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HEALTH

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Clinical Chemistry Proficiency Testing – September 12, 2011

Enclosed are results from the clinical chemistry proficiency survey shipped September 12, 2011. Test samples were prepared in-house by the quantitative transfer of constituents to pooled human serum. The material was subsequently sterile filtered, dispensed into aliquots and stored frozen at -80 ^{o}C. Five specimens (**C61, C62, C63, C64, C65**) were distributed to each participant for analysis.

Outlined below is a description of the process utilized in the evaluation of your laboratory's proficiency test results. A summary of your laboratory's performance for the three most recent surveys is also included with your report.

Target Value: In general, targets utilized are derived from all-participant mean values calculated by robust statistical technique. In some cases, however, it is recognized that method, reagent, and/or instrument specific targets may be required and "peer group" specific targets are used where appropriate. Should an alternate target be required to evaluate your laboratory's data, an asterisk will be placed adjacent to the method, reagent, and/or instrument listing(s) corresponding to the peer group utilized.

Acceptable Range: Represents limits established using criteria specified by CLIA '88 regulations, allowing for rounding to appropriate significant digits. Results falling within this range are scored as 100%. Any result exceeding these limits is considered unsatisfactory and receives a score of 0%. Laboratories must achieve an overall analyte score ≥80% in order to meet performance criteria for that analyte.

Range Plots: Plots relative distance of your laboratory's result (represented by an "x") from the target for each sample analyzed. Any result exceeding the high or low limit by >20% of the acceptable range is indicated by an asterisk (*).

Not Gradable: Results for graded analytes for a few laboratories using unique instrument, reagent, or instrument/reagent combinations were considered "not gradable". For these laboratories, pass credit (100%) has been issued. **If a laboratory is unable to participate in the NYS clinical chemistry proficiency test event as a graded participant for any analyte, it is the responsibility of that laboratory to establish alternate means to verify the accuracy and precision of the test system for any non-graded analyte(s).**

Troponin I, Troponin T, and Estimated Glomerular Filtration Rate: These analytes were included in the September 2011 test event for evaluation only. Although results were not graded, targets and acceptable ranges appropriate for your laboratory's methodology are provided.

The attached statistical report provides a summary of participant data for the five survey specimens. Results for individual instrument and reagent systems where the number of laboratories using those systems is three or greater are provided. Mean and Standard Deviation (1 SD) values shown are calculated by a robust statistical technique that does not assume a Gaussian distribution. These statistical reports are also available on the internet at:
http://www.wadsworth.org/chemheme/chem/gencc/ptframes.htm

Should you have any questions regarding these reports or wish to obtain an additional copy, please contact the Clinical Chemistry Section at (518) 474-5582.

Note: The use of brand and/or trade names in this report does not constitute an endorsement of the products on the part of the Wadsworth Center or the New York State Department of Health

Summary of Participant Performance (Mean and Standard Deviation)

Glucose (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
265.5 ± 6.43	44.3 ± 2.33	75.8 ± 2.36	192.7 ± 4.99	91.0 ± 2.61	n = 390	[---] All Methods & Instruments
						<Instruments>
263.3 ± 1.37	48.6 ± 1.02	80.0 ± 1.80	192.5 ± 1.86	94.3 ± 1.37	n = 3	[AXA] Abaxis Piccolo
268.6 ± 2.87	42.4 ± 0.56	75.3 ± 0.74	192.9 ± 2.29	90.6 ± 1.05	n = 14	[ABJ] Abbott Architect c System
264.3 ± 7.68	43.0 ± 1.49	75.7 ± 1.94	190.8 ± 4.82	90.7 ± 2.79	n = 52	[OLC] Beckman Coulter AU Chemistry System
263.0 ± 9.89	43.2 ± 2.71	76.0 ± 3.55	192.4 ± 8.17	90.6 ± 4.12	n = 9	[BCS] Beckman Coulter CX
262.6 ± 8.23	43.8 ± 2.44	74.9 ± 3.03	189.7 ± 5.90	89.7 ± 2.47	n = 9	[BCX] Beckman Coulter LX-20
265.2 ± 5.78	44.9 ± 1.62	76.6 ± 1.39	192.7 ± 4.08	91.8 ± 2.50	n = 22	[BCG] Beckman Coulter UniCel DxC 600
263.0 ± 5.04	43.8 ± 2.36	75.0 ± 2.05	191.0 ± 2.96	90.3 ± 1.75	n = 23	[BCH] Beckman Coulter UniCel DxC 800
273.0 ± 0.90	64.7 ± 3.37	95.3 ± 1.37	203.7 ± 0.51	108.2 ± 2.36	n = 3	[HEB] HemoCue B-Glucose
277.0 ± 0.90	67.5 ± 1.86	104.7 ± 2.26	213.0 ± 1.80	120.5 ± 5.40	n = 3	[HEC] HemoCue Glucose 201
272.8 ± 1.91	43.7 ± 1.85	77.5 ± 1.02	194.2 ± 0.91	92.5 ± 1.24	n = 6	[IAA] i-STAT
266.9 ± 5.30	43.9 ± 1.45	73.7 ± 2.53	197.6 ± 4.39	90.3 ± 2.33	n = 13	[JJE] Ortho Vitros 250/350/950
265.5 ± 4.78	43.5 ± 0.89	73.1 ± 1.30	195.1 ± 3.81	88.7 ± 1.53	n = 22	[JJF] Ortho Vitros 5,1FS
264.9 ± 5.38	43.8 ± 1.51	72.8 ± 1.79	195.2 ± 4.10	88.9 ± 1.86	n = 11	[JJG] Ortho Vitros 5600
264.8 ± 4.24	43.7 ± 0.98	76.1 ± 1.45	192.1 ± 3.56	91.1 ± 1.90	n = 18	[ROC] Roche cobas c501
262.9 ± 5.54	42.7 ± 0.74	75.4 ± 1.17	191.2 ± 3.65	89.6 ± 1.78	n = 13	[ROT] Roche Cobas INTEGRA
266.5 ± 5.94	43.7 ± 1.09	76.3 ± 1.79	192.8 ± 4.74	91.6 ± 2.19	n = 36	[ROD] Roche MODULAR D/P
262.5 ± 6.17	43.0 ± 1.09	75.4 ± 1.89	191.1 ± 4.54	90.1 ± 2.19	n = 16	[BYE] Siemens ADVIA 1800
259.3 ± 14.77	42.9 ± 2.86	74.2 ± 4.11	187.9 ± 10.08	89.0 ± 4.60	n = 3	[BYB] Siemens ADVIA 2400
269.2 ± 5.35	46.6 ± 0.96	77.0 ± 2.05	194.3 ± 4.69	92.0 ± 2.18	n = 12	[DUE] Siemens Dimension EXL
268.5 ± 5.56	47.6 ± 1.32	78.1 ± 1.56	195.3 ± 4.10	93.4 ± 2.08	n = 28	[DUR] Siemens Dimension RxL
260.6 ± 6.17	46.2 ± 1.41	75.2 ± 2.17	189.2 ± 5.01	90.8 ± 2.69	n = 32	[DUT] Siemens Dimension Vista
265.4 ± 5.46	47.2 ± 1.62	77.1 ± 1.57	193.8 ± 3.57	92.3 ± 2.19	n = 21	[DUX] Siemens Dimension Xpand
						<Reagents>
263.3 ± 1.37	48.6 ± 1.02	80.0 ± 1.80	192.5 ± 1.86	94.3 ± 1.37	n = 3	[AX1] Abaxis
268.6 ± 2.87	42.4 ± 0.56	75.3 ± 0.74	192.9 ± 2.29	90.6 ± 1.05	n = 14	[AB1] Abbott
263.8 ± 5.95	44.2 ± 2.17	75.6 ± 2.21	191.7 ± 4.48	90.8 ± 2.24	n = 60	[BC1] Beckman Coulter
264.0 ± 7.45	42.9 ± 1.31	75.6 ± 1.81	190.7 ± 4.67	90.7 ± 2.76	n = 48	[OL1] Beckman Coulter AU Series
261.4 ± 11.43	44.4 ± 1.69	75.6 ± 3.85	191.8 ± 9.36	89.5 ± 5.15	n = 6	[CR1] Carolina
275.0 ± 2.39	66.4 ± 2.64	99.9 ± 5.53	208.2 ± 5.41	113.6 ± 7.79	n = 6	[HE1] HemoCue
272.8 ± 1.91	43.7 ± 1.85	77.5 ± 1.02	194.2 ± 0.91	92.5 ± 1.24	n = 6	[IA1] i-STAT
265.9 ± 5.13	43.6 ± 1.27	73.1 ± 1.77	195.8 ± 4.13	89.1 ± 1.97	n = 47	[JJ1] Ortho Clinical Diagnostics
264.6 ± 4.09	43.6 ± 0.96	76.1 ± 1.38	192.0 ± 3.43	91.1 ± 1.83	n = 19	[RO4] Roche cobas c311/c501/c502/c701
266.5 ± 5.80	43.7 ± 1.08	76.2 ± 1.85	192.8 ± 4.67	91.5 ± 2.22	n = 37	[RO2] Roche Hitachi and Modular D/P
262.9 ± 5.54	42.7 ± 0.74	75.4 ± 1.17	191.2 ± 3.65	89.6 ± 1.78	n = 13	[RO1] Roche Integra and MIRA
264.2 ± 7.05	43.3 ± 1.28	75.8 ± 2.08	192.0 ± 5.13	90.7 ± 2.62	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
265.4 ± 6.79	46.9 ± 1.53	76.9 ± 2.19	193.0 ± 5.19	92.2 ± 2.53	n = 92	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Urea Nitrogen (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
30.3 ± 1.64	9.9 ± 0.73	19.4 ± 1.20	60.7 ± 3.26	23.2 ± 1.47	n = 372	[---] All Methods & Instruments
						<Instruments>
28.7 ± 0.51	10.7 ± 0.51	18.3 ± 0.51	60.0 ± 0.00	22.3 ± 0.51	n = 3	[AXA] Abaxis Piccolo
30.1 ± 0.69	10.0 ± 0.00	19.4 ± 0.60	60.0 ± 1.62	23.0 ± 0.55	n = 13	[ABJ] Abbott Architect c System
30.7 ± 0.89	10.1 ± 0.45	19.9 ± 0.49	61.2 ± 1.49	23.6 ± 0.73	n = 50	[OLC] Beckman Coulter AU Chemistry System
31.2 ± 0.84	10.3 ± 0.80	20.0 ± 0.82	62.3 ± 2.04	23.6 ± 0.86	n = 9	[BCS] Beckman Coulter CX
29.0 ± 1.29	9.4 ± 0.73	18.5 ± 0.70	58.5 ± 2.16	22.0 ± 0.00	n = 9	[BCX] Beckman Coulter LX-20
30.7 ± 0.92	10.7 ± 0.53	19.7 ± 0.65	61.2 ± 1.35	23.8 ± 0.68	n = 21	[BCG] Beckman Coulter UniCel DxC 600
28.5 ± 1.77	9.1 ± 1.24	18.3 ± 0.93	58.3 ± 1.95	21.7 ± 1.42	n = 24	[BCH] Beckman Coulter UniCel DxC 800
34.0 ± 0.90	9.0 ± 0.00	20.3 ± 0.51	69.7 ± 1.48	26.5 ± 1.02	n = 6	[IAA] i-STAT
27.2 ± 0.67	9.0 ± 0.00	17.0 ± 0.00	53.0 ± 1.19	20.0 ± 0.00	n = 13	[JJE] Ortho Vitros 250/350/950
27.0 ± 0.65	9.0 ± 0.00	16.7 ± 0.50	52.8 ± 1.14	19.4 ± 0.57	n = 22	[JJF] Ortho Vitros 5,1FS
26.9 ± 1.05	8.7 ± 0.62	16.2 ± 1.02	52.7 ± 2.28	19.3 ± 1.05	n = 11	[JJG] Ortho Vitros 5600
30.3 ± 0.51	10.0 ± 0.00	19.3 ± 0.61	60.6 ± 1.28	23.0 ± 0.00	n = 18	[ROC] Roche cobas c501
30.2 ± 0.61	10.0 ± 0.00	19.2 ± 0.61	61.5 ± 2.35	23.2 ± 0.61	n = 10	[ROT] Roche Cobas INTEGRA
30.8 ± 0.63	10.1 ± 0.41	19.8 ± 0.65	61.6 ± 1.41	23.6 ± 0.65	n = 35	[ROD] Roche MODULAR D/P
31.1 ± 0.99	10.3 ± 0.54	20.2 ± 0.66	61.1 ± 1.60	23.9 ± 0.74	n = 16	[BYE] Siemens ADVIA 1800
30.7 ± 0.51	10.3 ± 0.51	20.0 ± 0.90	60.9 ± 2.05	24.0 ± 0.90	n = 3	[BYB] Siemens ADVIA 2400
30.9 ± 0.94	9.9 ± 0.44	19.6 ± 0.92	62.4 ± 2.49	23.5 ± 0.93	n = 11	[DUE] Siemens Dimension EXL
31.4 ± 1.15	10.1 ± 0.76	20.1 ± 0.84	63.1 ± 1.96	23.9 ± 0.86	n = 29	[DUR] Siemens Dimension RxL
30.7 ± 0.97	10.0 ± 0.41	19.4 ± 0.72	61.4 ± 2.09	23.3 ± 0.66	n = 32	[DUT] Siemens Dimension Vista
31.1 ± 0.72	10.1 ± 0.56	19.7 ± 0.88	62.1 ± 1.94	23.5 ± 0.77	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
28.7 ± 0.51	10.7 ± 0.51	18.3 ± 0.51	60.0 ± 0.00	22.3 ± 0.51	n = 3	[AX1] Abaxis
30.1 ± 0.69	10.0 ± 0.00	19.4 ± 0.60	60.0 ± 1.62	23.0 ± 0.55	n = 13	[AB1] Abbott
29.7 ± 1.66	9.9 ± 1.08	19.0 ± 1.06	59.8 ± 2.40	22.7 ± 1.48	n = 59	[BC1] Beckman Coulter
30.6 ± 0.87	10.1 ± 0.40	19.8 ± 0.50	61.2 ± 1.52	23.6 ± 0.74	n = 49	[OL1] Beckman Coulter AU Series
30.6 ± 1.37	10.4 ± 1.09	19.6 ± 1.09	61.6 ± 2.61	23.4 ± 1.09	n = 5	[CR1] Carolina
34.0 ± 0.90	9.0 ± 0.00	20.3 ± 0.51	69.7 ± 1.48	26.5 ± 1.02	n = 6	[IA1] i-STAT
27.1 ± 0.75	9.0 ± 0.00	16.8 ± 0.58	53.0 ± 1.32	19.7 ± 0.67	n = 48	[JJ1] Ortho Clinical Diagnostics
30.3 ± 0.50	10.0 ± 0.00	19.3 ± 0.60	60.5 ± 1.31	23.0 ± 0.00	n = 19	[RO4] Roche cobas c311/c501/c502/c701
30.8 ± 0.66	10.1 ± 0.39	19.8 ± 0.63	61.6 ± 1.41	23.7 ± 0.64	n = 36	[RO2] Roche Hitachi and Modular D/P
30.2 ± 0.61	10.0 ± 0.00	19.2 ± 0.61	61.5 ± 2.35	23.2 ± 0.61	n = 10	[RO1] Roche Integra and MIRA
31.2 ± 0.99	10.3 ± 0.52	20.2 ± 0.69	61.5 ± 1.74	24.0 ± 0.73	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
31.0 ± 1.00	10.0 ± 0.58	19.7 ± 0.85	62.2 ± 2.19	23.5 ± 0.82	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Creatinine (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
3.02 ± 0.18	1.07 ± 0.13	1.10 ± 0.09	4.62 ± 0.17	1.36 ± 0.11	n = 380	[---] All Methods & Instruments
3.01 ± 0.20	1.06 ± 0.13	1.09 ± 0.10	4.67 ± 0.32	1.35 ± 0.12	n = 199	[---] All IDMS Traceable Methods
3.03 ± 0.17	1.09 ± 0.12	1.11 ± 0.08	4.64 ± 0.16	1.37 ± 0.11	n = 178	[---] All Non-IDMS Traceable Methods
3.02 ± 0.15	1.09 ± 0.11	1.10 ± 0.07	4.64 ± 0.15	1.36 ± 0.10	n = 156	[-G-] Alkaline picrate/Jaffe
2.95 ± 0.14	1.07 ± 0.14	1.07 ± 0.08	4.59 ± 0.15	1.31 ± 0.09	n = 136	[-H-] Alkaline picrate/Jaffe - IDMS calibration
3.12 ± 0.24	1.06 ± 0.14	1.17 ± 0.12	5.13 ± 0.51	1.42 ± 0.16	n = 22	[-I-] Enzymatic
3.16 ± 0.24	1.04 ± 0.10	1.16 ± 0.10	5.19 ± 0.54	1.43 ± 0.14	n = 63	[-J-] Enzymatic - IDMS-traceable calibration
2.98 ± 0.06	1.04 ± 0.08	1.11 ± 0.09	4.64 ± 0.36	1.33 ± 0.10	n = 3	[-Z-] Other
						<Instruments>
2.83 ± 0.05	0.90 ± 0.18	1.02 ± 0.09	4.57 ± 0.18	1.24 ± 0.05	n = 3	[AXA] Abaxis Piccolo
3.36 ± 0.12	1.24 ± 0.08	1.12 ± 0.05	4.94 ± 0.12	1.50 ± 0.00	n = 13	[ABJ] Abbott Architect c System
2.95 ± 0.07	1.10 ± 0.02	1.08 ± 0.03	4.53 ± 0.10	1.32 ± 0.04	n = 52	[OLC] Beckman Coulter AU Chemistry System
2.88 ± 0.09	1.10 ± 0.09	1.12 ± 0.06	4.55 ± 0.14	1.35 ± 0.06	n = 9	[BCS] Beckman Coulter CX
2.91 ± 0.03	0.92 ± 0.02	1.01 ± 0.03	4.64 ± 0.07	1.25 ± 0.04	n = 9	[BCX] Beckman Coulter LX-20
2.81 ± 0.06	0.95 ± 0.07	1.00 ± 0.00	4.54 ± 0.13	1.23 ± 0.07	n = 22	[BCG] Beckman Coulter UniCel DxC 600
2.88 ± 0.08	0.94 ± 0.06	1.04 ± 0.05	4.62 ± 0.08	1.27 ± 0.05	n = 24	[BCH] Beckman Coulter UniCel DxC 800
3.40 ± 0.15	1.04 ± 0.06	1.16 ± 0.06	5.44 ± 0.30	1.45 ± 0.08	n = 5	[IAA] i-STAT
3.22 ± 0.11	1.13 ± 0.05	1.26 ± 0.05	5.42 ± 0.21	1.55 ± 0.05	n = 13	[JJE] Ortho Vitros 250/350/950
3.33 ± 0.08	1.08 ± 0.06	1.20 ± 0.00	5.58 ± 0.12	1.50 ± 0.01	n = 22	[JJF] Ortho Vitros 5,1FS
3.29 ± 0.08	1.07 ± 0.06	1.20 ± 0.01	5.58 ± 0.14	1.50 ± 0.06	n = 11	[JJG] Ortho Vitros 5600
2.93 ± 0.10	1.01 ± 0.12	1.07 ± 0.06	4.60 ± 0.14	1.30 ± 0.08	n = 20	[ROC] Roche cobas c501
2.91 ± 0.09	1.04 ± 0.10	1.10 ± 0.00	4.59 ± 0.18	1.30 ± 0.00	n = 11	[ROT] Roche Cobas INTEGRA
3.09 ± 0.18	1.17 ± 0.18	1.14 ± 0.08	4.73 ± 0.14	1.41 ± 0.12	n = 35	[ROD] Roche MODULAR D/P
3.06 ± 0.08	1.21 ± 0.07	1.10 ± 0.00	4.62 ± 0.06	1.40 ± 0.00	n = 16	[BYE] Siemens ADVIA 1800
2.98 ± 0.13	1.14 ± 0.10	1.02 ± 0.08	4.51 ± 0.15	1.30 ± 0.07	n = 3	[BYB] Siemens ADVIA 2400
3.02 ± 0.09	1.06 ± 0.06	1.10 ± 0.00	4.59 ± 0.09	1.34 ± 0.06	n = 11	[DUE] Siemens Dimension EXL
3.05 ± 0.11	1.10 ± 0.11	1.12 ± 0.09	4.66 ± 0.12	1.38 ± 0.09	n = 30	[DUR] Siemens Dimension RxL
3.05 ± 0.13	1.05 ± 0.10	1.10 ± 0.08	4.65 ± 0.12	1.36 ± 0.10	n = 33	[DUT] Siemens Dimension Vista
2.99 ± 0.11	1.05 ± 0.13	1.08 ± 0.10	4.60 ± 0.11	1.34 ± 0.11	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
2.83 ± 0.05	0.90 ± 0.18	1.02 ± 0.09	4.57 ± 0.18	1.24 ± 0.05	n = 3	[AX1] Abaxis
3.37 ± 0.11	1.23 ± 0.10	1.13 ± 0.05	4.96 ± 0.12	1.50 ± 0.00	n = 14	[AB1] Abbott
2.86 ± 0.08	0.94 ± 0.06	1.02 ± 0.06	4.60 ± 0.10	1.26 ± 0.06	n = 60	[BC1] Beckman Coulter
2.96 ± 0.07	1.10 ± 0.02	1.08 ± 0.03	4.53 ± 0.10	1.32 ± 0.04	n = 49	[OL1] Beckman Coulter AU Series
2.94 ± 0.10	1.13 ± 0.09	1.12 ± 0.05	4.55 ± 0.18	1.34 ± 0.05	n = 6	[CR1] Carolina
3.40 ± 0.18	1.05 ± 0.06	1.15 ± 0.06	5.53 ± 0.27	1.43 ± 0.09	n = 4	[IA1] i-STAT
3.29 ± 0.10	1.09 ± 0.07	1.23 ± 0.05	5.55 ± 0.16	1.52 ± 0.06	n = 48	[JJ1] Ortho Clinical Diagnostics
2.93 ± 0.10	1.02 ± 0.12	1.08 ± 0.06	4.60 ± 0.14	1.31 ± 0.08	n = 21	[RO4] Roche cobas c311/c501/c502/c701
3.09 ± 0.18	1.16 ± 0.18	1.14 ± 0.08	4.73 ± 0.13	1.41 ± 0.12	n = 36	[RO2] Roche Hitachi and Modular D/P
2.91 ± 0.09	1.04 ± 0.10	1.10 ± 0.00	4.59 ± 0.18	1.30 ± 0.00	n = 11	[RO1] Roche Integra and MIRA
3.06 ± 0.09	1.20 ± 0.08	1.10 ± 0.00	4.62 ± 0.07	1.38 ± 0.04	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
3.03 ± 0.12	1.07 ± 0.11	1.10 ± 0.09	4.63 ± 0.12	1.36 ± 0.10	n = 92	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Estimated Glomerular Filtration Rate (mL/min/1.73 m²)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
22.0 ± 1.79	71.1 ± 11.39	70.2 ± 8.76	13.2 ± 1.18	54.8 ± 5.39	n = 281	[---] All Methods & Instruments
21.4 ± 1.98	68.9 ± 11.65	66.9 ± 8.97	12.8 ± 1.42	53.2 ± 5.75	n = 160	[-A-] IDMS-traceable MDRD Study Equation
22.6 ± 1.26	72.2 ± 10.18	72.5 ± 6.01	13.7 ± 0.68	56.2 ± 4.09	n = 102	[-B-] Original MDRD Study Equation (4-variable)
22.3 ± 1.38	73.7 ± 8.50	75.7 ± 4.70	13.2 ± 0.68	58.8 ± 3.75	n = 15	[-F-] CKD-EPI Equation
20.5 ± 1.86	85.5 ± 1.71	76.5 ± 8.55	12.0 ± 0.90	55.1 ± 5.22	n = 3	[-Z-] Other

