



End-of-Cycle Report
Clinical Chemistry (Monthly) Program (BC50)
Cycle 22: July 2023 – July 2024



Exceptions

Insufficient results for calculation of your statistics

Analyte	Instrument	N
LDH	Mindray BS-2000	8
Lipase	Mindray BS-2000	6

EQAS News



Bio-Rad Laboratories is accredited to ISO/IEC 17043:2010.
Refer to the User Guide for additional information on the EQAS Program,
EQAS reports, their interpretation, statistics, and contact details.

Customer Information

Lab: 267608

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INTERMED INNOVATION
10A CHINOBOD STR., UNUSABAD DISTRICT TAS
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RUSSIA

**Lab 267608**INTERMED INNOVATION
10A CHINOBOD STR., UNUSABAD DISTRICT TAS
TASHKENT
RUSSIA**Cycle Data on File Report
Clinical Chemistry (Monthly) Program****Cycle 22**
Jul 2023 – Jul 2024
Lot No: 212100**Sample Numbers**

Analyte Unit	1	2	3	4	5	6	7	8	9	10	11	12
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Instrument: Mindray BS-2000

✓ ALB	g/L	31.16	41.01	50.4	23.74	41.03	49.27	24.18	31.24	48.95	24.2	31.71	42.27
ALKP	U/L	193.99	380.34	698.11	78.94	344.19	543.7	74.49	192.16	431.76	–	185.11	445.98
✓ ALT	U/L	126.77	70.72	26.71	172.59	69.89	24.16	167.5	129.27	26.06	171.76	132.35	74.9
✓ AMYL	U/L	671.91	364.71	98.05	887.25	357.96	95.44	881.56	657.81	90.25	878.59	675.26	356.62
✓ AST	U/L	111.2	216.94	311.65	44.69	206.19	293.6	46.37	112.85	306.55	43.84	105.53	218.21
BILACD		–	–	–	–	–	–	–	–	–	–	–	–
✓ DBIL	μmol/L	23.628	32.852	41.98	16.27	33.59	40.01	17.71	26.113	44.12	16.08	24.31	34.6
IBIL	μmol/L	33.914	71.371	119.38	9.96	80.161	117.58	10.37	36.847	114.35	9.94	40.82	83.42
✓ TBIL	μmol/L	57.542	104.223	161.36	26.23	113.751	157.59	28.08	62.96	158.47	26.02	65.13	118.02
✓ CA	mmol/L	2.152	3.036	3.696	1.48	2.955	3.62	1.45	2.081	3.59	1.46	2.12	3.026
CL	mmol/L	91.13	105.38	119.65	80.58	104.99	118.3	84.23	90.85	118.9	81.87	90.64	105.54
✓ HDL	mmol/L	0.935	1.233	1.508	0.656	1.213	1.47	0.7	1.021	1.59	0.676	0.984	1.332
✓ LDL	mmol/L	2.723	4.495	6.057	1.443	4.356	6.033	1.56	2.913	6.14	1.545	2.864	4.78
✓ CHOL	mmol/L	4.249	6.806	9.25	2.44	6.78	9.047	2.5	4.293	9.14	2.407	4.29	6.906
COLI	U/L	–	7263.1*	8995.9	4316	7340.2	8890.5	4326.3	5491.8	8673.8	4145.7	5372.5	7120.6
CO2		–	–	–	–	–	–	–	–	–	–	–	–
CK	U/L	206.65	316.59	421.13	125.61	–	–	122.9	209.79	394.53	118.42	200.43	311.23
CREA	μmol/L	283.21	177.07	91.77	360.15	174.59	85.18	371.5	284.42	86.39	–	285.71	175.01
✓ GGT	U/L	156.06	274.3	390.32	77.79	272.17	359.01	77.87	153.68	363.2	77.3	154.7	278.64
✓ GLUC	mmol/L	35.754	5.125	7.17	1.27	5.23	7.176	1.34	36.468	7.1	1.251	37.05	5.178
IRON	μmol/L	17.7	28.85	38.11	10.65	27.9	35.95	11.13	18.77	39.59	11.81	17.58	28.76
LDH	U/L	–	–	–	–	690.91	946.81	177.47	381.74	904.86	166.04	387.19	697.77
LIP	U/L	58.91	75.27	122.08	49.04	91.4	107.28	–	–	–	–	–	–
MG	mmol/L	1.332	0.85*	0.441	1.633	0.873	0.431	1.79	1.394	0.47	1.713	1.335	0.858
✓ PHOS	mmol/L	1.037	1.724	2.34	0.554	1.688	2.394	0.57	1.063	2.23	0.577	1.04	1.753
✓ K	mmol/L	2.905	4.643	6.269	1.735	4.631	6.253	1.8	2.848	6.244	1.798	2.897	4.673
✓ TP	g/L	48.47	65.16	83.92	36.34	66.88	82.54	36.67	47.25	80.18	35.68	47.82	66.16
✓ NA	mmol/L	131.78	148.61	165.55	118.43	147.78	164.26	123.2	131.83	165.47	120.09	133.24	148.59
✓ TRIG	mmol/L	1.061	1.72	2.398	0.54	1.768	2.321	0.54	1.051	2.243	0.527	1.061	1.753
UREA	mmol/L	9.697	20.445	29.14	2.43	20.397	28.765	2.55	9.99	24.99	2.651	9.62	19.885
✓ URIC	μmol/L	438.74	282.25	167.01	524.47	273.97	148.12	552.67	457.69	176.66	539.33	451.85	291.81

