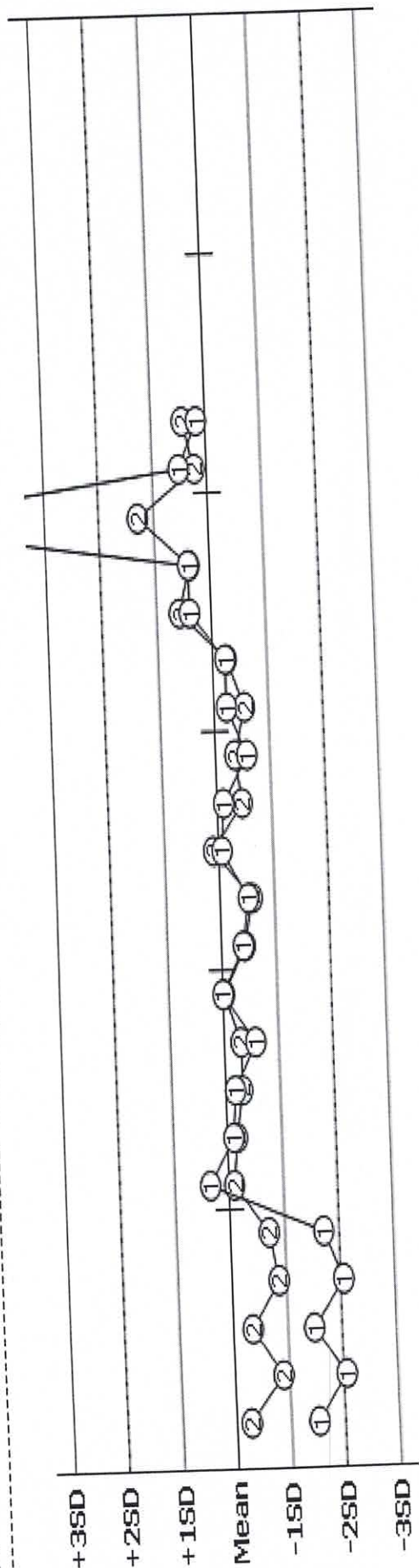
Print Time [30/12/2020 12:44 PM]

QC Monitor - Day to Day Chart

Type Serum

Index 29/11/2020 06:56 PM29/12/2020 08:41 PM

19.CK
Graph



3R
2R
1R
0

29/11 06:56 PM
01/12 09:11 AM
01/12 06:34 PM
02/12 03:29 PM
02/12 04:51 PM
03/12 12:37 PM
04/12 12:58 PM
07/12 11:23 AM
08/12 04:22 PM
09/12 03:36 PM
10/12 04:52 PM
11/12 07:23 PM
12/12 10:14 AM
14/12 03:26 PM
17/12 10:45 AM
18/12 06:39 PM
21/12 05:01 PM
22/12 12:48 PM
23/12 03:12 PM
24/12 11:29 AM
24/12 06:54 PM
29/12 05:55 PM



QC Monitor - Day to Day Chart

Print Time [30/12/2020 12:44 PM]

Index 29/11/2020 06:56 PM 29/12/2020 08:41 PM

Type Serum

19.CK
Statistics

	Control serum 1	Control serum 2		
N	: 22	22		
Mean	: (170.2 (390.5			
SD	: (173.0) (397.0)			
CV	: (29.15 (20.20			
Range	: (17.50) (39.50)			
	: (17.13 (5.17			
	: (10.12) (9.95)			
	: (148 (86			
	: (70) (158)			