Target values and allowable ranges for Estimated Glomerular Filtration Rate (eGFR):

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Method
22 (18-25)	72 (61-90)	70 (59-88)	13 (11-15)	55 (46-63)	IDMS-traceable MDRD Study Equation
23 (19-27)	74 (63-93)	73 (61-91)	14 (11-16)	57 (48-66)	Original MDRD Study Equation
22 (18-26)	78 (65-97)	75 (63-94)	13 (11-15)	58 (49-67)	CKD-EPI Equation
31 (26-36)	88 (66-111)	86 (64-108)	21 (17-24)	70 (59-87)	Cockcroft-Gault Equation

Laboratories were asked to report Estimated Glomerular Filtration Rate (eGFR) for samples C61-C65 for a 57-year-old non-African American man weighing 82 kg.

Target values for eGFR calculated by the MDRD Study Equations were derived from participant mean values for serum creatinine for both conventional and isotope dilution mass spectroscopy (IDMS) calibration methods and application of the appropriate 4-variable MDRD Study equation.

Target values for eGFR calculated by the CKD-EPI equation were derived from participant mean values for IDMS-traceable serum creatinine methods and application of the CKD-EPI equation.

Target values for eGFR calculated by the Cockcroft-Gault equation were derived from all-method mean values for serum creatinine and application of the Cockcroft-Gault formula.

Allowable ranges are ±/- 15% of the target eGFR for eGFR <= 59 mL/min; ±/- 25% of the target eGFR for eGFR > 80 mL/min; and a range of -15% to ±25% of the target eGFR for eGFR = 60-80 mL/min.

Note: the NKDEP recommends reporting estimated GFR values greater than or equal to 60 mL/min/1.73 m^2 as "> 60 mL/min/1.73 m2" and not as an exact number. However, ranges exceeding 60 mL/min are provided as a relative indicator of acceptability for laboratories that report numeric results above that threshold. Note that some laboratories reported results > 60 mL/min/1.73 m2 for samples C62, C63, and C65. These data were removed from the calculations of mean and standard deviation since their inclusion would have skewed results. Participant results for specimens C62, C63, and C65 reported as >60 mL/min/1.73 m2 were considered acceptable performance.

Summary of Participant Performance (Mean and Standard Deviation)