Legend: ✓ No Warnings 1 Late Results $2.0 \leq |Z\text{-score}| < 3.0$ $|Z\text{-score}| \geq 3.0$ – No Result

* Amended Result (per participant's request)

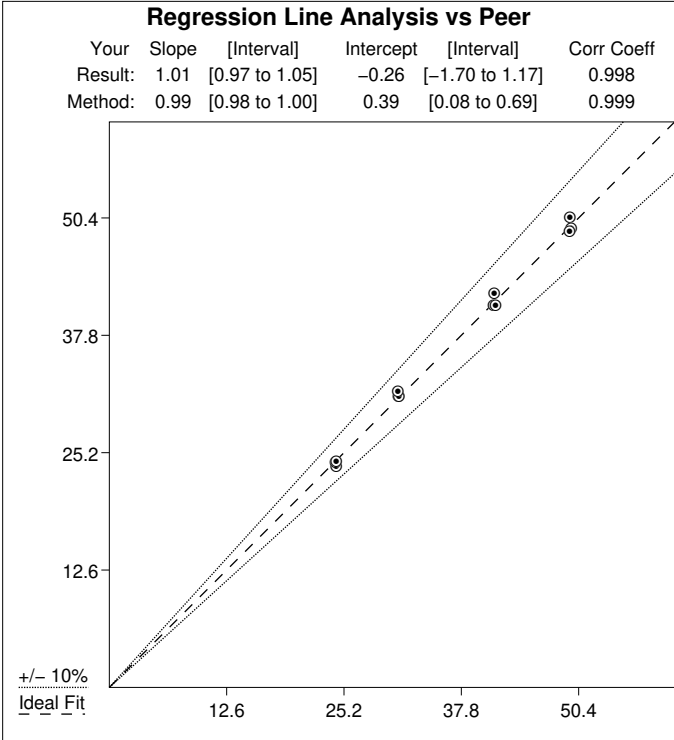
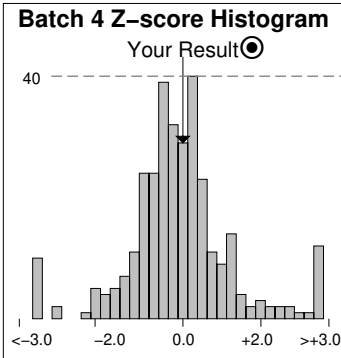
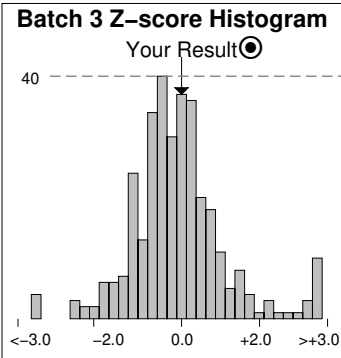
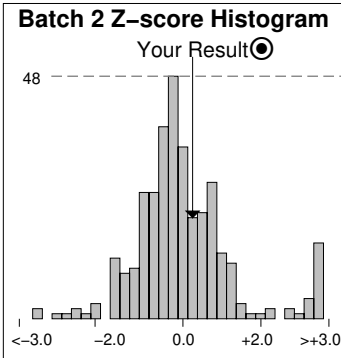
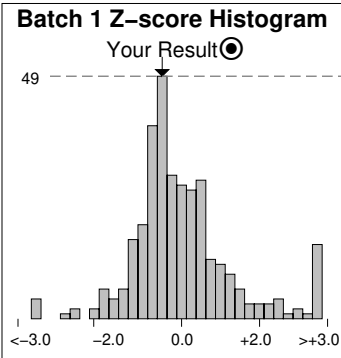
⚠ Non-robust determination of Mean and SD



Mindray BS Series (g/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	23.74	24.18	24.2	31.16	31.24	31.71	41.01	41.03	42.27	50.4	49.27	48.95
Comparator Mean	24.4	24.3	24.4	31.1	31.1	31.0	41.3	41.5	41.4	49.5	49.6	49.4
Comparator	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer
Your Lab's Z-score	-0.52	-0.12	-0.19	0.06	0.11	0.53	-0.16	-0.27	0.64	0.42	-0.16	-0.25
Your Batch Z-score	-0.29			0.22			0.02			0.03		
Reference Values												

Your Mode Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	23242	23.9	1.54	6.47	0.025	0.776	23129	30.5	1.75	5.73	0.029	2.81
	19004	24.3	1.29	5.32	0.023	-1.16	18885	31.0	1.54	4.97	0.028	1.18
	876	24.4	1.13	4.65	0.096	-1.36	866	31.1	1.43	4.62	0.122	1.02
Your Mode Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	22686	41.3	1.94	4.70	0.032	0.390	22987	49.8	2.23	4.47	0.037	-0.528
	18523	41.4	1.78	4.30	0.033	0.144	18800	49.8	2.11	4.24	0.039	-0.512
	852	41.4	1.68	4.06	0.144	0.089	847	49.5	2.07	4.19	0.178	0.107