Device No. 2121907

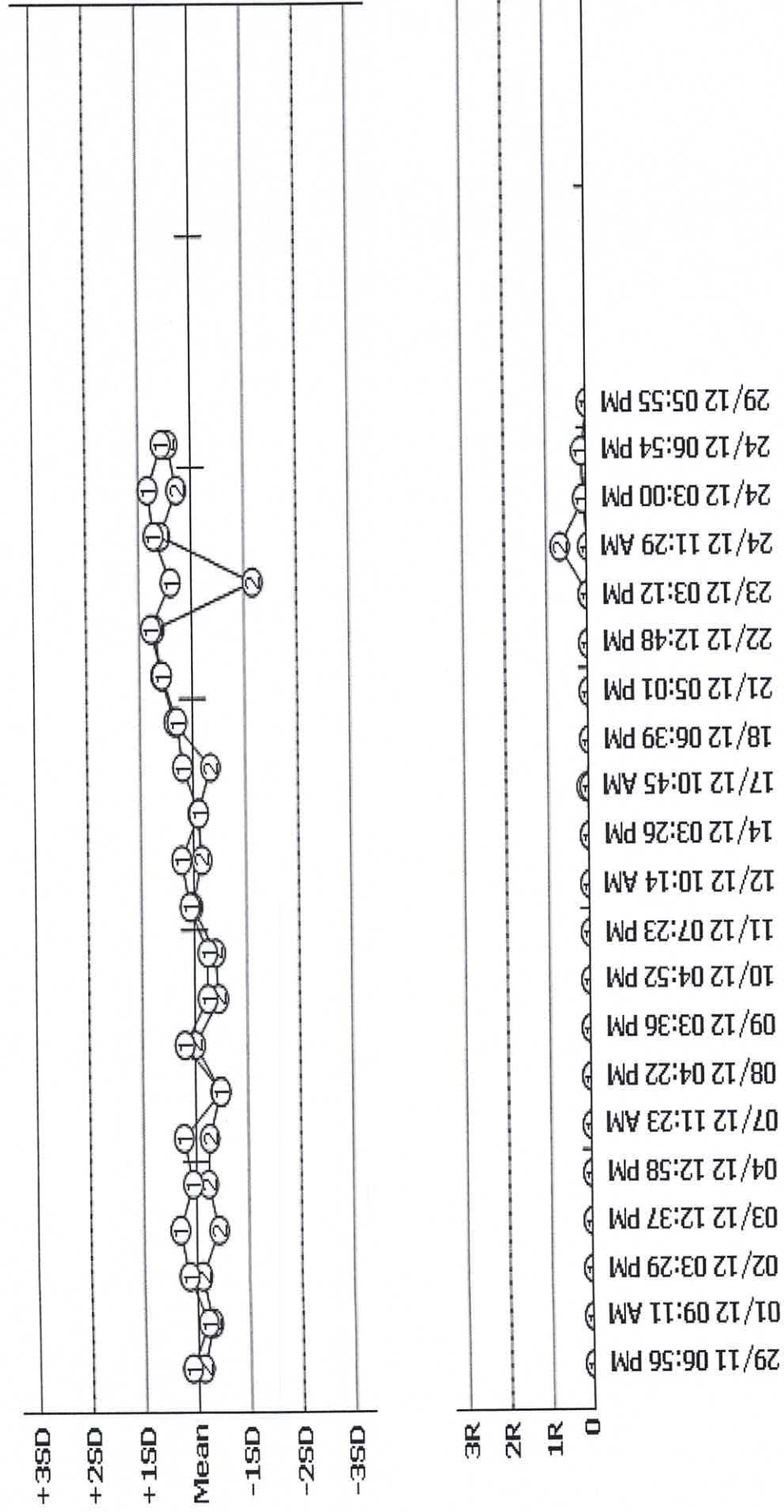
QC Monitor - Day to Day Chart

Print Time [30/12/2020 12:44 PM]

Index 29/11/2020 06:56 PM 29/12/2020 08:41 PM

Type Serum

34.AST Graph



QC Monitor - Day to Day Chart

Print Time [30/12/2020 12:44 PM]

Index 29/11/2020 06:56 PM 29/12/2020 08:41 PM

Type Serum

34.AST
Statistics

	Control serum 1	Control serum 2			
N	: 21	21			
Mean	: (53.78	145.80			
	(52.50) (147.00) (
SD	: (2.123	7.570			
	(6.050) (17.000) (
CV	: (3.95	5.19			
	(11.52) (11.56) (
Range	: (7.9	31.8			
	(24.2) (68.0) (