Uric Acid (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
2.73 ± 0.20	9.91 ± 0.49	5.73 ± 0.30	4.08 ± 0.21	6.85 ± 0.35	n = 334	[---] All Methods & Instruments
						<Instruments>
2.98 ± 0.10	10.24 ± 0.07	5.98 ± 0.10	4.29 ± 0.08	7.14 ± 0.12	n = 12	[ABJ] Abbott Architect c System
3.05 ± 0.09	10.90 ± 0.35	6.47 ± 0.16	4.51 ± 0.12	7.67 ± 0.18	n = 48	[OLC] Beckman Coulter AU Chemistry System
2.64 ± 0.12	9.48 ± 0.25	5.71 ± 0.20	4.10 ± 0.16	6.87 ± 0.26	n = 9	[BCS] Beckman Coulter CX
2.74 ± 0.09	9.58 ± 0.14	5.83 ± 0.10	4.20 ± 0.07	6.89 ± 0.14	n = 9	[BCX] Beckman Coulter LX-20
2.63 ± 0.06	9.59 ± 0.21	5.71 ± 0.13	4.12 ± 0.09	6.82 ± 0.12	n = 18	[BCG] Beckman Coulter UniCel DxC 600
2.61 ± 0.05	9.59 ± 0.11	5.72 ± 0.09	4.10 ± 0.08	6.78 ± 0.09	n = 22	[BCH] Beckman Coulter UniCel DxC 800
2.52 ± 0.07	9.79 ± 0.17	5.60 ± 0.11	4.05 ± 0.06	6.73 ± 0.10	n = 11	[JJE] Ortho Vitros 250/350/950
2.57 ± 0.06	9.71 ± 0.19	5.57 ± 0.13	3.99 ± 0.10	6.65 ± 0.15	n = 22	[JJF] Ortho Vitros 5,1FS
2.54 ± 0.07	9.77 ± 0.22	5.64 ± 0.12	4.01 ± 0.09	6.70 ± 0.14	n = 11	[JJG] Ortho Vitros 5600
2.69 ± 0.06	10.29 ± 0.20	5.91 ± 0.14	4.14 ± 0.10	7.07 ± 0.13	n = 18	[ROC] Roche cobas c501
2.55 ± 0.06	9.86 ± 0.21	5.70 ± 0.13	3.95 ± 0.09	6.82 ± 0.14	n = 8	[ROT] Roche Cobas INTEGRA
2.60 ± 0.05	10.07 ± 0.15	5.75 ± 0.11	4.00 ± 0.08	6.90 ± 0.11	n = 34	[ROD] Roche MODULAR D/P
2.62 ± 0.08	9.97 ± 0.15	5.74 ± 0.09	4.08 ± 0.08	6.89 ± 0.09	n = 16	[BYE] Siemens ADVIA 1800
2.67 ± 0.05	10.13 ± 0.31	5.82 ± 0.15	4.10 ± 0.09	6.90 ± 0.18	n = 3	[BYB] Siemens ADVIA 2400
2.83 ± 0.11	9.90 ± 0.16	5.61 ± 0.14	4.04 ± 0.11	6.72 ± 0.08	n = 11	[DUE] Siemens Dimension EXL
2.88 ± 0.12	9.90 ± 0.21	5.59 ± 0.15	4.02 ± 0.13	6.73 ± 0.16	n = 26	[DUR] Siemens Dimension RxL
2.79 ± 0.10	9.30 ± 0.19	5.36 ± 0.11	3.80 ± 0.10	6.36 ± 0.11	n = 31	[DUT] Siemens Dimension Vista
2.87 ± 0.08	9.92 ± 0.22	5.63 ± 0.14	4.10 ± 0.00	6.74 ± 0.11	n = 14	[DUX] Siemens Dimension Xpand
						<Reagents>
2.98 ± 0.10	10.24 ± 0.07	5.98 ± 0.10	4.29 ± 0.08	7.14 ± 0.12	n = 12	[AB1] Abbott
2.64 ± 0.08	9.58 ± 0.17	5.73 ± 0.12	4.12 ± 0.09	6.81 ± 0.12	n = 55	[BC1] Beckman Coulter
3.05 ± 0.09	10.91 ± 0.34	6.47 ± 0.15	4.51 ± 0.11	7.67 ± 0.17	n = 47	[OL1] Beckman Coulter AU Series
2.60 ± 0.10	9.53 ± 0.14	5.71 ± 0.24	4.07 ± 0.16	6.97 ± 0.38	n = 5	[CR1] Carolina
2.55 ± 0.07	9.74 ± 0.19	5.59 ± 0.13	4.01 ± 0.10	6.68 ± 0.14	n = 44	[JJ1] Ortho Clinical Diagnostics
2.69 ± 0.06	10.29 ± 0.20	5.91 ± 0.14	4.14 ± 0.10	7.07 ± 0.13	n = 18	[RO4] Roche cobas c311/c501/c502/c701
2.60 ± 0.04	10.07 ± 0.15	5.75 ± 0.11	4.00 ± 0.08	6.90 ± 0.11	n = 35	[RO2] Roche Hitachi and Modular D/P
2.55 ± 0.06	9.86 ± 0.21	5.70 ± 0.13	3.95 ± 0.09	6.82 ± 0.14	n = 8	[RO1] Roche Integra and MIRA
2.64 ± 0.08	10.03 ± 0.20	5.77 ± 0.11	4.08 ± 0.08	6.92 ± 0.11	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
2.84 ± 0.11	9.69 ± 0.38	5.51 ± 0.19	3.95 ± 0.17	6.59 ± 0.23	n = 81	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Bilirubin (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
1.65 ± 0.18	0.67 ± 0.17	1.01 ± 0.17	3.13 ± 0.22	1.27 ± 0.19	n = 361	[---] All Methods & Instruments
						<Instruments>
1.60 ± 0.00	0.63 ± 0.05	1.00 ± 0.00	3.10 ± 0.00	1.20 ± 0.09	n = 3	[AXA] Abaxis Piccolo
1.80 ± 0.09	0.72 ± 0.07	1.13 ± 0.12	3.41 ± 0.12	1.41 ± 0.11	n = 13	[ABJ] Abbott Architect c System
1.67 ± 0.07	0.78 ± 0.05	1.12 ± 0.08	3.07 ± 0.12	1.34 ± 0.10	n = 50	[OLC] Beckman Coulter AU Chemistry System
1.78 ± 0.21	0.86 ± 0.23	1.17 ± 0.14	3.29 ± 0.18	1.49 ± 0.18	n = 9	[BCS] Beckman Coulter CX
1.96 ± 0.10	0.96 ± 0.09	1.23 ± 0.09	3.42 ± 0.12	1.53 ± 0.18	n = 9	[BCX] Beckman Coulter LX-20
1.82 ± 0.18	0.91 ± 0.16	1.17 ± 0.18	3.38 ± 0.16	1.43 ± 0.19	n = 21	[BCG] Beckman Coulter UniCel DxC 600
1.80 ± 0.12	0.91 ± 0.11	1.12 ± 0.13	3.39 ± 0.15	1.40 ± 0.14	n = 24	[BCH] Beckman Coulter UniCel DxC 800
1.86 ± 0.08	0.72 ± 0.08	1.15 ± 0.10	3.15 ± 0.10	1.47 ± 0.08	n = 12	[JJE] Ortho Vitros 250/350/950
1.74 ± 0.15	0.57 ± 0.13	1.01 ± 0.16	3.08 ± 0.18	1.28 ± 0.17	n = 22	[JJF] Ortho Vitros 5,1FS
1.74 ± 0.13	0.60 ± 0.07	1.03 ± 0.07	3.07 ± 0.19	1.33 ± 0.11	n = 11	[JJG] Ortho Vitros 5600
1.38 ± 0.06	0.45 ± 0.06	0.79 ± 0.08	2.86 ± 0.11	1.04 ± 0.09	n = 17	[ROC] Roche cobas c501
1.31 ± 0.10	0.45 ± 0.06	0.81 ± 0.11	2.77 ± 0.12	1.02 ± 0.13	n = 12	[ROT] Roche Cobas INTEGRA
1.45 ± 0.10	0.50 ± 0.07	0.84 ± 0.11	2.99 ± 0.14	1.07 ± 0.12	n = 35	[ROD] Roche MODULAR D/P
1.70 ± 0.06	0.69 ± 0.06	1.05 ± 0.10	3.30 ± 0.15	1.32 ± 0.13	n = 16	[BYE] Siemens ADVIA 1800
1.70 ± 0.09	0.67 ± 0.05	1.04 ± 0.10	3.34 ± 0.10	1.27 ± 0.14	n = 3	[BYB] Siemens ADVIA 2400
1.62 ± 0.05	0.63 ± 0.06	0.96 ± 0.08	3.12 ± 0.08	1.25 ± 0.06	n = 11	[DUE] Siemens Dimension EXL
1.60 ± 0.09	0.62 ± 0.08	0.97 ± 0.08	3.13 ± 0.12	1.22 ± 0.10	n = 29	[DUR] Siemens Dimension RxL
1.61 ± 0.07	0.67 ± 0.07	0.99 ± 0.08	3.10 ± 0.11	1.26 ± 0.10	n = 32	[DUT] Siemens Dimension Vista
1.65 ± 0.09	0.64 ± 0.08	0.97 ± 0.08	3.12 ± 0.13	1.23 ± 0.11	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
1.60 ± 0.00	0.63 ± 0.05	1.00 ± 0.00	3.10 ± 0.00	1.20 ± 0.09	n = 3	[AX1] Abaxis
1.80 ± 0.09	0.72 ± 0.07	1.13 ± 0.12	3.41 ± 0.12	1.41 ± 0.11	n = 13	[AB1] Abbott
1.83 ± 0.15	0.92 ± 0.13	1.17 ± 0.14	3.39 ± 0.16	1.45 ± 0.18	n = 60	[BC1] Beckman Coulter
1.67 ± 0.07	0.79 ± 0.04	1.12 ± 0.08	3.07 ± 0.12	1.35 ± 0.10	n = 48	[OL1] Beckman Coulter AU Series
1.60 ± 0.16	0.65 ± 0.14	1.02 ± 0.14	3.21 ± 0.11	1.32 ± 0.14	n = 6	[CR1] Carolina
1.77 ± 0.14	0.61 ± 0.14	1.06 ± 0.15	3.11 ± 0.17	1.34 ± 0.17	n = 47	[JJ1] Ortho Clinical Diagnostics
1.38 ± 0.07	0.45 ± 0.06	0.78 ± 0.08	2.85 ± 0.12	1.03 ± 0.10	n = 18	[RO4] Roche cobas c311/c501/c502/c701
1.45 ± 0.10	0.50 ± 0.07	0.84 ± 0.11	2.99 ± 0.14	1.07 ± 0.12	n = 35	[RO2] Roche Hitachi and Modular D/P
1.31 ± 0.10	0.45 ± 0.06	0.81 ± 0.11	2.77 ± 0.12	1.02 ± 0.13	n = 12	[RO1] Roche Integra and MIRA
1.70 ± 0.07	0.69 ± 0.05	1.05 ± 0.09	3.31 ± 0.14	1.31 ± 0.13	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
1.62 ± 0.08	0.64 ± 0.08	0.98 ± 0.08	3.12 ± 0.12	1.24 ± 0.10	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Phosphorus (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
2.84 ± 0.16	3.97 ± 0.18	4.86 ± 0.17	2.51 ± 0.16	5.82 ± 0.22	n = 338	[---] All Methods & Instruments
						<Instruments>
2.82 ± 0.07	3.95 ± 0.08	4.83 ± 0.07	2.45 ± 0.08	5.75 ± 0.07	n = 13	[ABJ] Abbott Architect c System
2.75 ± 0.08	3.84 ± 0.11	4.72 ± 0.11	2.44 ± 0.09	5.62 ± 0.13	n = 49	[OLC] Beckman Coulter AU Chemistry System
3.08 ± 0.20	4.09 ± 0.25	4.90 ± 0.19	2.64 ± 0.16	5.85 ± 0.20	n = 8	[BCS] Beckman Coulter CX
2.93 ± 0.09	4.00 ± 0.07	4.96 ± 0.07	2.68 ± 0.07	5.99 ± 0.08	n = 9	[BCX] Beckman Coulter LX-20
2.83 ± 0.12	3.98 ± 0.14	4.85 ± 0.15	2.52 ± 0.13	5.81 ± 0.21	n = 19	[BCG] Beckman Coulter UniCel DxC 600
2.92 ± 0.08	4.02 ± 0.08	4.97 ± 0.08	2.66 ± 0.06	5.98 ± 0.08	n = 23	[BCH] Beckman Coulter UniCel DxC 800
3.14 ± 0.09	4.28 ± 0.15	5.11 ± 0.12	2.84 ± 0.09	6.20 ± 0.15	n = 11	[JJE] Ortho Vitros 250/350/950
3.18 ± 0.11	4.33 ± 0.13	5.14 ± 0.14	2.85 ± 0.13	6.24 ± 0.20	n = 22	[JJF] Ortho Vitros 5,1FS
3.11 ± 0.11	4.26 ± 0.12	5.04 ± 0.16	2.76 ± 0.13	6.09 ± 0.16	n = 11	[JJG] Ortho Vitros 5600
2.85 ± 0.06	3.99 ± 0.07	4.89 ± 0.08	2.49 ± 0.08	5.83 ± 0.09	n = 19	[ROC] Roche cobas c501
2.84 ± 0.09	3.98 ± 0.09	4.86 ± 0.12	2.47 ± 0.05	5.80 ± 0.14	n = 9	[ROT] Roche Cobas INTEGRA
2.84 ± 0.09	4.01 ± 0.11	4.89 ± 0.13	2.52 ± 0.10	5.85 ± 0.12	n = 34	[ROD] Roche MODULAR D/P
2.86 ± 0.09	4.02 ± 0.13	4.89 ± 0.10	2.51 ± 0.10	5.86 ± 0.14	n = 16	[BYE] Siemens ADVIA 1800
2.76 ± 0.10	3.93 ± 0.14	4.75 ± 0.19	2.46 ± 0.10	5.78 ± 0.15	n = 3	[BYB] Siemens ADVIA 2400
2.72 ± 0.05	3.85 ± 0.06	4.78 ± 0.06	2.40 ± 0.10	5.73 ± 0.07	n = 10	[DUE] Siemens Dimension EXL
2.80 ± 0.10	3.92 ± 0.10	4.87 ± 0.12	2.46 ± 0.09	5.81 ± 0.16	n = 26	[DUR] Siemens Dimension RxL
2.65 ± 0.09	3.78 ± 0.13	4.69 ± 0.13	2.34 ± 0.09	5.64 ± 0.15	n = 31	[DUT] Siemens Dimension Vista
2.79 ± 0.06	3.91 ± 0.08	4.81 ± 0.08	2.43 ± 0.08	5.76 ± 0.10	n = 17	[DUX] Siemens Dimension Xpand
						<Reagents>
2.82 ± 0.07	3.95 ± 0.08	4.83 ± 0.07	2.45 ± 0.08	5.75 ± 0.07	n = 13	[AB1] Abbott
2.90 ± 0.11	4.00 ± 0.11	4.93 ± 0.12	2.62 ± 0.10	5.94 ± 0.15	n = 55	[BC1] Beckman Coulter
2.75 ± 0.08	3.85 ± 0.11	4.72 ± 0.10	2.44 ± 0.08	5.63 ± 0.12	n = 48	[OL1] Beckman Coulter AU Series
3.15 ± 0.24	4.18 ± 0.24	4.96 ± 0.11	2.65 ± 0.16	5.85 ± 0.16	n = 5	[CR1] Carolina
3.15 ± 0.11	4.30 ± 0.14	5.11 ± 0.14	2.83 ± 0.13	6.19 ± 0.19	n = 44	[JJ1] Ortho Clinical Diagnostics
2.85 ± 0.06	3.99 ± 0.07	4.89 ± 0.08	2.49 ± 0.08	5.83 ± 0.09	n = 19	[RO4] Roche cobas c311/c501/c502/c701
2.84 ± 0.09	4.01 ± 0.11	4.89 ± 0.13	2.52 ± 0.10	5.85 ± 0.12	n = 34	[RO2] Roche Hitachi and Modular D/P
2.84 ± 0.09	3.98 ± 0.09	4.86 ± 0.12	2.47 ± 0.05	5.80 ± 0.14	n = 9	[RO1] Roche Integra and MIRA
2.85 ± 0.09	4.00 ± 0.12	4.88 ± 0.12	2.51 ± 0.10	5.86 ± 0.13	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
2.74 ± 0.11	3.87 ± 0.12	4.79 ± 0.13	2.41 ± 0.10	5.73 ± 0.15	n = 83	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Calcium (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
8.91 ± 0.23	10.18 ± 0.28	7.12 ± 0.19	13.80 ± 0.39	8.46 ± 0.22	n = 367	[---] All Methods & Instruments
						<Instruments>
9.03 ± 0.32	10.16 ± 0.26	7.22 ± 0.15	13.45 ± 0.54	8.44 ± 0.26	n = 3	[AXA] Abaxis Piccolo
9.00 ± 0.13	10.41 ± 0.15	7.19 ± 0.14	13.92 ± 0.13	8.50 ± 0.17	n = 13	[ABJ] Abbott Architect c System
8.89 ± 0.17	10.23 ± 0.16	7.08 ± 0.17	13.72 ± 0.24	8.42 ± 0.16	n = 51	[OLC] Beckman Coulter AU Chemistry System
8.92 ± 0.27	10.23 ± 0.39	7.25 ± 0.13	13.57 ± 0.31	8.48 ± 0.32	n = 9	[BCS] Beckman Coulter CX
8.92 ± 0.17	10.03 ± 0.12	7.20 ± 0.10	13.62 ± 0.09	8.47 ± 0.11	n = 9	[BCX] Beckman Coulter LX-20
8.79 ± 0.10	9.89 ± 0.13	7.10 ± 0.10	13.50 ± 0.19	8.38 ± 0.11	n = 22	[BCG] Beckman Coulter UniCel DxC 600
8.84 ± 0.10	9.98 ± 0.10	7.16 ± 0.08	13.55 ± 0.20	8.43 ± 0.10	n = 24	[BCH] Beckman Coulter UniCel DxC 800
9.03 ± 0.24	10.24 ± 0.24	6.98 ± 0.22	13.82 ± 0.23	8.53 ± 0.22	n = 13	[JJE] Ortho Vitros 250/350/950
9.04 ± 0.18	10.14 ± 0.18	6.97 ± 0.15	13.60 ± 0.22	8.45 ± 0.17	n = 22	[JJF] Ortho Vitros 5,1FS
8.96 ± 0.15	10.12 ± 0.17	6.91 ± 0.14	13.64 ± 0.23	8.39 ± 0.16	n = 11	[JJG] Ortho Vitros 5600
9.11 ± 0.23	10.50 ± 0.20	7.17 ± 0.17	14.62 ± 0.23	8.66 ± 0.22	n = 19	[ROC] Roche cobas c501
8.85 ± 0.16	10.30 ± 0.20	7.01 ± 0.15	14.43 ± 0.27	8.43 ± 0.20	n = 11	[ROT] Roche Cobas INTEGRA
9.16 ± 0.24	10.52 ± 0.25	7.29 ± 0.21	14.26 ± 0.29	8.75 ± 0.23	n = 35	[ROD] Roche MODULAR D/P
9.02 ± 0.25	10.34 ± 0.26	7.21 ± 0.26	13.91 ± 0.27	8.59 ± 0.22	n = 16	[BYE] Siemens ADVIA 1800
8.98 ± 0.50	10.22 ± 0.32	7.12 ± 0.24	13.58 ± 0.41	8.55 ± 0.36	n = 3	[BYB] Siemens ADVIA 2400
8.74 ± 0.18	10.04 ± 0.21	7.07 ± 0.14	13.79 ± 0.21	8.33 ± 0.10	n = 11	[DUE] Siemens Dimension EXL
8.81 ± 0.16	10.10 ± 0.20	7.16 ± 0.16	13.80 ± 0.37	8.40 ± 0.16	n = 29	[DUR] Siemens Dimension RxL
8.69 ± 0.16	9.97 ± 0.17	7.05 ± 0.19	13.66 ± 0.21	8.34 ± 0.15	n = 32	[DUT] Siemens Dimension Vista
8.84 ± 0.16	10.12 ± 0.20	7.15 ± 0.16	13.96 ± 0.30	8.44 ± 0.18	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
9.03 ± 0.32	10.16 ± 0.26	7.22 ± 0.15	13.45 ± 0.54	8.44 ± 0.26	n = 3	[AX1] Abaxis
9.00 ± 0.13	10.41 ± 0.15	7.19 ± 0.14	13.92 ± 0.13	8.50 ± 0.17	n = 13	[AB1] Abbott
8.83 ± 0.13	9.95 ± 0.15	7.16 ± 0.10	13.54 ± 0.18	8.41 ± 0.13	n = 60	[BC1] Beckman Coulter
8.89 ± 0.16	10.22 ± 0.16	7.08 ± 0.17	13.71 ± 0.24	8.41 ± 0.15	n = 50	[OL1] Beckman Coulter AU Series
8.93 ± 0.09	10.33 ± 0.34	7.18 ± 0.13	13.70 ± 0.32	8.49 ± 0.28	n = 5	[CR1] Carolina
9.03 ± 0.20	10.17 ± 0.20	6.96 ± 0.18	13.67 ± 0.24	8.46 ± 0.19	n = 47	[JJ1] Ortho Clinical Diagnostics
9.12 ± 0.18	10.52 ± 0.14	7.17 ± 0.14	14.61 ± 0.23	8.66 ± 0.13	n = 17	[RO4] Roche cobas c311/c501/c502/c701
9.16 ± 0.24	10.52 ± 0.25	7.29 ± 0.21	14.26 ± 0.29	8.75 ± 0.23	n = 35	[RO2] Roche Hitachi and Modular D/P
8.85 ± 0.16	10.30 ± 0.20	7.01 ± 0.15	14.43 ± 0.27	8.43 ± 0.20	n = 11	[RO1] Roche Integra and MIRA
9.06 ± 0.29	10.38 ± 0.27	7.24 ± 0.27	13.88 ± 0.31	8.63 ± 0.25	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
8.77 ± 0.18	10.05 ± 0.21	7.11 ± 0.18	13.78 ± 0.30	8.37 ± 0.16	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Magnesium (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
1.57 ± 0.09	2.74 ± 0.11	1.94 ± 0.09	3.43 ± 0.15	2.32 ± 0.10	n = 331	[---] All Methods & Instruments
						<Instruments>
1.60 ± 0.08	2.71 ± 0.06	1.98 ± 0.04	3.36 ± 0.12	2.34 ± 0.08	n = 12	[ABJ] Abbott Architect c System
1.53 ± 0.07	2.66 ± 0.11	1.89 ± 0.07	3.31 ± 0.12	2.26 ± 0.07	n = 47	[OLC] Beckman Coulter AU Chemistry System
1.63 ± 0.05	2.83 ± 0.11	2.00 ± 0.00	3.52 ± 0.10	2.43 ± 0.05	n = 8	[BCS] Beckman Coulter CX
1.60 ± 0.00	2.80 ± 0.08	1.98 ± 0.04	3.50 ± 0.08	2.39 ± 0.06	n = 8	[BCX] Beckman Coulter LX-20