Comments:

Reviewed by:

Date:



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Amylase Summary Report Clinical Chemistry (Monthly) Program

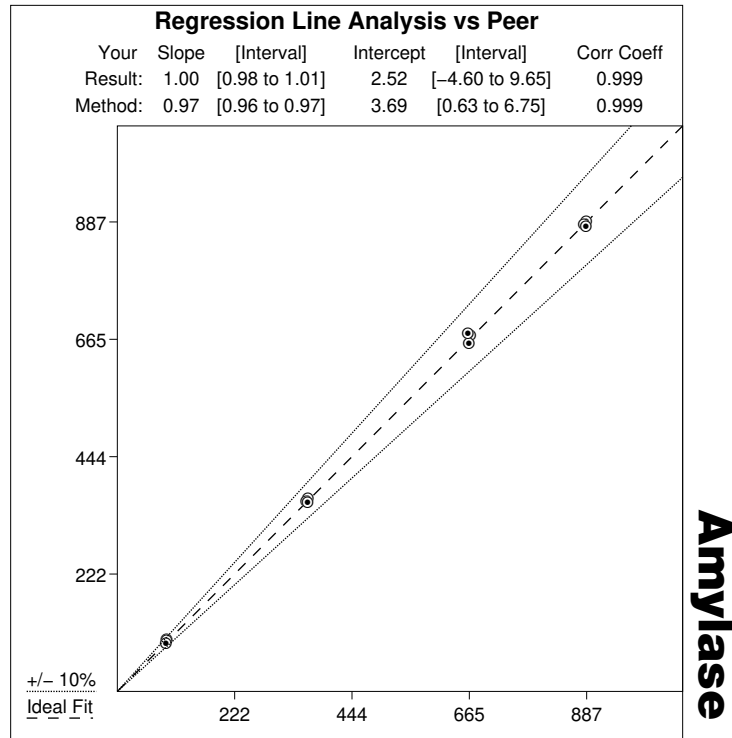
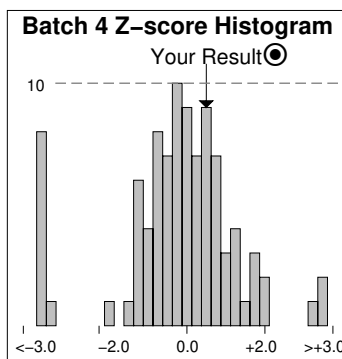
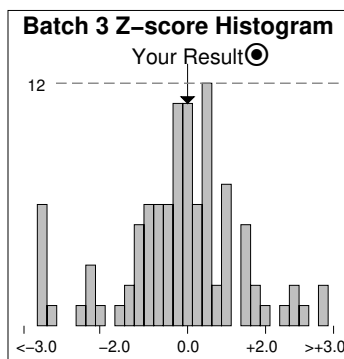
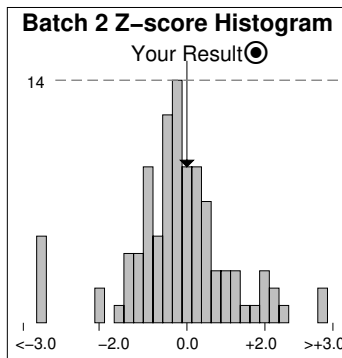
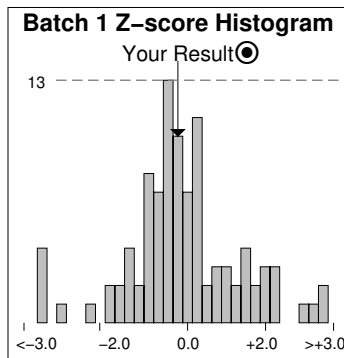
Cycle 22
Jul 2023 – Jul 2024
Lot No: 212100



Mindray BS Series (U/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	887.25	881.56	878.59	671.91	657.81	675.26	364.71	357.96	356.62	98.05	95.44	90.25
Comparator Mean	887	882	886	667	665	663	361	357	360	93.2	92.9	92.0
Comparator	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer
Your Lab's Z-score	0.02	-0.01	-0.23	0.22	-0.28	0.55	0.34	0.07	-0.30	1.16	0.62	-0.40
Your Batch Z-score	-0.08			0.16			0.03			0.47		
Reference Values												

Your Mode Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	9575	832	34.3	4.12	0.877	6.02	9635	625	25.6	4.10	0.653	6.89
	3458	910	45.3	4.98	1.93	-2.99	3425	679	32.7	4.81	1.40	-1.58
Your Mode Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	9340	342	14.6	4.27	0.378	5.15	9433	90.0	4.19	4.65	0.108	5.08
	3363	368	17.2	4.68	0.741	-2.19	3390	91.6	6.94	7.57	0.298	3.22
Your Mode Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	237	885	30.5	3.45	4.96	-0.272	244	665	23.0	3.46	3.68	0.551
	237	359	12.5	3.48	2.03	0.119	234	92.7	4.12	4.45	0.674	2.07