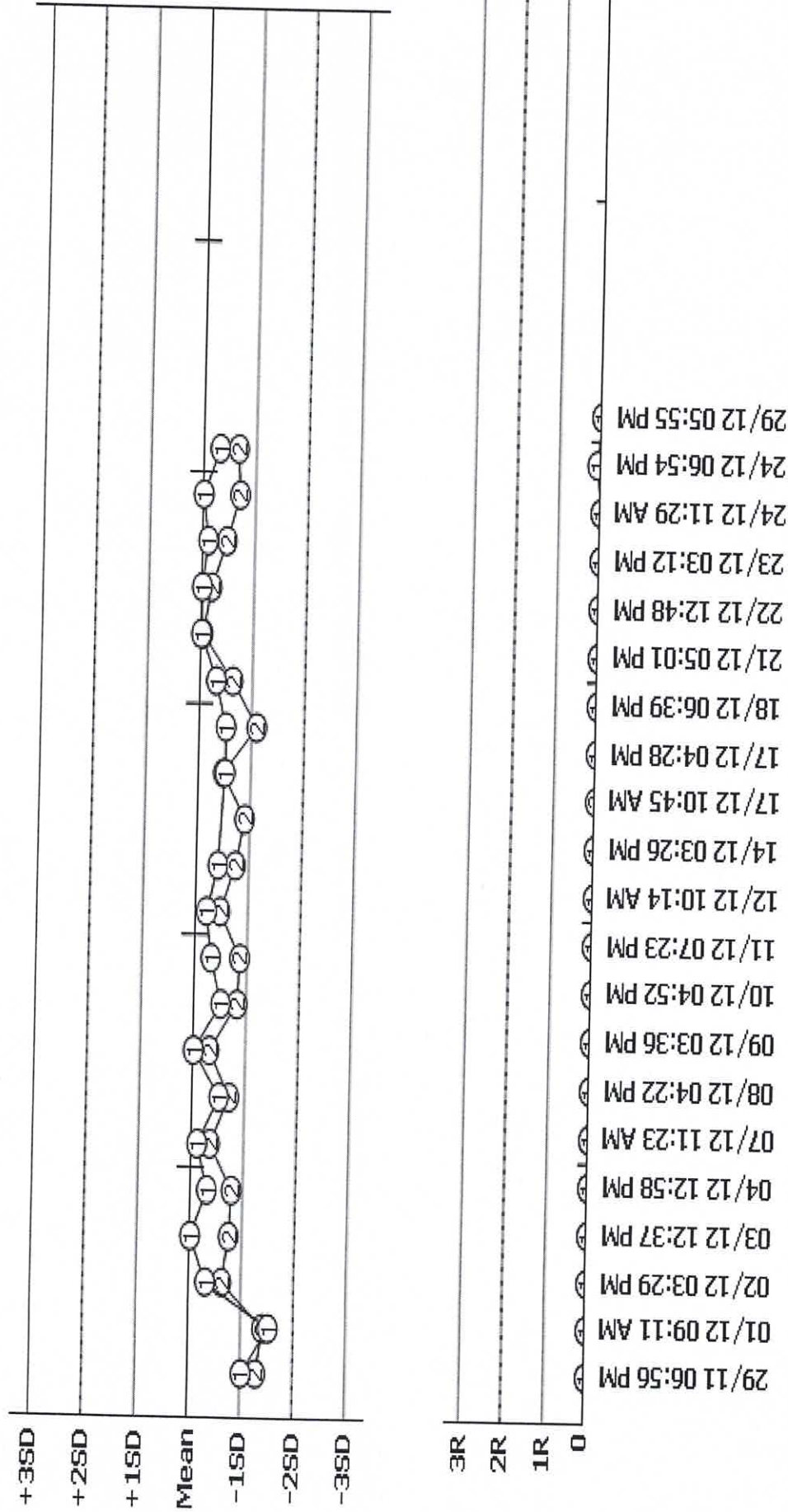
QC Monitor - Day to Day Chart

Print Time [30/12/2020 12:44 PM]

Index 29/11/2020 06:56 PM 29/12/2020 08:41 PM

Type Serum

24. Amy Graph



QC Monitor - Day to Day Chart

Print Time [30/12/2020 12:44 PM]

Index 29/11/2020 06:56 PM 29/12/2020 08:41 PM

Type Serum

24.Amy
Statistics

	Control Serum 1	Control Serum 2		
N	: 20	: 21		
Mean	: (95.6 (239.6			
SD	: (99.1 (257.0			
CV	: (3.70 (8.52			
Range	: (9.95 (25.50			
	: (3.87 (3.56			
	: (10.04 (9.92			
	: (15 (35			
	: (40 (102			

PROTEUS LABORATORIES	
DOC NO. PRLQC001	VERSION: 001

EQA/IQC: **AST**, Amylase, CR

PROBLEM STATEMENT: AST keeps failing RQAS Chem
 EQA Cycle: 17 sample 10-12 > 2SD

POSSIBLE CAUSES (YES/ NO)

REAGENTS EXPIRED	NO
CALIBRATION ACCEPTABLE	YES
IQC ACCEPTABLE	YES
MACHINE SERVICED/ MAINTENANCE PERFORMED	yes
TECHNICAL STAFF COMPETENT	yes

COMMENT:

- ① **AST** The 10C (LT) are within set reference ranges. Sent RQAS a email to advise. As 10C is acceptable.
 Will have to await response from RQAS.
 But patient sample are analyzed as 10C is acceptable.
- ② Amylase & CR → random errors (10C acceptable) will check next sample.

WAS CORRECTIVE ACTION APPLIED EFFECTIVE: YES/ NO

(Not sure)

SIGNED OFF BY: Guyu. Ditskey

DATE: 20/12/20