1.63 ± 0.07	2.84 ± 0.07	2.00 ± 0.07	3.53 ± 0.11	2.42 ± 0.05	n = 21	[BCG] Beckman Coulter UniCel DxC 600
1.62 ± 0.06	2.82 ± 0.09	1.98 ± 0.07	3.48 ± 0.12	2.39 ± 0.08	n = 23	[BCH] Beckman Coulter UniCel DxC 800
1.54 ± 0.06	2.71 ± 0.11	1.92 ± 0.07	3.53 ± 0.11	2.30 ± 0.05	n = 7	[JJE] Ortho Vitros 250/350/950
1.54 ± 0.06	2.68 ± 0.07	1.91 ± 0.07	3.45 ± 0.09	2.28 ± 0.05	n = 22	[JJF] Ortho Vitros 5,1FS
1.56 ± 0.06	2.69 ± 0.07	1.91 ± 0.05	3.46 ± 0.08	2.28 ± 0.05	n = 10	[JJG] Ortho Vitros 5600
1.58 ± 0.06	2.61 ± 0.08	1.92 ± 0.06	3.23 ± 0.09	2.30 ± 0.00	n = 17	[ROC] Roche cobas c501
1.57 ± 0.09	2.66 ± 0.07	1.91 ± 0.05	3.30 ± 0.08	2.30 ± 0.07	n = 9	[ROT] Roche Cobas INTEGRA
1.60 ± 0.00	2.77 ± 0.07	1.99 ± 0.08	3.47 ± 0.09	2.37 ± 0.06	n = 32	[ROD] Roche MODULAR D/P
1.67 ± 0.08	2.84 ± 0.11	2.02 ± 0.09	3.58 ± 0.13	2.44 ± 0.06	n = 16	[BYE] Siemens ADVIA 1800
1.67 ± 0.05	2.90 ± 0.09	2.07 ± 0.05	3.63 ± 0.14	2.43 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
1.47 ± 0.08	2.73 ± 0.09	1.86 ± 0.07	3.37 ± 0.12	2.25 ± 0.07	n = 9	[DUE] Siemens Dimension EXL
1.52 ± 0.07	2.78 ± 0.07	1.90 ± 0.00	3.44 ± 0.09	2.29 ± 0.07	n = 28	[DUR] Siemens Dimension RxL
1.48 ± 0.09	2.73 ± 0.09	1.87 ± 0.10	3.42 ± 0.13	2.27 ± 0.12	n = 32	[DUT] Siemens Dimension Vista
1.50 ± 0.00	2.72 ± 0.09	1.90 ± 0.00	3.41 ± 0.10	2.30 ± 0.08	n = 18	[DUX] Siemens Dimension Xpand
						<Reagents>
1.60 ± 0.08	2.71 ± 0.06	1.98 ± 0.04	3.36 ± 0.12	2.34 ± 0.08	n = 12	[AB1] Abbott
1.62 ± 0.06	2.83 ± 0.08	1.99 ± 0.06	3.51 ± 0.10	2.40 ± 0.06	n = 56	[BC1] Beckman Coulter
1.54 ± 0.07	2.67 ± 0.11	1.89 ± 0.07	3.32 ± 0.13	2.27 ± 0.08	n = 47	[OL1] Beckman Coulter AU Series
1.68 ± 0.04	2.75 ± 0.12	2.02 ± 0.04	3.42 ± 0.13	2.42 ± 0.04	n = 4	[CR1] Carolina
1.55 ± 0.06	2.69 ± 0.08	1.91 ± 0.06	3.47 ± 0.10	2.28 ± 0.05	n = 39	[JJ1] Ortho Clinical Diagnostics
1.58 ± 0.06	2.61 ± 0.08	1.92 ± 0.06	3.23 ± 0.09	2.30 ± 0.00	n = 17	[RO4] Roche cobas c311/c501/c502/c701
1.60 ± 0.00	2.77 ± 0.08	1.98 ± 0.08	3.46 ± 0.10	2.36 ± 0.06	n = 32	[RO2] Roche Hitachi and Modular D/P
1.57 ± 0.09	2.67 ± 0.09	1.92 ± 0.07	3.31 ± 0.11	2.31 ± 0.08	n = 9	[RO1] Roche Integra and MIRA
1.67 ± 0.07	2.86 ± 0.10	2.05 ± 0.09	3.60 ± 0.14	2.44 ± 0.07	n = 24	[BY1] Siemens ADVIA/ADVIA Centaur
1.50 ± 0.08	2.75 ± 0.09	1.90 ± 0.08	3.42 ± 0.11	2.28 ± 0.09	n = 85	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Iron (µg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
109.6 ± 12.34	132.2 ± 15.06	94.7 ± 4.12	120.1 ± 7.55	113.8 ± 5.90	n = 269	[---] All Methods & Instruments
						<Instruments>
64.7 ± 1.38	86.4 ± 23.77	73.8 ± 1.45	87.2 ± 1.92	87.5 ± 1.51	n = 13	[ABJ] Abbott Architect c System
110.2 ± 3.52	132.9 ± 3.77	95.5 ± 2.79	121.4 ± 3.79	115.1 ± 3.23	n = 45	[OLC] Beckman Coulter AU Chemistry System
90.8 ± 5.77	109.7 ± 6.90	87.5 ± 6.24	110.7 ± 6.52	104.9 ± 3.71	n = 6	[BCS] Beckman Coulter CX
95.0 ± 6.99	112.6 ± 6.43	92.3 ± 3.71	113.6 ± 5.73	109.7 ± 5.08	n = 8	[BCX] Beckman Coulter LX-20
92.3 ± 3.86	111.3 ± 3.92	92.7 ± 3.16	114.1 ± 3.98	110.6 ± 4.23	n = 12	[BCG] Beckman Coulter UniCel DxC 600
92.5 ± 3.17	110.9 ± 3.16	91.2 ± 2.42	112.5 ± 3.08	108.1 ± 2.39	n = 17	[BCH] Beckman Coulter UniCel DxC 800
132.8 ± 8.58	161.4 ± 6.91	98.1 ± 3.94	139.8 ± 8.42	124.9 ± 3.58	n = 5	[JJE] Ortho Vitros 250/350/950
131.4 ± 3.26	160.7 ± 4.18	99.0 ± 5.09	137.3 ± 5.25	124.0 ± 4.15	n = 20	[JJF] Ortho Vitros 5,1FS
131.2 ± 4.05	161.5 ± 4.52	98.4 ± 3.51	135.3 ± 6.69	123.6 ± 3.34	n = 11	[JJG] Ortho Vitros 5600
116.6 ± 2.07	138.6 ± 2.41	97.7 ± 2.58	123.3 ± 2.50	117.2 ± 2.67	n = 10	[ROC] Roche cobas c501
115.4 ± 2.12	139.4 ± 1.68	99.3 ± 3.40	124.3 ± 1.77	117.3 ± 2.08	n = 8	[ROT] Roche Cobas INTEGRA
112.9 ± 1.85	135.7 ± 2.11	95.1 ± 1.66	121.3 ± 1.82	113.9 ± 1.85	n = 33	[ROD] Roche MODULAR D/P
113.4 ± 3.25	136.7 ± 2.72	96.2 ± 3.07	122.4 ± 3.23	115.3 ± 3.15	n = 15	[BYE] Siemens ADVIA 1800
111.1 ± 6.08	134.9 ± 6.58	93.4 ± 5.58	120.7 ± 5.97	113.0 ± 6.31	n = 3	[BYB] Siemens ADVIA 2400
105.0 ± 1.60	129.6 ± 2.07	92.4 ± 0.94	117.0 ± 1.92	111.2 ± 1.22	n = 6	[DUE] Siemens Dimension EXL
104.2 ± 1.92	127.8 ± 2.37	91.8 ± 1.65	116.1 ± 2.05	110.5 ± 1.87	n = 17	[DUR] Siemens Dimension RxL
104.8 ± 2.62	128.4 ± 3.07	92.6 ± 2.92	116.6 ± 3.10	110.9 ± 3.16	n = 27	[DUT] Siemens Dimension Vista
105.8 ± 1.27	129.0 ± 0.00	92.2 ± 0.41	116.7 ± 0.82	111.7 ± 1.51	n = 4	[DUX] Siemens Dimension Xpand
						<Reagents>
118.5 ± 2.74	141.5 ± 2.74	97.0 ± 2.70	121.7 ± 2.26	116.0 ± 2.70	n = 3	[AB3] Abbott-Iron/6K95
64.8 ± 1.36	80.1 ± 1.70	73.9 ± 1.45	87.2 ± 1.92	87.5 ± 1.50	n = 10	[AB2] Abbott-Iron/7D68
92.4 ± 4.18	110.9 ± 4.17	91.7 ± 2.83	113.2 ± 3.78	108.8 ± 3.67	n = 39	[BC1] Beckman Coulter
110.3 ± 3.69	133.1 ± 4.05	95.6 ± 2.98	122.0 ± 3.75	115.6 ± 3.38	n = 36	[OL1] Beckman Coulter AU Series
93.6 ± 6.11	113.9 ± 8.27	85.4 ± 6.83	108.6 ± 6.59	104.3 ± 4.21	n = 4	[CR1] Carolina
111.2 ± 4.89	134.6 ± 4.72	96.2 ± 4.10	121.4 ± 6.14	116.5 ± 4.61	n = 3	[DG1] Diagnostic Chemicals Ltd - Endpoint
110.2 ± 2.70	132.1 ± 2.96	95.5 ± 2.10	119.4 ± 3.05	113.4 ± 2.41	n = 7	[GZ1] Genzyme
131.3 ± 4.26	160.9 ± 4.74	98.7 ± 4.52	137.0 ± 6.09	124.0 ± 3.81	n = 36	[JJ1] Ortho Clinical Diagnostics
116.6 ± 2.07	138.6 ± 2.41	97.7 ± 2.58	123.3 ± 2.50	117.2 ± 2.67	n = 10	[RO4] Roche cobas c311/c501/c502/c701
113.0 ± 1.85	135.7 ± 2.11	95.2 ± 1.67	121.3 ± 1.85	113.9 ± 1.89	n = 33	[RO2] Roche Hitachi and Modular D/P
115.4 ± 2.12	139.4 ± 1.68	99.3 ± 3.40	124.3 ± 1.77	117.3 ± 2.08	n = 8	[RO1] Roche Integra and MIRA
113.7 ± 3.03	137.2 ± 2.68	96.4 ± 2.72	122.7 ± 2.96	115.5 ± 2.99	n = 21	[BY1] Siemens ADVIA/ADVIA Centaur
104.7 ± 2.27	128.4 ± 2.76	92.2 ± 2.17	116.5 ± 2.53	110.9 ± 2.44	n = 51	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Sodium (mmol/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
138.0 ± 2.22	135.9 ± 2.57	128.7 ± 1.67	147.1 ± 2.18	153.3 ± 2.17	n = 374	[---] All Methods & Instruments
						<Instruments>
138.0 ± 0.90	134.0 ± 0.90	128.3 ± 0.51	142.0 ± 0.00	152.0 ± 0.00	n = 3	[AXA] Abaxis Piccolo
138.2 ± 1.70	136.7 ± 0.79	127.6 ± 1.61	147.4 ± 1.80	153.3 ± 1.47	n = 13	[ABJ] Abbott Architect c System
137.4 ± 1.12	135.7 ± 1.42	128.0 ± 0.93	146.6 ± 1.17	152.5 ± 1.43	n = 51	[OLC] Beckman Coulter AU Chemistry System
137.3 ± 1.57	135.7 ± 1.30	128.9 ± 1.37	146.4 ± 2.03	153.1 ± 1.24	n = 9	[BCS] Beckman Coulter CX
137.2 ± 1.47	135.7 ± 1.49	128.9 ± 1.50	145.8 ± 1.66	153.0 ± 1.58	n = 9	[BCX] Beckman Coulter LX-20
137.3 ± 0.84	135.7 ± 0.95	128.7 ± 0.97	146.6 ± 1.11	153.1 ± 0.83	n = 22	[BCG] Beckman Coulter UniCel DxC 600
137.4 ± 1.17	136.0 ± 1.06	129.1 ± 1.16	146.5 ± 1.17	153.3 ± 1.31	n = 24	[BCH] Beckman Coulter UniCel DxC 800
135.8 ± 0.47	131.2 ± 0.47	127.0 ± 0.00	145.2 ± 0.66	151.3 ± 0.74	n = 7	[IAA] i-STAT
143.2 ± 1.44	141.9 ± 1.99	132.0 ± 2.06	153.5 ± 2.83	160.5 ± 2.20	n = 13	[JJE] Ortho Vitros 250/350/950
142.8 ± 1.62	141.4 ± 1.51	131.1 ± 1.49	152.4 ± 1.99	159.1 ± 1.71	n = 22	[JJF] Ortho Vitros 5,1FS
143.3 ± 2.11	141.8 ± 2.13	131.6 ± 1.75	153.6 ± 2.31	159.7 ± 2.08	n = 11	[JJG] Ortho Vitros 5600
136.6 ± 1.18	135.1 ± 1.07	127.2 ± 1.21	146.5 ± 1.15	153.1 ± 1.05	n = 18	[ROC] Roche cobas c501
136.7 ± 1.07	134.5 ± 0.83	127.6 ± 0.56	145.7 ± 0.85	152.5 ± 0.69	n = 10	[ROT] Roche Cobas INTEGRA
138.9 ± 1.47	136.8 ± 1.06	128.2 ± 1.24	147.7 ± 1.44	154.0 ± 1.54	n = 34	[ROD] Roche MODULAR D/P
139.8 ± 1.17	137.6 ± 1.15	130.0 ± 1.12	148.7 ± 1.02	154.7 ± 1.02	n = 16	[BYE] Siemens ADVIA 1800
138.7 ± 0.51	136.3 ± 0.51	128.3 ± 0.51	147.7 ± 0.51	153.3 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
137.6 ± 1.69	135.7 ± 1.57	128.7 ± 1.57	147.1 ± 1.99	153.3 ± 1.98	n = 11	[DUE] Siemens Dimension EXL
137.0 ± 1.80	134.1 ± 1.86	127.8 ± 1.65	146.2 ± 1.86	152.0 ± 1.69	n = 29	[DUR] Siemens Dimension RxL
136.4 ± 1.36	132.5 ± 1.50	129.2 ± 1.23	146.3 ± 1.46	152.0 ± 1.35	n = 32	[DUT] Siemens Dimension Vista
137.9 ± 1.53	135.6 ± 1.57	129.1 ± 0.90	147.1 ± 1.22	153.0 ± 1.44	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
138.0 ± 0.90	134.0 ± 0.90	128.3 ± 0.51	142.0 ± 0.00	152.0 ± 0.00	n = 3	[AX1] Abaxis
138.0 ± 1.83	136.0 ± 1.95	127.5 ± 1.50	147.3 ± 1.81	153.2 ± 1.48	n = 14	[AB1] Abbott
137.3 ± 1.15	135.8 ± 1.17	128.9 ± 1.19	146.5 ± 1.25	153.2 ± 1.12	n = 60	[BC1] Beckman Coulter
137.4 ± 1.13	135.8 ± 1.35	128.0 ± 0.95	146.6 ± 1.18	152.5 ± 1.45	n = 50	[OL1] Beckman Coulter AU Series
137.6 ± 1.09	135.8 ± 1.07	128.9 ± 1.27	147.2 ± 2.55	153.1 ± 1.83	n = 5	[CR1] Carolina
135.7 ± 0.51	131.0 ± 0.00	127.0 ± 0.00	145.0 ± 0.55	151.2 ± 0.73	n = 6	[IA1] i-STAT
137.5 ± 1.86	137.3 ± 1.37	130.2 ± 2.36	151.9 ± 2.05	157.5 ± 1.86	n = 3	[IL1] Instrumentation Lab
143.1 ± 1.70	141.6 ± 1.80	131.5 ± 1.86	153.0 ± 2.34	159.6 ± 2.02	n = 47	[JJ1] Ortho Clinical Diagnostics
136.7 ± 1.33	135.2 ± 1.17	127.3 ± 1.28	146.6 ± 1.19	153.1 ± 1.04	n = 19	[RO4] Roche cobas c311/c501/c502/c701
138.9 ± 1.47	136.8 ± 1.06	128.2 ± 1.24	147.7 ± 1.44	154.0 ± 1.54	n = 34	[RO2] Roche Hitachi and Modular D/P
136.7 ± 1.07	134.5 ± 0.83	127.6 ± 0.56	145.7 ± 0.85	152.5 ± 0.69	n = 10	[RO1] Roche Integra and MIRA
139.6 ± 1.19	137.3 ± 1.14	129.6 ± 1.23	148.5 ± 1.09	154.4 ± 1.17	n = 22	[BY1] Siemens ADVIA/ADVIA Centaur
137.0 ± 1.70	134.1 ± 2.16	128.7 ± 1.51	146.5 ± 1.64	152.3 ± 1.65	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Potassium (mmol/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
4.39 ± 0.10	3.47 ± 0.11	5.27 ± 0.11	2.97 ± 0.10	6.35 ± 0.13	n = 374	[---] All Methods & Instruments
						<Instruments>
4.51 ± 0.20	3.67 ± 0.05	5.25 ± 0.19	3.26 ± 0.10	6.40 ± 0.18	n = 3	[AXA] Abaxis Piccolo
4.43 ± 0.08	3.52 ± 0.06	5.26 ± 0.08	3.00 ± 0.00	6.33 ± 0.08	n = 13	[ABJ] Abbott Architect c System
4.40 ± 0.00	3.50 ± 0.00	5.22 ± 0.06	3.02 ± 0.05	6.27 ± 0.08	n = 51	[OLC] Beckman Coulter AU Chemistry System
4.39 ± 0.08	3.50 ± 0.00	5.27 ± 0.05	2.90 ± 0.00	6.34 ± 0.09	n = 9	[BCS] Beckman Coulter CX
4.36 ± 0.06	3.43 ± 0.05	5.26 ± 0.07	2.90 ± 0.00	6.40 ± 0.07	n = 9	[BCX] Beckman Coulter LX-20
4.34 ± 0.06	3.42 ± 0.05	5.24 ± 0.06	2.91 ± 0.04	6.35 ± 0.07	n = 22	[BCG] Beckman Coulter UniCel DxC 600
4.36 ± 0.06	3.41 ± 0.05	5.26 ± 0.06	2.90 ± 0.00	6.39 ± 0.08	n = 24	[BCH] Beckman Coulter UniCel DxC 800
4.30 ± 0.00	3.34 ± 0.06	5.20 ± 0.00	2.90 ± 0.00	6.20 ± 0.00	n = 7	[IAA] i-STAT
4.64 ± 0.09	3.72 ± 0.07	5.53 ± 0.11	3.17 ± 0.06	6.64 ± 0.13	n = 13	[JJE] Ortho Vitros 250/350/950
4.64 ± 0.07	3.70 ± 0.04	5.49 ± 0.07	3.10 ± 0.00	6.59 ± 0.09	n = 22	[JJF] Ortho Vitros 5,1FS
4.62 ± 0.09	3.69 ± 0.07	5.48 ± 0.11	3.10 ± 0.07	6.59 ± 0.11	n = 11	[JJG] Ortho Vitros 5600
4.30 ± 0.07	3.40 ± 0.00	5.20 ± 0.00	2.85 ± 0.07	6.28 ± 0.06	n = 17	[ROC] Roche cobas c501
4.40 ± 0.00	3.50 ± 0.00	5.32 ± 0.05	3.00 ± 0.00	6.38 ± 0.05	n = 10	[ROT] Roche Cobas INTEGRA
4.34 ± 0.09	3.42 ± 0.07	5.21 ± 0.07	2.92 ± 0.09	6.29 ± 0.09	n = 34	[ROD] Roche MODULAR D/P
4.48 ± 0.06	3.58 ± 0.07	5.35 ± 0.09	3.08 ± 0.06	6.44 ± 0.11	n = 16	[BYE] Siemens ADVIA 1800
4.43 ± 0.05	3.50 ± 0.00	5.30 ± 0.00	3.03 ± 0.05	6.33 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
4.35 ± 0.07	3.42 ± 0.04	5.29 ± 0.09	2.89 ± 0.04	6.34 ± 0.08	n = 11	[DUE] Siemens Dimension EXL
4.36 ± 0.06	3.40 ± 0.00	5.22 ± 0.05	2.90 ± 0.00	6.29 ± 0.08	n = 29	[DUR] Siemens Dimension RxL
4.38 ± 0.05	3.43 ± 0.06	5.29 ± 0.06	2.99 ± 0.04	6.36 ± 0.08	n = 32	[DUT] Siemens Dimension Vista
4.35 ± 0.06	3.40 ± 0.00	5.29 ± 0.05	2.90 ± 0.00	6.33 ± 0.05	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
4.51 ± 0.20	3.67 ± 0.05	5.25 ± 0.19	3.26 ± 0.10	6.40 ± 0.18	n = 3	[AX1] Abaxis
4.42 ± 0.09	3.51 ± 0.07	5.25 ± 0.07	2.99 ± 0.05	6.32 ± 0.09	n = 14	[AB1] Abbott
4.36 ± 0.06	3.43 ± 0.06	5.25 ± 0.06	2.90 ± 0.00	6.38 ± 0.07	n = 60	[BC1] Beckman Coulter
4.40 ± 0.00	3.50 ± 0.00	5.22 ± 0.06	3.02 ± 0.05	6.27 ± 0.08	n = 50	[OL1] Beckman Coulter AU Series
4.42 ± 0.08	3.50 ± 0.06	5.30 ± 0.00	2.95 ± 0.08	6.30 ± 0.09	n = 5	[CR1] Carolina
4.30 ± 0.00	3.33 ± 0.05	5.20 ± 0.00	2.90 ± 0.00	6.20 ± 0.00	n = 6	[IA1] i-STAT
4.33 ± 0.05	3.40 ± 0.00	5.30 ± 0.09	2.90 ± 0.00	6.40 ± 0.09	n = 3	[IL1] Instrumentation Lab
4.64 ± 0.08	3.70 ± 0.06	5.50 ± 0.09	3.13 ± 0.07	6.60 ± 0.11	n = 47	[JJ1] Ortho Clinical Diagnostics
4.31 ± 0.08	3.40 ± 0.00	5.20 ± 0.07	2.86 ± 0.08	6.28 ± 0.07	n = 18	[RO4] Roche cobas c311/c501/c502/c701
4.34 ± 0.09	3.42 ± 0.07	5.21 ± 0.07	2.92 ± 0.09	6.29 ± 0.09	n = 34	[RO2] Roche Hitachi and Modular D/P
4.40 ± 0.00	3.50 ± 0.00	5.32 ± 0.05	3.00 ± 0.00	6.38 ± 0.05	n = 11	[RO1] Roche Integra and MIRA
4.47 ± 0.06	3.57 ± 0.07	5.33 ± 0.08	3.07 ± 0.07	6.41 ± 0.11	n = 22	[BY1] Siemens ADVIA/ADVIA Centaur
4.36 ± 0.06	3.41 ± 0.04	5.27 ± 0.07	2.92 ± 0.06	6.33 ± 0.08	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Chloride (mmol/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