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**Bile Acids Summary Report
Clinical Chemistry (Monthly) Program**

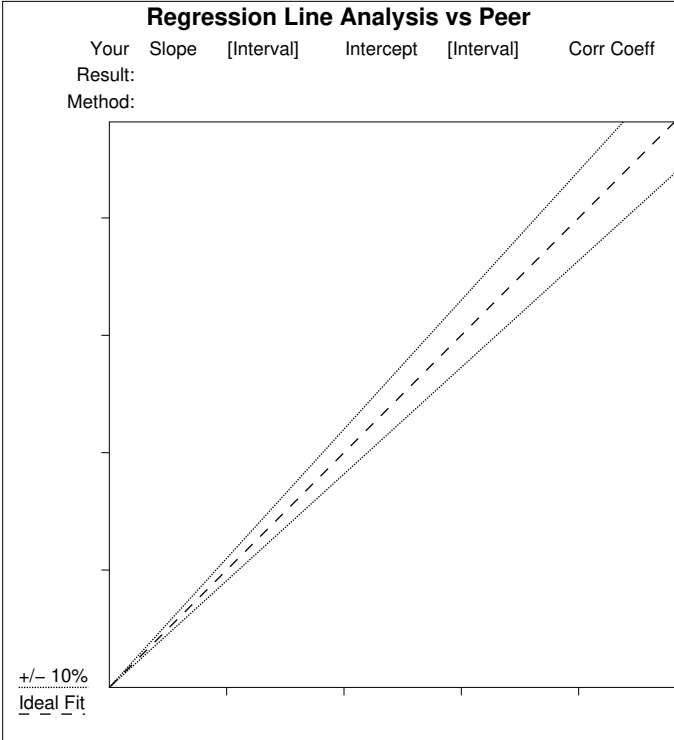
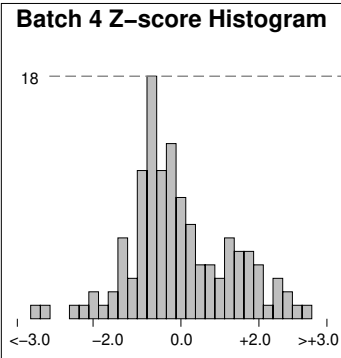
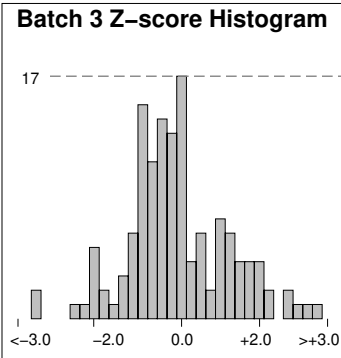
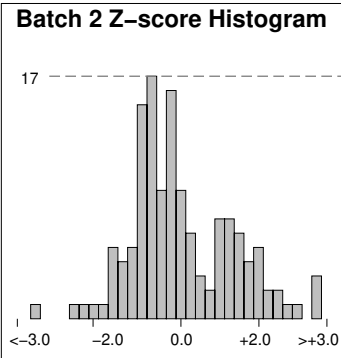
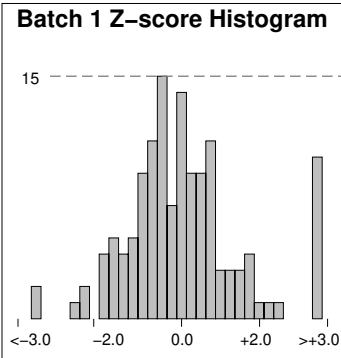
Cycle 22
Jul 2023 – Jul 2024
Lot No: 212100



Mindray BS Series (μmol/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	–	–	–	–	–	–	–	–	–	–	–	–
Comparator Mean	5.43	5.54	5.46	26.0	26.2	26.4	54.3	55.3	56.2	78.0	79.6	79.9
Comparator	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method	Method
Your Lab's Z-score	–	–	–	–	–	–	–	–	–	–	–	–
Your Batch Z-score	–			–			–			–		
Reference Values												

All Results Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	320	5.48	0.645	11.8	0.090	–	326	26.2	3.32	12.6	0.459	–
	320	5.48	0.645	11.8	0.090	–	326	26.2	3.32	12.6	0.459	–
All Results Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	317	55.3	6.86	12.4	0.963	–	307	79.1	8.60	10.9	1.23	–
	317	55.3	6.86	12.4	0.963	–	307	79.1	8.60	10.9	1.23	–
All Results Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	3	54.5	1.54	2.83	2.22	–	4	79.7	0.180	0.226	0.225	–
	3	54.5	1.54	2.83	2.22	–	4	79.7	0.180	0.226	0.225	–



Comments: _____

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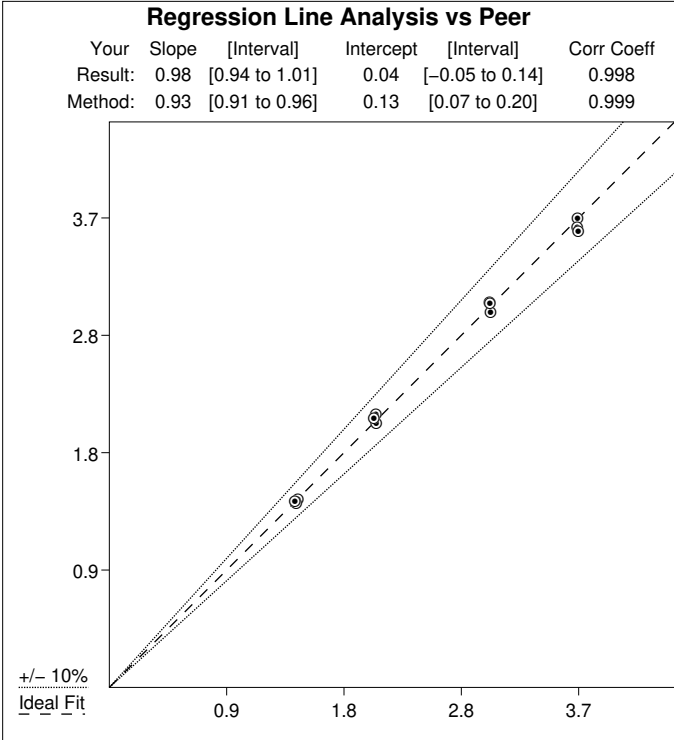
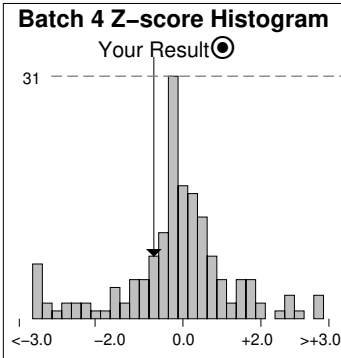
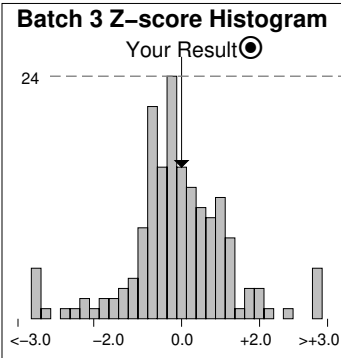
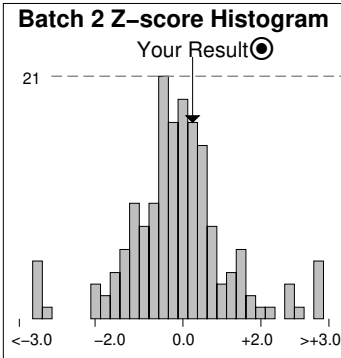
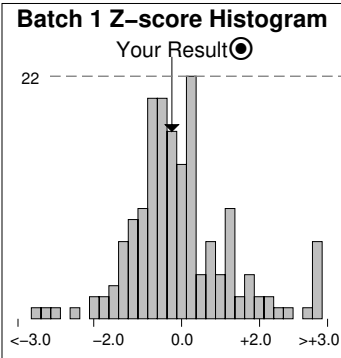
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Mindray BS Series (mmol/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	1.48	1.45	1.46	2.152	2.081	2.12	3.036	2.955	3.026	3.696	3.62	3.59
Comparator Mean	1.49	1.47	1.46	2.10	2.11	2.09	3.00	3.01	3.00	3.69	3.69	3.70
Comparator	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer
Your Lab's Z-score	-0.09	-0.31	-0.06	0.50	-0.25	0.45	0.31	-0.52	0.29	0.03	-0.48	-0.91
Your Batch Z-score	-0.15			0.24			0.05			-0.42		
Reference Values												

All Results Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	19179	1.45	0.054	3.75	0.001	0.992	19042	2.07	0.062	3.01	0.001	2.18
	9261	1.46	0.054	3.71	0.001	0.034	9163	2.08	0.067	3.24	0.002	1.88
	446	1.47	0.071	4.83	0.008	-0.722	431	2.10	0.090	4.29	0.011	1.05
All Results Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	18656	3.03	0.089	2.94	0.002	-0.755	18837	3.84	0.124	3.23	0.002	-5.43
	9085	3.03	0.087	2.87	0.002	-0.964	9123	3.84	0.124	3.23	0.003	-5.31
	431	3.00	0.103	3.42	0.012	0.163	413	3.69	0.140	3.78	0.017	-1.58