97.4 ± 2.29	86.9 ± 2.35	97.4 ± 2.83	107.8 ± 2.80	117.4 ± 2.87	n = 369	[---] All Methods & Instruments
						<Instruments>
95.9 ± 2.86	85.9 ± 2.86	95.9 ± 2.86	107.8 ± 4.10	115.7 ± 3.37	n = 3	[AXA] Abaxis Piccolo
98.5 ± 1.33	87.1 ± 1.26	99.1 ± 1.19	109.4 ± 1.14	119.2 ± 0.90	n = 12	[ABJ] Abbott Architect c System
95.9 ± 0.92	85.0 ± 0.97	96.5 ± 1.06	106.4 ± 1.12	115.6 ± 1.23	n = 50	[OLC] Beckman Coulter AU Chemistry System
99.7 ± 2.04	89.3 ± 1.25	100.2 ± 1.13	109.9 ± 1.27	119.6 ± 1.84	n = 9	[BCS] Beckman Coulter CX
98.3 ± 1.21	88.2 ± 1.55	100.1 ± 1.20	109.7 ± 1.79	119.9 ± 1.50	n = 9	[BCX] Beckman Coulter LX-20
98.2 ± 1.02	87.7 ± 0.83	99.4 ± 0.93	109.5 ± 1.05	119.3 ± 1.15	n = 22	[BCG] Beckman Coulter UniCel DxC 600
98.8 ± 1.09	88.2 ± 0.95	100.2 ± 1.18	110.2 ± 1.47	120.0 ± 1.15	n = 24	[BCH] Beckman Coulter UniCel DxC 800
104.2 ± 0.73	95.0 ± 0.90	102.8 ± 0.73	117.8 ± 0.91	125.1 ± 1.13	n = 6	[IAA] i-STAT
99.5 ± 1.45	88.7 ± 1.37	100.1 ± 1.82	111.5 ± 2.36	120.9 ± 1.91	n = 13	[JJE] Ortho Vitros 250/350/950
99.9 ± 0.77	88.1 ± 0.95	99.9 ± 1.02	110.9 ± 1.14	120.3 ± 0.93	n = 22	[JJF] Ortho Vitros 5,1FS
100.0 ± 1.13	88.7 ± 1.10	100.3 ± 0.94	111.5 ± 1.62	120.7 ± 1.22	n = 11	[JJG] Ortho Vitros 5600
92.0 ± 1.36	81.3 ± 1.03	91.9 ± 1.38	103.1 ± 1.51	113.2 ± 1.27	n = 18	[ROC] Roche cobas c501
97.5 ± 0.69	87.5 ± 0.89	97.3 ± 0.99	107.8 ± 0.65	117.1 ± 0.49	n = 10	[ROT] Roche Cobas INTEGRA
95.1 ± 1.24	83.7 ± 1.16	94.6 ± 1.16	105.0 ± 1.10	114.9 ± 1.30	n = 34	[ROD] Roche MODULAR D/P
97.6 ± 0.80	86.2 ± 0.86	97.1 ± 0.74	107.6 ± 0.56	117.2 ± 1.26	n = 16	[BYE] Siemens ADVIA 1800
97.3 ± 0.51	85.0 ± 0.90	96.3 ± 0.51	106.4 ± 1.02	116.2 ± 1.54	n = 3	[BYB] Siemens ADVIA 2400
96.7 ± 0.87	88.7 ± 1.03	95.8 ± 0.84	106.5 ± 1.42	115.6 ± 1.29	n = 11	[DUE] Siemens Dimension EXL
96.5 ± 1.89	86.8 ± 1.48	94.4 ± 1.16	106.3 ± 1.28	115.9 ± 1.57	n = 29	[DUR] Siemens Dimension RxL
97.9 ± 1.19	87.0 ± 0.89	97.9 ± 1.15	108.3 ± 1.45	118.1 ± 1.68	n = 32	[DUT] Siemens Dimension Vista
96.5 ± 0.90	88.4 ± 1.09	95.5 ± 1.23	106.1 ± 0.82	115.2 ± 0.91	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
95.9 ± 2.86	85.9 ± 2.86	95.9 ± 2.86	107.8 ± 4.10	115.7 ± 3.37	n = 3	[AX1] Abaxis
98.5 ± 1.27	87.2 ± 1.24	99.2 ± 1.16	109.5 ± 1.07	119.2 ± 0.84	n = 13	[AB1] Abbott
98.5 ± 1.24	88.0 ± 1.04	99.9 ± 1.13	109.9 ± 1.39	119.8 ± 1.24	n = 60	[BC1] Beckman Coulter
96.0 ± 0.94	85.0 ± 0.98	96.5 ± 1.08	106.4 ± 1.13	115.6 ± 1.22	n = 49	[OL1] Beckman Coulter AU Series
99.2 ± 1.66	89.2 ± 0.80	99.2 ± 1.91	109.6 ± 1.09	118.3 ± 1.99	n = 5	[CR1] Carolina
104.2 ± 0.73	95.0 ± 0.90	102.8 ± 0.73	117.8 ± 0.91	125.1 ± 1.13	n = 6	[IA1] i-STAT
99.8 ± 1.12	88.4 ± 1.13	100.0 ± 1.30	111.1 ± 1.70	120.5 ± 1.38	n = 47	[JJ1] Ortho Clinical Diagnostics
91.9 ± 1.34	81.3 ± 0.98	91.8 ± 1.35	102.9 ± 1.57	113.1 ± 1.35	n = 19	[RO4] Roche cobas c311/c501/c502/c701
95.1 ± 1.24	83.7 ± 1.16	94.6 ± 1.16	105.0 ± 1.10	114.9 ± 1.30	n = 34	[RO2] Roche Hitachi and Modular D/P
97.5 ± 0.69	87.5 ± 0.89	97.3 ± 0.99	107.8 ± 0.65	117.1 ± 0.49	n = 10	[RO1] Roche Integra and MIRA
97.8 ± 0.95	86.2 ± 0.93	97.1 ± 0.79	107.5 ± 0.59	117.2 ± 1.26	n = 22	[BY1] Siemens ADVIA/ADVIA Centaur
97.0 ± 1.45	87.5 ± 1.42	96.0 ± 1.87	106.9 ± 1.56	116.4 ± 1.85	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Albumin (g/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
4.20 ± 0.20	5.19 ± 0.24	3.71 ± 0.17	4.80 ± 0.18	4.43 ± 0.17	n = 360	[---] All Methods & Instruments
4.26 ± 0.10	5.13 ± 0.05	3.80 ± 0.00	4.70 ± 0.09	4.46 ± 0.10	n = 3	[AXA] Abaxis Piccolo
3.99 ± 0.16	4.87 ± 0.13	3.59 ± 0.12	4.58 ± 0.14	4.24 ± 0.18	n = 13	[ABJ] Abbott Architect c System
4.21 ± 0.10	5.13 ± 0.11	3.75 ± 0.08	4.80 ± 0.13	4.42 ± 0.11	n = 52	[OLC] Beckman Coulter AU Chemistry System
3.99 ± 0.15	4.95 ± 0.13	3.58 ± 0.14	4.65 ± 0.17	4.26 ± 0.16	n = 9	[BCS] Beckman Coulter CX
4.02 ± 0.09	5.00 ± 0.07	3.60 ± 0.08	4.63 ± 0.05	4.23 ± 0.08	n = 9	[BCX] Beckman Coulter LX-20
3.94 ± 0.07	4.96 ± 0.07	3.54 ± 0.06	4.52 ± 0.12	4.21 ± 0.11	n = 21	[BCG] Beckman Coulter UniCel DxC 600
4.00 ± 0.00	5.00 ± 0.04	3.58 ± 0.05	4.60 ± 0.06	4.24 ± 0.06	n = 24	[BCH] Beckman Coulter UniCel DxC 800
3.99 ± 0.12	5.10 ± 0.18	3.42 ± 0.13	4.68 ± 0.13	4.34 ± 0.16	n = 12	[JJE] Ortho Vitros 250/350/950
4.04 ± 0.12	5.11 ± 0.12	3.43 ± 0.09	4.73 ± 0.12	4.33 ± 0.12	n = 21	[JJF] Ortho Vitros 5,1FS
4.03 ± 0.15	5.11 ± 0.20	3.42 ± 0.10	4.68 ± 0.28	4.35 ± 0.20	n = 11	[JJG] Ortho Vitros 5600
4.36 ± 0.08	5.29 ± 0.08	3.85 ± 0.09	4.91 ± 0.09	4.56 ± 0.08	n = 17	[ROC] Roche cobas c501
4.23 ± 0.12	5.11 ± 0.15	3.75 ± 0.14	4.70 ± 0.11	4.37 ± 0.16	n = 10	[ROT] Roche Cobas INTEGRA
4.38 ± 0.11	5.27 ± 0.12	3.85 ± 0.10	4.90 ± 0.12	4.54 ± 0.09	n = 35	[ROD] Roche MODULAR D/P
4.23 ± 0.10	5.08 ± 0.09	3.76 ± 0.07	4.78 ± 0.08	4.48 ± 0.07	n = 16	[BYE] Siemens ADVIA 1800
4.24 ± 0.10	5.10 ± 0.18	3.74 ± 0.10	4.77 ± 0.14	4.47 ± 0.14	n = 3	[BYB] Siemens ADVIA 2400
4.30 ± 0.07	5.47 ± 0.12	3.75 ± 0.07	4.91 ± 0.10	4.54 ± 0.09	n = 11	[DUE] Siemens Dimension EXL
4.31 ± 0.10	5.47 ± 0.12	3.78 ± 0.08	4.91 ± 0.09	4.52 ± 0.10	n = 29	[DUR] Siemens Dimension RxL
4.35 ± 0.09	5.48 ± 0.11	3.81 ± 0.10	4.94 ± 0.10	4.57 ± 0.10	n = 32	[DUT] Siemens Dimension Vista
4.35 ± 0.09	5.48 ± 0.11	3.81 ± 0.07	4.93 ± 0.08	4.55 ± 0.11	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
4.26 ± 0.10	5.13 ± 0.05	3.80 ± 0.00	4.70 ± 0.09	4.46 ± 0.10	n = 3	[AX1] Abaxis
3.99 ± 0.16	4.87 ± 0.13	3.59 ± 0.12	4.58 ± 0.14	4.24 ± 0.18	n = 13	[AB1] Abbott
3.97 ± 0.07	4.98 ± 0.07	3.56 ± 0.07	4.57 ± 0.09	4.22 ± 0.08	n = 57	[BC1] Beckman Coulter
4.21 ± 0.11	5.14 ± 0.11	3.75 ± 0.08	4.80 ± 0.13	4.42 ± 0.11	n = 51	[OL1] Beckman Coulter AU Series
4.11 ± 0.18	5.10 ± 0.32	3.68 ± 0.17	4.76 ± 0.17	4.35 ± 0.22	n = 5	[CR1] Carolina
4.02 ± 0.13	5.10 ± 0.16	3.42 ± 0.11	4.70 ± 0.15	4.34 ± 0.15	n = 45	[JJ1] Ortho Clinical Diagnostics
4.36 ± 0.08	5.28 ± 0.08	3.85 ± 0.09	4.90 ± 0.09	4.56 ± 0.08	n = 18	[RO4] Roche cobas c311/c501/c502/c701
4.38 ± 0.11	5.27 ± 0.12	3.85 ± 0.10	4.90 ± 0.12	4.55 ± 0.09	n = 35	[RO2] Roche Hitachi and Modular D/P
4.23 ± 0.12	5.11 ± 0.15	3.75 ± 0.14	4.70 ± 0.11	4.37 ± 0.16	n = 10	[RO1] Roche Integra and MIRA
4.25 ± 0.11	5.11 ± 0.10	3.77 ± 0.07	4.80 ± 0.09	4.50 ± 0.08	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
4.33 ± 0.09	5.48 ± 0.11	3.79 ± 0.09	4.93 ± 0.09	4.55 ± 0.11	n = 91	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Total Protein (g/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
7.00 ± 0.20	7.95 ± 0.21	6.08 ± 0.17	7.60 ± 0.22	7.27 ± 0.20	n = 361	[---] All Methods & Instruments
						<Instruments>
7.03 ± 0.23	7.90 ± 0.18	6.04 ± 0.10	7.50 ± 0.18	7.24 ± 0.10	n = 3	[AXA] Abaxis Piccolo
6.98 ± 0.08	7.87 ± 0.10	6.00 ± 0.00	7.51 ± 0.09	7.18 ± 0.08	n = 13	[ABJ] Abbott Architect c System
6.93 ± 0.11	7.83 ± 0.15	6.03 ± 0.12	7.49 ± 0.12	7.18 ± 0.12	n = 51	[OLC] Beckman Coulter AU Chemistry System
6.96 ± 0.20	7.93 ± 0.08	6.16 ± 0.22	7.65 ± 0.23	7.35 ± 0.18	n = 9	[BCS] Beckman Coulter CX
6.74 ± 0.15	7.74 ± 0.10	5.89 ± 0.11	7.34 ± 0.17	7.07 ± 0.14	n = 10	[BCX] Beckman Coulter LX-20
6.97 ± 0.13	7.93 ± 0.15	6.06 ± 0.15	7.60 ± 0.17	7.23 ± 0.18	n = 20	[BCG] Beckman Coulter UniCel DxC 600
6.65 ± 0.15	7.67 ± 0.11	5.85 ± 0.10	7.33 ± 0.14	6.98 ± 0.16	n = 24	[BCH] Beckman Coulter UniCel DxC 800
6.90 ± 0.13	8.08 ± 0.14	6.06 ± 0.13	7.69 ± 0.16	7.35 ± 0.12	n = 13	[JJE] Ortho Vitros 250/350/950
6.93 ± 0.15	8.02 ± 0.19	6.03 ± 0.17	7.64 ± 0.18	7.19 ± 0.16	n = 22	[JJF] Ortho Vitros 5,1FS
7.01 ± 0.13	8.12 ± 0.20	6.03 ± 0.13	7.69 ± 0.22	7.31 ± 0.14	n = 11	[JJG] Ortho Vitros 5600
6.97 ± 0.06	7.87 ± 0.11	6.07 ± 0.08	7.49 ± 0.12	7.23 ± 0.09	n = 17	[ROC] Roche cobas c501
6.87 ± 0.14	7.80 ± 0.10	5.97 ± 0.13	7.41 ± 0.13	7.15 ± 0.13	n = 10	[ROT] Roche Cobas INTEGRA
6.99 ± 0.10	7.90 ± 0.08	6.10 ± 0.08	7.53 ± 0.11	7.26 ± 0.09	n = 35	[ROD] Roche MODULAR D/P
7.04 ± 0.13	7.95 ± 0.14	6.08 ± 0.09	7.65 ± 0.13	7.30 ± 0.10	n = 16	[BYE] Siemens ADVIA 1800
7.02 ± 0.24	7.99 ± 0.29	6.12 ± 0.24	7.65 ± 0.27	7.32 ± 0.24	n = 3	[BYB] Siemens ADVIA 2400
7.26 ± 0.12	8.23 ± 0.16	6.24 ± 0.10	7.81 ± 0.13	7.51 ± 0.08	n = 11	[DUE] Siemens Dimension EXL
7.20 ± 0.11	8.15 ± 0.12	6.23 ± 0.10	7.80 ± 0.11	7.47 ± 0.11	n = 29	[DUR] Siemens Dimension RxL
7.20 ± 0.13	8.11 ± 0.11	6.22 ± 0.08	7.78 ± 0.12	7.43 ± 0.10	n = 32	[DUT] Siemens Dimension Vista
7.21 ± 0.15	8.17 ± 0.14	6.24 ± 0.12	7.81 ± 0.15	7.52 ± 0.21	n = 20	[DUX] Siemens Dimension Xpand
						<Reagents>
7.03 ± 0.23	7.90 ± 0.18	6.04 ± 0.10	7.50 ± 0.18	7.24 ± 0.10	n = 3	[AX1] Abaxis
6.98 ± 0.08	7.87 ± 0.10	6.00 ± 0.00	7.51 ± 0.09	7.18 ± 0.08	n = 13	[AB1] Abbott
6.80 ± 0.22	7.78 ± 0.18	5.94 ± 0.16	7.43 ± 0.20	7.10 ± 0.20	n = 59	[BC1] Beckman Coulter
6.93 ± 0.10	7.82 ± 0.15	6.02 ± 0.12	7.49 ± 0.13	7.18 ± 0.13	n = 50	[OL1] Beckman Coulter AU Series
6.88 ± 0.19	7.89 ± 0.36	6.19 ± 0.32	7.75 ± 0.28	7.45 ± 0.18	n = 5	[CR1] Carolina
6.94 ± 0.15	8.05 ± 0.19	6.04 ± 0.15	7.67 ± 0.18	7.27 ± 0.17	n = 46	[JJ1] Ortho Clinical Diagnostics
6.96 ± 0.07	7.86 ± 0.12	6.06 ± 0.09	7.49 ± 0.12	7.22 ± 0.10	n = 17	[RO4] Roche cobas c311/c501/c502/c701
6.99 ± 0.10	7.90 ± 0.08	6.10 ± 0.07	7.53 ± 0.11	7.26 ± 0.09	n = 36	[RO2] Roche Hitachi and Modular D/P
6.87 ± 0.14	7.80 ± 0.10	5.97 ± 0.13	7.41 ± 0.13	7.15 ± 0.13	n = 10	[RO1] Roche Integra and MIRA
7.07 ± 0.14	7.99 ± 0.16	6.12 ± 0.13	7.68 ± 0.15	7.34 ± 0.13	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
7.21 ± 0.13	8.15 ± 0.13	6.23 ± 0.09	7.79 ± 0.13	7.46 ± 0.11	n = 90	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Cholesterol (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
239.6 ± 7.49	190.3 ± 7.80	136.0 ± 4.72	200.6 ± 7.07	162.4 ± 5.51	n = 333	[---] All Methods & Instruments
						<Instruments>
239.3 ± 1.37	190.7 ± 0.51	136.2 ± 1.54	203.3 ± 1.37	164.4 ± 1.02	n = 3	[AXA] Abaxis Piccolo
244.6 ± 1.31	196.4 ± 1.42	139.6 ± 1.07	202.8 ± 1.36	166.6 ± 0.69	n = 13	[ABJ] Abbott Architect c System
236.2 ± 5.52	188.1 ± 4.02	133.1 ± 3.01	195.8 ± 4.23	158.9 ± 3.28	n = 55	[OLC] Beckman Coulter AU Chemistry System
235.8 ± 5.60	187.0 ± 6.42	135.8 ± 4.75	199.9 ± 5.74	162.1 ± 4.39	n = 9	[BCS] Beckman Coulter CX
240.2 ± 3.16	187.8 ± 2.29	134.4 ± 1.30	202.7 ± 1.28	160.0 ± 1.78	n = 7	[BCX] Beckman Coulter LX-20
238.2 ± 5.14	187.3 ± 4.54	134.4 ± 3.82	202.3 ± 5.13	160.4 ± 3.30	n = 18	[BCG] Beckman Coulter UniCel DxC 600
238.8 ± 0.79	186.2 ± 3.07	133.2 ± 1.72	200.6 ± 3.10	160.1 ± 2.95	n = 20	[BCH] Beckman Coulter UniCel DxC 800
250.4 ± 5.56	205.0 ± 4.24	145.5 ± 0.83	219.5 ± 3.86	177.3 ± 0.90	n = 5	[JJE] Ortho Vitros 250/350/950
254.0 ± 6.29	207.9 ± 5.36	145.3 ± 3.77	217.8 ± 5.48	175.7 ± 4.02	n = 21	[JJF] Ortho Vitros 5,1FS
253.9 ± 6.33	207.1 ± 1.59	144.8 ± 2.03	219.1 ± 2.60	175.8 ± 2.89	n = 11	[JJG] Ortho Vitros 5600
244.5 ± 4.00	195.0 ± 2.33	139.7 ± 2.38	203.3 ± 3.08	165.2 ± 2.63	n = 15	[ROC] Roche cobas c501
241.5 ± 4.72	193.7 ± 4.29	136.9 ± 3.51	199.7 ± 3.89	163.3 ± 3.15	n = 12	[ROT] Roche Cobas INTEGRA
241.9 ± 5.21	194.4 ± 4.11	137.8 ± 2.96	202.0 ± 4.77	164.3 ± 3.64	n = 36	[ROD] Roche MODULAR D/P
237.1 ± 3.97	189.2 ± 2.75	135.3 ± 2.57	202.2 ± 4.00	161.4 ± 2.75	n = 16	[BYE] Siemens ADVIA 1800
237.4 ± 7.34	187.7 ± 3.16	133.5 ± 2.74	201.0 ± 5.48	160.4 ± 3.87	n = 3	[BYB] Siemens ADVIA 2400
237.2 ± 6.70	183.2 ± 5.05	134.6 ± 3.54	197.5 ± 4.05	161.5 ± 3.88	n = 11	[DUE] Siemens Dimension EXL
237.5 ± 5.51	184.9 ± 3.99	135.2 ± 2.75	199.6 ± 3.48	163.4 ± 2.87	n = 22	[DUR] Siemens Dimension RxL
233.9 ± 5.50	186.3 ± 6.02	133.2 ± 3.11	194.8 ± 5.55	159.5 ± 3.73	n = 29	[DUT] Siemens Dimension Vista
236.9 ± 6.44	183.6 ± 6.36	133.6 ± 4.32	197.2 ± 5.96	161.2 ± 4.33	n = 15	[DUX] Siemens Dimension Xpand
						<Reagents>
239.3 ± 1.37	190.7 ± 0.51	136.2 ± 1.54	203.3 ± 1.37	164.4 ± 1.02	n = 3	[AX1] Abaxis
244.6 ± 1.31	196.4 ± 1.42	139.6 ± 1.07	202.8 ± 1.36	166.6 ± 0.69	n = 13	[AB1] Abbott
238.3 ± 4.26	187.0 ± 3.53	133.8 ± 2.85	201.5 ± 3.71	160.5 ± 3.18	n = 50	[BC1] Beckman Coulter
236.6 ± 5.49	188.5 ± 3.86	133.2 ± 3.08	195.9 ± 4.43	158.9 ± 3.43	n = 52	[OL1] Beckman Coulter AU Series
231.7 ± 2.90	182.5 ± 4.49	136.3 ± 4.42	197.3 ± 6.29	158.9 ± 3.00	n = 5	[CR1] Carolina
253.4 ± 6.38	207.5 ± 4.67	145.2 ± 2.84	218.7 ± 4.63	175.9 ± 3.49	n = 37	[JJ1] Ortho Clinical Diagnostics
244.5 ± 4.00	195.0 ± 2.33	139.7 ± 2.38	203.3 ± 3.08	165.2 ± 2.63	n = 15	[RO4] Roche cobas c311/c501/c502/c701
242.1 ± 5.85	194.5 ± 4.38	137.9 ± 3.13	202.1 ± 4.86	164.4 ± 3.97	n = 37	[RO2] Roche Hitachi and Modular D/P
241.5 ± 4.72	193.7 ± 4.29	136.9 ± 3.51	199.7 ± 3.89	163.3 ± 3.15	n = 12	[RO1] Roche Integra and MIRA
237.9 ± 4.99	189.5 ± 3.14	135.4 ± 2.80	202.7 ± 4.36	161.8 ± 3.14	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
235.9 ± 6.06	184.8 ± 5.43	134.1 ± 3.47	197.2 ± 5.26	161.3 ± 4.14	n = 76	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