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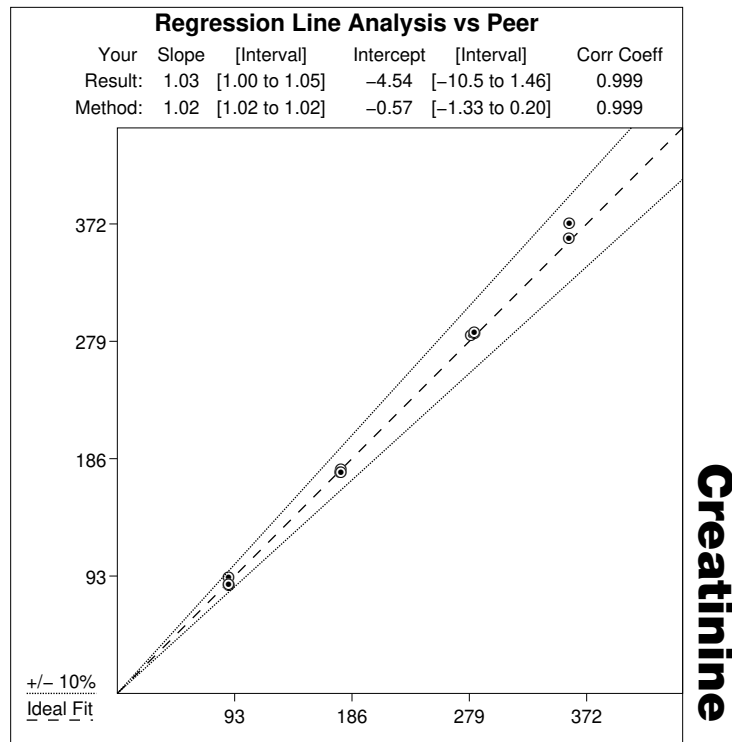
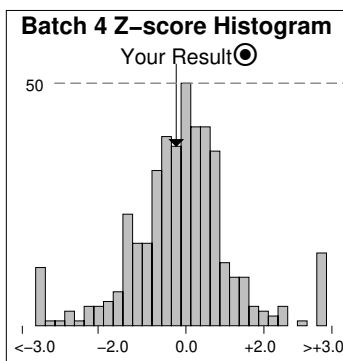
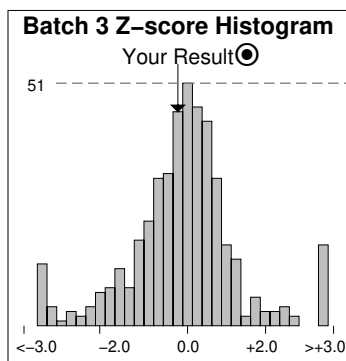
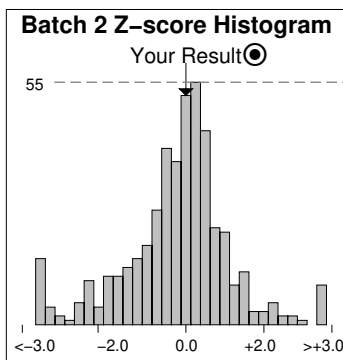
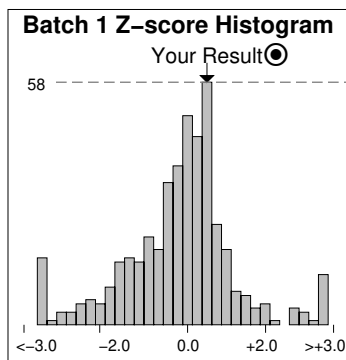
Cycle 22
Jul 2023 – Jul 2024
Lot No: 212100



Mindray BS Series (μmol/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	360.15	371.5	–	283.21	284.42	285.71	177.07	174.59	175.01	91.77	85.18	86.39
Comparator Mean	358	358	360	280	283	283	177	176	177	88.0	88.4	88.0
Comparator	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer
Your Lab's Z-score	0.14	0.84	–	0.22	0.13	0.26	0.01	–0.20	–0.22	0.62	–0.63	–0.33
Your Batch Z-score	0.45			0.19			–0.13			–0.07		
Reference Values	354									88.4		

All Results Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	35825	338	24.4	7.22	0.322	8.23	35533	274	16.7	6.09	0.221	3.86
	5170	352	19.6	5.57	0.681	3.97	5104	277	15.0	5.39	0.523	2.52
All Results Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	35004	168	13.5	8.04	0.180	4.48	35557	84.6	9.64	11.4	0.128	3.75
	5056	174	10.3	5.92	0.362	0.847	5115	87.0	7.08	8.13	0.247	0.860
All Results Your Method Your Peer	1209	177	9.27	5.24	0.666	–0.666	1208	88.1	5.43	6.16	0.390	–0.402



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Phosphorus Summary Report
Clinical Chemistry (Monthly) Program