HDL-Cholesterol (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
53.8 ± 7.49	38.7 ± 6.09	35.1 ± 3.91	69.6 ± 7.22	42.6 ± 5.24	n = 316	[---] All Methods & Instruments
55.5 ± 9.09	40.6 ± 7.40	35.9 ± 5.31	72.5 ± 10.40	44.5 ± 6.60	n = 15	[---] All Precipitation Methods
53.7 ± 7.39	38.7 ± 6.00	35.1 ± 3.84	69.6 ± 7.09	42.5 ± 5.15	n = 301	[---] All Homogeneous (Direct) Methods
55.8 ± 2.88	40.1 ± 2.31	37.6 ± 2.05	72.7 ± 3.61	44.9 ± 2.27	n = 12	[AB1] Abbott
44.9 ± 2.86	28.6 ± 2.56	25.7 ± 0.51	54.1 ± 2.05	32.0 ± 1.80	n = 3	[AX1] Abaxis
66.0 ± 2.35	47.7 ± 1.82	39.0 ± 1.67	75.9 ± 3.05	47.9 ± 1.81	n = 45	[BC1] Beckman Coulter
56.9 ± 1.93	40.8 ± 1.59	37.9 ± 1.35	74.2 ± 2.38	45.8 ± 1.50	n = 35	[OL1] Beckman Coulter AU Series
64.7 ± 4.06	50.1 ± 3.72	44.7 ± 0.51	81.7 ± 3.16	55.5 ± 1.86	n = 3	[CR1] Carolina
57.0 ± 2.72	41.0 ± 2.72	38.0 ± 2.12	73.6 ± 3.98	46.5 ± 2.89	n = 5	[EQ1/GZ1] Equal/Genzyme
61.3 ± 1.63	45.2 ± 1.49	38.9 ± 0.98	81.5 ± 2.90	48.9 ± 1.52	n = 30	[JJ1] Ortho Clinical Diagnostics
48.6 ± 1.29	35.3 ± 1.06	32.4 ± 1.00	64.2 ± 1.83	38.9 ± 1.06	n = 13	[RO4] Roche cobas c311/c501/c502/c701
51.4 ± 2.53	37.5 ± 2.25	33.7 ± 1.47	66.6 ± 2.43	40.3 ± 1.97	n = 33	[RO2] Roche Hitachi and Modular D/P
50.2 ± 1.39	36.0 ± 1.56	33.5 ± 0.89	66.0 ± 2.70	39.6 ± 0.90	n = 10	[RO1] Roche Integra and MIRA
43.9 ± 1.71	28.6 ± 1.24	29.4 ± 0.96	63.9 ± 1.67	36.0 ± 1.09	n = 22	[BY1] Siemens ADVIA/ADVIA Centaur
48.7 ± 1.94	34.8 ± 1.63	32.5 ± 1.18	63.9 ± 2.01	38.6 ± 1.14	n = 68	[DA5] Siemens Dimension HDL DF48B or K3048A
52.8 ± 3.85	36.5 ± 3.31	35.6 ± 3.14	71.4 ± 4.34	43.3 ± 4.00	n = 5	[DA7] Siemens Dimension HDL DF48A or K3048