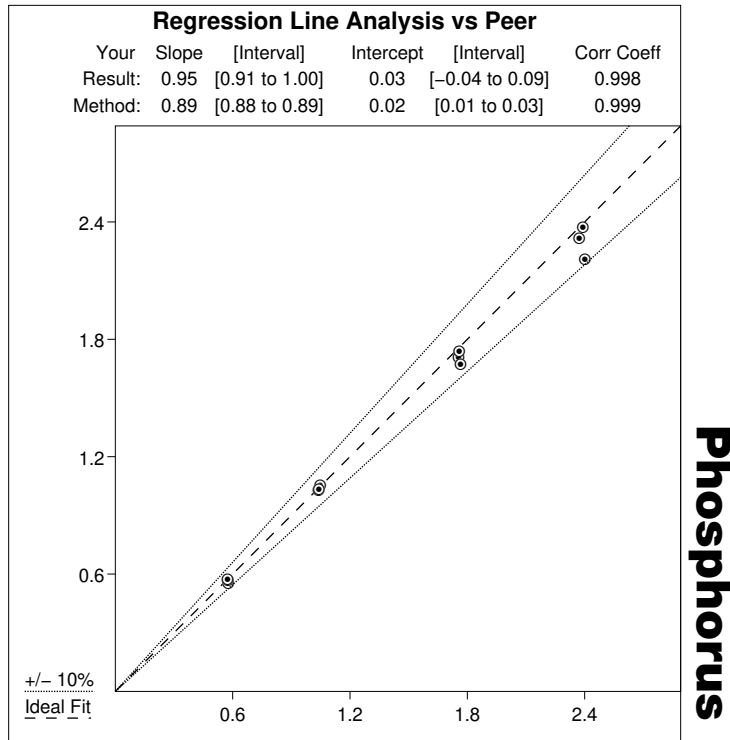
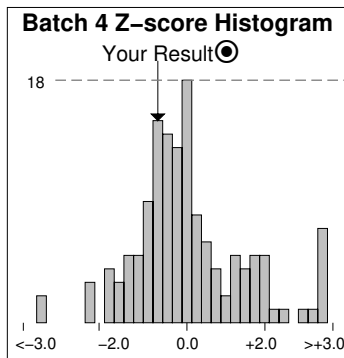
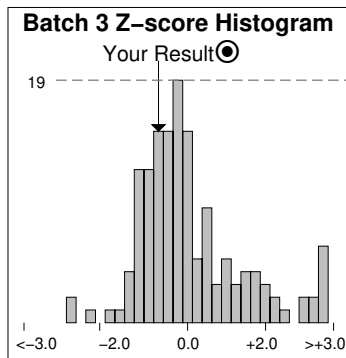
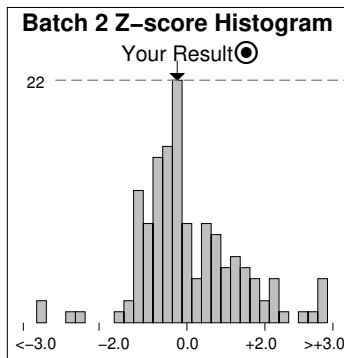
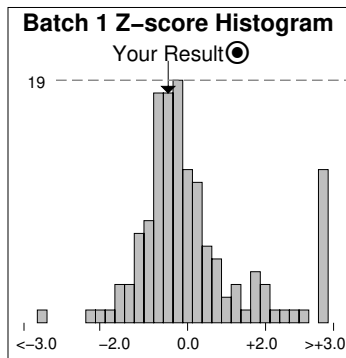
Cycle 22
Jul 2023 – Jul 2024
Lot No: 212100



Mindray BS Series (mmol/L)

Batch #	1			2			3			4		
Sample #	4	7	10	1	8	11	2	5	12	3	6	9
Lab Result	0.554	0.57	0.577	1.037	1.063	1.04	1.724	1.688	1.753	2.34	2.394	2.23
Comparator Mean	0.583	0.582	0.581	1.05	1.06	1.05	1.77	1.78	1.78	2.40	2.42	2.43
Comparator	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer	Peer
Your Lab's Z-score	-0.70	-0.30	-0.08	-0.17	0.05	-0.17	-0.42	-0.83	-0.26	-0.39	-0.14	-1.23
Your Batch Z-score	-0.35			-0.11			-0.52			-0.60		
Reference Values												

Your Mode Your Method Your Peer	Batch 1: Cycle Comparative Statistics						Batch 2: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	390	0.581	0.041	7.13	0.005	-2.46	377	1.05	0.069	6.53	0.009	-0.425
	14783	0.632	0.027	4.32	0.001	-10.3	14761	1.17	0.047	4.08	0.001	-10.2
	378	0.582	0.042	7.22	0.005	-2.52	365	1.05	0.075	7.14	0.010	-0.751
Your Mode Your Method Your Peer	Batch 3: Cycle Comparative Statistics						Batch 4: Cycle Comparative Statistics					
	N	Mean	SD	CV	U ¹	Mean Bias	N	Mean	SD	CV	U ¹	Mean Bias
	378	1.78	0.103	5.82	0.013	-3.09	372	2.41	0.144	5.97	0.019	-3.60
	14344	1.98	0.065	3.26	0.001	-13.1	14538	2.69	0.090	3.34	0.002	-13.7
	366	1.78	0.111	6.25	0.015	-3.25	360	2.41	0.148	6.14	0.020	-3.69



Comments: _____

Reviewed by: _____

Date: _____

**Lab 267608**INTERMED INNOVATION
10A CHINOBOD STR., UNUSABAD DISTRICT TAS
TASHKENT
RUSSIA**Mean Z-score Report
Clinical Chemistry (Monthly) Program****Cycle 22**
Jul 2023 – Jul 2024
Lot No: 212100**Instrument: Mindray BS Series**