Summary of Participant Performance (Mean and Standard Deviation)

LDL-Cholesterol (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
150.2 ± 15.26	124.1 ± 14.76	80.0 ± 12.06	105.9 ± 12.19	95.8 ± 13.31	n = 303	[---] All Methods
156.9 ± 9.89	132.0 ± 9.21	86.5 ± 5.72	110.9 ± 8.44	102.8 ± 6.86	n = 160	[-A-] All Calculated Results Friedewald formula [LDL=TC-HDL-(Trigs÷5)]
140.7 ± 16.46	113.5 ± 13.83	69.8 ± 11.08	98.6 ± 12.80	85.3 ± 12.83	n = 141	[---] All Homogeneous (Direct) Methods
131.6 ± 1.90	108.0 ± 2.45	65.8 ± 1.46	90.9 ± 1.13	79.7 ± 1.51	n = 4	[AB1] Abbott
128.5 ± 4.60	105.3 ± 3.98	61.9 ± 2.68	88.6 ± 3.46	75.8 ± 3.40	n = 23	[BC1] Beckman Coulter
121.4 ± 6.08	97.4 ± 5.46	59.7 ± 4.06	85.1 ± 4.80	72.0 ± 4.39	n = 16	[OL1] Beckman Coulter AU Series
128.5 ± 10.98	104.6 ± 10.71	62.7 ± 7.36	87.5 ± 8.37	77.2 ± 9.49	n = 14	[EQ1/GZ1] Equal/Genzyme
156.3 ± 7.48	119.8 ± 6.38	67.3 ± 3.40	107.5 ± 5.14	86.6 ± 4.57	n = 13	[JJ1] Ortho Clinical Diagnostics
163.0 ± 1.14	130.5 ± 1.71	90.0 ± 1.14	118.5 ± 1.71	108.0 ± 2.28	n = 2	[RO4] Roche cobas c311/c501/c502/c701
163.9 ± 4.75	134.3 ± 3.91	92.5 ± 3.34	121.3 ± 3.93	110.7 ± 2.75	n = 16	[RO2] Roche Hitachi and Modular D/P
148.8 ± 4.04	115.8 ± 3.66	69.0 ± 2.57	105.6 ± 3.86	86.0 ± 3.03	n = 11	[BY1] Siemens ADVIA/ADVIA Centaur
145.2 ± 5.61	120.5 ± 5.84	76.6 ± 3.84	101.4 ± 4.30	91.9 ± 4.97	n = 33	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Triglycerides (mg/dL)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
154.2 ± 7.50	110.2 ± 6.67	77.4 ± 4.40	108.9 ± 5.46	94.8 ± 5.04	n = 326	[---] All Methods & Instruments
						<Instruments>
171.7 ± 2.26	124.2 ± 2.36	84.7 ± 0.51	118.4 ± 1.02	104.3 ± 0.51	n = 3	[AXA] Abaxis Piccolo
149.5 ± 2.73	106.6 ± 1.47	77.6 ± 1.95	109.9 ± 2.69	94.2 ± 1.62	n = 14	[ABJ] Abbott Architect c System
150.6 ± 4.34	107.1 ± 3.08	75.1 ± 1.95	105.1 ± 3.35	91.4 ± 2.68	n = 53	[OLC] Beckman Coulter AU Chemistry System
168.3 ± 10.41	123.3 ± 10.40	87.6 ± 6.31	118.6 ± 7.99	103.3 ± 5.37	n = 9	[BCS] Beckman Coulter CX
161.0 ± 5.20	119.1 ± 5.23	78.2 ± 3.77	111.8 ± 4.10	96.7 ± 2.60	n = 7	[BCX] Beckman Coulter LX-20
162.0 ± 4.11	117.0 ± 4.25	78.0 ± 3.00	111.6 ± 2.85	97.7 ± 3.38	n = 15	[BCG] Beckman Coulter UniCel DxC 600
161.1 ± 3.97	116.6 ± 2.62	77.6 ± 3.29	111.5 ± 3.73	97.0 ± 3.40	n = 17	[BCH] Beckman Coulter UniCel DxC 800
165.6 ± 4.93	122.6 ± 3.94	82.8 ± 2.32	115.5 ± 3.68	102.6 ± 2.84	n = 5	[JJE] Ortho Vitros 250/350/950
159.2 ± 6.56	116.4 ± 4.96	79.0 ± 3.00	110.5 ± 4.61	97.4 ± 3.96	n = 21	[JJF] Ortho Vitros 5,1FS
156.8 ± 4.77	116.3 ± 2.94	79.0 ± 1.85	109.2 ± 3.99	97.0 ± 2.07	n = 11	[JJG] Ortho Vitros 5600
154.9 ± 2.84	109.3 ± 1.87	80.9 ± 2.50	109.0 ± 2.10	97.8 ± 1.49	n = 16	[ROC] Roche cobas c501
149.6 ± 4.79	105.8 ± 1.74	78.1 ± 2.07	103.7 ± 1.84	93.5 ± 2.72	n = 11	[ROT] Roche Cobas INTEGRA
151.5 ± 4.27	106.6 ± 2.79	77.6 ± 2.98	108.0 ± 3.25	94.7 ± 2.71	n = 36	[ROD] Roche MODULAR D/P
151.0 ± 1.85	107.5 ± 1.31	76.3 ± 0.74	109.5 ± 1.82	93.0 ± 1.00	n = 16	[BYE] Siemens ADVIA 1800
152.5 ± 1.86	110.0 ± 0.00	77.3 ± 0.51	111.0 ± 0.00	94.7 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
147.5 ± 2.67	103.3 ± 1.53	71.9 ± 1.57	105.0 ± 2.63	88.5 ± 2.14	n = 11	[DUE] Siemens Dimension EXL
149.4 ± 3.77	104.7 ± 4.15	72.6 ± 2.66	106.4 ± 4.52	90.4 ± 3.59	n = 22	[DUR] Siemens Dimension RxL
163.8 ± 4.43	116.5 ± 3.83	83.1 ± 3.23	117.6 ± 4.59	101.0 ± 4.19	n = 31	[DUT] Siemens Dimension Vista
147.7 ± 2.19	104.3 ± 2.37	71.2 ± 2.16	103.8 ± 2.21	88.9 ± 1.85	n = 12	[DUX] Siemens Dimension Xpand
						<Reagents>
171.7 ± 2.26	124.2 ± 2.36	84.7 ± 0.51	118.4 ± 1.02	104.3 ± 0.51	n = 3	[AX1] Abaxis
149.5 ± 2.73	106.6 ± 1.47	77.6 ± 1.95	109.9 ± 2.69	94.2 ± 1.62	n = 14	[AB1] Abbott
162.0 ± 5.29	117.5 ± 4.23	78.2 ± 3.57	111.8 ± 3.92	97.5 ± 3.67	n = 46	[BC1] Beckman Coulter
150.4 ± 3.91	107.0 ± 2.72	75.1 ± 1.56	105.2 ± 3.09	91.3 ± 2.27	n = 49	[OL1] Beckman Coulter AU Series
160.6 ± 13.00	117.5 ± 12.11	86.0 ± 6.46	112.9 ± 11.26	101.2 ± 5.28	n = 5	[CR1] Carolina
159.3 ± 6.41	117.2 ± 4.74	79.5 ± 2.84	110.7 ± 4.80	97.9 ± 3.88	n = 37	[JJ1] Ortho Clinical Diagnostics
154.9 ± 2.84	109.3 ± 1.87	80.9 ± 2.50	109.0 ± 2.10	97.8 ± 1.49	n = 16	[RO4] Roche cobas c311/c501/c502/c701
151.4 ± 4.28	106.4 ± 2.82	77.6 ± 2.98	107.9 ± 3.19	94.7 ± 2.71	n = 36	[RO2] Roche Hitachi and Modular D/P
149.9 ± 4.22	106.0 ± 1.80	78.0 ± 1.97	104.1 ± 4.49	93.7 ± 2.49	n = 12	[RO1] Roche Integra and MIRA
151.8 ± 2.27	108.3 ± 1.74	76.8 ± 1.10	110.3 ± 1.99	93.6 ± 1.57	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
154.3 ± 9.22	108.9 ± 7.61	75.9 ± 6.74	109.8 ± 7.80	93.5 ± 7.21	n = 74	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Homocysteine (µmol/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
19.38 ± 1.75	12.70 ± 1.43	9.20 ± 0.99	26.10 ± 2.11	11.18 ± 1.20	n = 122	[---] All Methods & Instruments
						<Instruments>
20.30 ± 0.92	13.75 ± 0.58	10.06 ± 0.45	27.21 ± 0.84	12.11 ± 0.67	n = 8	[ABH] Abbott Architect i System
19.78 ± 1.10	13.47 ± 0.73	9.83 ± 0.28	25.75 ± 1.49	11.79 ± 0.37	n = 6	[ABB] Abbott AxSym
20.33 ± 1.12	13.38 ± 1.16	9.68 ± 0.67	26.78 ± 1.58	11.74 ± 0.71	n = 19	[OLC] Beckman Coulter AU Chemistry System
21.01 ± 1.21	13.78 ± 0.80	10.17 ± 0.40	29.01 ± 0.11	12.29 ± 0.41	n = 5	[BCH] Beckman Coulter UniCel DxC 800
19.03 ± 1.30	13.03 ± 1.02	8.90 ± 0.86	25.34 ± 1.88	10.90 ± 0.93	n = 4	[JJG] Ortho Vitros 5600
19.84 ± 1.28	13.94 ± 1.27	10.06 ± 1.18	26.35 ± 1.05	12.10 ± 0.96	n = 6	[ROD] Roche MODULAR D/P
17.34 ± 0.96	11.58 ± 0.67	8.36 ± 0.47	24.08 ± 1.23	10.17 ± 0.73	n = 23	[COB] Siemens ADVIA Centaur
18.32 ± 1.00	11.10 ± 0.58	8.95 ± 0.76	25.23 ± 1.67	10.30 ± 0.62	n = 7	[DUT] Siemens Dimension Vista
19.56 ± 1.26	11.86 ± 0.61	8.68 ± 0.78	26.59 ± 1.92	10.56 ± 0.88	n = 21	[DPD] Siemens Immulite 2000
21.06 ± 1.63	13.79 ± 1.08	9.61 ± 0.28	27.56 ± 2.46	12.27 ± 1.32	n = 6	[DPE] Siemens Immulite 2500
						<Reagents>
20.08 ± 1.04	13.65 ± 0.66	9.97 ± 0.41	26.61 ± 1.32	11.94 ± 0.59	n = 14	[AB1] Abbott
20.48 ± 0.90	14.22 ± 0.94	9.78 ± 0.78	27.50 ± 1.86	12.18 ± 0.90	n = 8	[CR1] Carolina
21.39 ± 1.63	14.11 ± 1.07	9.95 ± 0.63	28.24 ± 1.38	12.27 ± 0.77	n = 3	[CC1] Catch, Inc
19.95 ± 1.31	13.07 ± 0.96	9.69 ± 0.76	26.69 ± 1.60	11.66 ± 0.79	n = 24	[DZ1] Diazyme
19.01 ± 1.06	13.16 ± 0.77	8.69 ± 0.85	25.22 ± 1.61	10.74 ± 0.91	n = 6	[JJ1] Ortho Clinical Diagnostics
17.34 ± 0.96	11.58 ± 0.67	8.36 ± 0.47	24.08 ± 1.23	10.17 ± 0.73	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
18.54 ± 0.91	11.22 ± 0.53	8.91 ± 0.84	25.60 ± 1.56	10.44 ± 0.53	n = 6	[DA5] Siemens Dimension
19.85 ± 1.47	12.27 ± 1.17	8.92 ± 0.82	26.76 ± 2.05	10.84 ± 1.13	n = 27	[DP5] Siemens Immulite