Analyte	Your Mean Z-score	Your Percentile	Mean Z-score Distribution		
			10%	50%	90%
Albumin	0.29	3%	0.40	0.72	2.19
Alkaline Phosphatase	1.22	76%	0.42	0.79	1.95
ALT (ALAT/GPT)	0.39	11%	0.39	0.76	2.17
Amylase	0.35	11%	0.32	0.74	3.00
AST/GOT	0.51	19%	0.40	0.82	1.97
Bilirubin, Direct	0.52	29%	0.29	0.87	2.12
Bilirubin, Indire...	0.90	67%	0.67	0.76	1.09
Bilirubin, Total	0.82	50%	0.29	0.82	1.59
Calcium	0.35	6%	0.39	0.81	2.20
Chloride	0.51	14%	0.45	0.88	1.74
Cholesterol, HDL	0.66	38%	0.31	0.82	2.28
Cholesterol, LDL	0.37	11%	0.36	0.77	1.78
Cholesterol, Total	0.29	4%	0.40	0.82	2.25
Cholinesterase	0.61	44%	0.21	0.67	1.41
Creatine Kinase	0.45	22%	0.37	0.77	2.40
Creatinine	0.33	6%	0.37	0.82	2.68
G-Glutamyltransfe...	0.50	23%	0.40	0.81	1.98
Glucose	0.57	24%	0.41	0.82	2.15
Iron	0.81	49%	0.33	0.81	2.83
LDH	0.51	22%	0.38	0.72	2.76
Lipase	1.15	67%	0.27	0.68	2.24
Magnesium	0.50	17%	0.36	0.91	3.19
Phosphorus	0.39	15%	0.33	0.75	2.55



Lab 267608

INTERMED INNOVATION
10A CHINOBOD STR., UNUSABAD DISTRICT TAS
TASHKENT
RUSSIA

Mean Z-score Report Clinical Chemistry (Monthly) Program

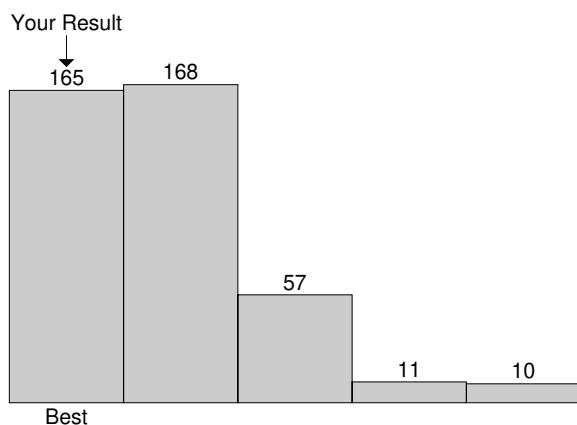
Cycle 22
Jul 2023 – Jul 2024
Lot No: 212100



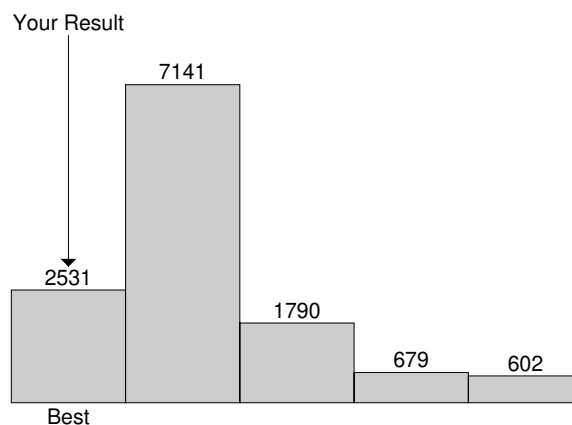
Instrument: Mindray BS Series

Analyte	Your Mean Z-score	Your Percentile	Mean Z-score Distribution		
			10%	50%	90%
Potassium	0.41	4%	0.48	0.95	3.24
Protein, Total	0.41	10%	0.40	0.79	2.06
Sodium	0.67	36%	0.45	0.77	1.73
Triglycerides	0.35	8%	0.37	0.80	2.25
Urea	0.64	34%	0.38	0.82	2.68
Uric Acid	0.62	36%	0.32	0.81	3.01

National Peer Performance Score Histogram



Worldwide Peer Performance Score Histogram





Certificate of Acceptable Performance



THIS IS TO CERTIFY THAT:

INTERMED INNOVATION
Lab 267608

HAS SUCCESSFULLY COMPLETED THE EXTERNAL QUALITY ASSESSMENT FOR:

EQAS Clinical Chemistry (Monthly) Program
Cycle 22: July 2023 – July 2024

FOR THE FOLLOWING TESTS:

ALT (ALAT/GPT)	Creatine Kinase
AST/GOT	Creatinine
Albumin	G-Glutamyltransferase
Alkaline Phosphatase	Glucose
Amylase	Iron
Bile Acids	LDH
Bilirubin, Direct	Lipase
Bilirubin, Indirect/BU	Magnesium
Bilirubin, Total	Phosphorus
CO ₂ (Carbon Dioxide)	Potassium
Calcium	Protein, Total
Chloride	Sodium
Cholesterol, HDL	Triglycerides
Cholesterol, LDL	Urea
Cholesterol, Total	Uric Acid
Cholinesterase	

Acceptable performance criteria: $\geq 75\%$ response rate with results within ± 3 Z-score



Bio-Rad Laboratories is fully accredited by the American Association for Laboratory Accreditation (A2LA) to the ISO/IEC 17043:2010 standard.

Michiko Suwoto

Michiko Suwoto, EQAS Program Manager

Bio-Rad Laboratories
EQAS Program Enrollment

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