Summary of Participant Performance (Mean and Standard Deviation)

Troponin I (µg/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
1.043 ± 0.226	0.520 ± 0.180	0.017 ± 0.017	0.276 ± 0.083	0.018 ± 0.018	n = 224	[---] All Methods & Instruments
						<Instruments>
6.875 ± 0.296	3.466 ± 0.170	0.010 ± 0.008	2.046 ± 0.063	0.010 ± 0.008	n = 16	[ABH] Abbott Architect i System
0.854 ± 0.072	0.444 ± 0.042	0.010 ± 0.000	0.238 ± 0.024	0.010 ± 0.000	n = 33	[SAA] Beckman Coulter ACCESS
0.291 ± 0.045	0.118 ± 0.041	0.050 ± 0.000	0.065 ± 0.018	0.050 ± 0.000	n = 9	[BSA] BioSite Triage
4.445 ± 0.203	1.889 ± 0.138	0.042 ± 0.037	1.147 ± 0.079	0.034 ± 0.045	n = 4	[IAA] i-STAT
4.009 ± 0.177	2.032 ± 0.100	0.010 ± 0.000	1.199 ± 0.064	0.010 ± 0.000	n = 9	[JJG] Ortho Vitros 5600
4.137 ± 0.125	2.115 ± 0.087	0.010 ± 0.000	1.216 ± 0.059	0.010 ± 0.000	n = 14	[JJC] Ortho Vitros ECi/ECiQ
1.068 ± 0.073	0.472 ± 0.041	0.009 ± 0.007	0.245 ± 0.025	0.009 ± 0.007	n = 42	[COB] Siemens ADVIA Centaur
0.936 ± 0.053	0.400 ± 0.050	0.015 ± 0.023	0.226 ± 0.018	0.015 ± 0.023	n = 4	[BYP] Siemens ADVIA Centaur CP
1.326 ± 0.108	0.807 ± 0.054	0.053 ± 0.048	0.403 ± 0.035	0.053 ± 0.048	n = 9	[DUE] Siemens Dimension EXL
1.023 ± 0.087	0.519 ± 0.048	0.040 ± 0.000	0.287 ± 0.042	0.039 ± 0.016	n = 22	[DUR] Siemens Dimension RxL
1.299 ± 0.123	0.765 ± 0.077	0.020 ± 0.000	0.391 ± 0.047	0.020 ± 0.000	n = 30	[DUT] Siemens Dimension Vista
1.006 ± 0.081	0.517 ± 0.042	0.029 ± 0.023	0.284 ± 0.026	0.026 ± 0.022	n = 11	[DUX] Siemens Dimension Xpand
2.138 ± 0.220	1.158 ± 0.055	0.200 ± 0.000	0.794 ± 0.044	0.200 ± 0.000	n = 5	[DPD] Siemens Immulite 2000
7.891 ± 0.340	4.461 ± 0.421	0.060 ± 0.000	2.496 ± 0.262	0.060 ± 0.000	n = 6	[TOM] Tosoh Bioscience
						<Reagents>
6.875 ± 0.297	3.466 ± 0.170	0.011 ± 0.008	2.046 ± 0.064	0.009 ± 0.008	n = 21	[AB1] Abbott
0.849 ± 0.071	0.442 ± 0.039	0.010 ± 0.000	0.236 ± 0.024	0.010 ± 0.000	n = 35	[BC1] Beckman Coulter
0.291 ± 0.045	0.118 ± 0.041	0.050 ± 0.000	0.065 ± 0.018	0.050 ± 0.000	n = 9	[BS1] Biosite Diagnostics
4.087 ± 0.167	2.086 ± 0.101	0.010 ± 0.000	1.209 ± 0.062	0.010 ± 0.000	n = 23	[JJ1] Ortho Clinical Diagnostics
0.733 ± 0.051	0.303 ± 0.005	0.303 ± 0.005	0.303 ± 0.005	0.303 ± 0.005	n = 3	[RO3] Roche Elecsys/Modular E/e601/e411
1.058 ± 0.083	0.468 ± 0.046	0.009 ± 0.006	0.243 ± 0.025	0.009 ± 0.006	n = 46	[BY1] Siemens ADVIA/ADVIA Centaur
1.033 ± 0.105	0.522 ± 0.055	0.033 ± 0.016	0.292 ± 0.042	0.033 ± 0.019	n = 36	[DA5] Siemens Dimension
1.310 ± 0.130	0.780 ± 0.079	0.028 ± 0.032	0.398 ± 0.047	0.028 ± 0.032	n = 35	[DA6] Siemens Dimension LOCI
2.071 ± 0.258	1.141 ± 0.067	0.200 ± 0.000	0.780 ± 0.055	0.200 ± 0.000	n = 6	[DP5] Siemens Immulite
8.194 ± 0.726	4.570 ± 0.447	0.060 ± 0.000	2.557 ± 0.261	0.060 ± 0.000	n = 5	[TO2] Tosoh ST AIA

Summary of Participant Performance (Mean and Standard Deviation)

Troponin T (µg/L)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
0.885 ± 0.072	0.527 ± 0.042	0.010 ± 0.000	0.314 ± 0.020	0.010 ± 0.000	n = 33	[---] All Methods & Instruments
						<Instruments>
0.875 ± 0.019	0.530 ± 0.018	0.010 ± 0.000	0.315 ± 0.019	0.010 ± 0.000	n = 3	[ROF] Roche cobas e411
0.872 ± 0.066	0.529 ± 0.049	0.010 ± 0.000	0.315 ± 0.020	0.010 ± 0.000	n = 8	[ROA] Roche cobas e601
0.947 ± 0.051	0.558 ± 0.031	0.010 ± 0.000	0.326 ± 0.021	0.010 ± 0.000	n = 12	[BME] Roche Elecsys
0.837 ± 0.040	0.501 ± 0.020	0.010 ± 0.000	0.303 ± 0.012	0.010 ± 0.000	n = 9	[ROE] Roche MODULAR E
						<Reagents>
0.880 ± 0.066	0.525 ± 0.041	0.010 ± 0.000	0.314 ± 0.022	0.010 ± 0.000	n = 29	[RO3] Roche Elecsys/Modular E/e601/e411

Summary of Participant Performance (Mean and Standard Deviation)

Alanine Aminotransferase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
89.5 ± 7.36	231.8 ± 12.51	50.7 ± 7.78	175.4 ± 9.58	59.7 ± 7.53	n = 363	[---] All Methods & Instruments
						<Instruments>
79.7 ± 3.16	202.0 ± 5.48	44.5 ± 1.86	153.4 ± 3.87	52.7 ± 0.51	n = 3	[AXA] Abaxis Piccolo
87.1 ± 2.59	234.3 ± 6.25	46.4 ± 0.80	175.5 ± 4.08	55.7 ± 1.15	n = 13	[ABJ] Abbott Architect c System
78.5 ± 2.36	206.8 ± 5.63	41.9 ± 1.65	154.9 ± 4.63	50.0 ± 1.70	n = 51	[OLC] Beckman Coulter AU Chemistry System
85.0 ± 2.23	221.1 ± 6.25	45.2 ± 1.03	167.0 ± 4.55	54.7 ± 0.54	n = 9	[BCS] Beckman Coulter CX
85.6 ± 2.62	223.7 ± 4.72	47.3 ± 1.22	170.5 ± 3.57	56.2 ± 1.60	n = 10	[BCX] Beckman Coulter LX-20
85.7 ± 2.11	224.6 ± 3.64	47.4 ± 1.45	170.1 ± 2.49	56.4 ± 1.68	n = 20	[BCG] Beckman Coulter UniCel DxC 600
85.9 ± 2.21	226.1 ± 3.76	47.1 ± 1.39	171.4 ± 3.64	56.8 ± 1.53	n = 23	[BCH] Beckman Coulter UniCel DxC 800
100.3 ± 3.66	240.5 ± 6.77	63.3 ± 3.53	179.2 ± 4.49	70.2 ± 3.09	n = 13	[JJE] Ortho Vitros 250/350/950
100.7 ± 5.65	237.9 ± 7.70	64.4 ± 4.73	177.5 ± 6.28	69.8 ± 5.25	n = 22	[JJF] Ortho Vitros 5,1FS
99.3 ± 6.06	242.1 ± 7.93	63.4 ± 4.07	177.4 ± 5.83	69.4 ± 5.21	n = 11	[JJG] Ortho Vitros 5600
89.5 ± 2.79	240.0 ± 4.65	48.3 ± 2.07	180.3 ± 5.03	57.9 ± 2.07	n = 17	[ROC] Roche cobas c501
87.3 ± 3.33	232.9 ± 6.34	46.9 ± 2.06	175.9 ± 5.62	55.9 ± 2.14	n = 12	[ROT] Roche Cobas INTEGRA
89.3 ± 3.12	238.0 ± 6.31	48.3 ± 2.53	178.0 ± 4.73	57.6 ± 2.22	n = 35	[ROD] Roche MODULAR D/P
92.1 ± 3.01	244.4 ± 5.47	50.6 ± 2.59	184.3 ± 4.95	60.2 ± 2.87	n = 16	[BYE] Siemens ADVIA 1800
88.2 ± 4.89	238.2 ± 14.99	47.7 ± 3.07	178.9 ± 11.62	56.6 ± 4.72	n = 3	[BYB] Siemens ADVIA 2400
95.9 ± 1.78	237.2 ± 3.34	59.5 ± 1.29	181.2 ± 4.00	69.0 ± 1.53	n = 12	[DUE] Siemens Dimension EXL
96.2 ± 3.09	235.2 ± 6.81	60.5 ± 2.29	181.9 ± 4.36	69.9 ± 2.59	n = 28	[DUR] Siemens Dimension RxL
90.5 ± 2.49	235.9 ± 4.88	51.0 ± 1.36	179.1 ± 3.38	60.2 ± 1.63	n = 32	[DUT] Siemens Dimension Vista
96.3 ± 2.74	234.9 ± 5.53	59.4 ± 2.11	182.4 ± 4.48	68.9 ± 1.84	n = 19	[DUX] Siemens Dimension Xpand
						<Reagents>
79.7 ± 3.16	202.0 ± 5.48	44.5 ± 1.86	153.4 ± 3.87	52.7 ± 0.51	n = 3	[AX1] Abaxis
87.1 ± 2.59	234.3 ± 6.25	46.4 ± 0.80	175.5 ± 4.08	55.7 ± 1.15	n = 13	[AB1] Abbott
85.6 ± 2.29	224.6 ± 4.39	47.1 ± 1.55	170.2 ± 3.52	56.4 ± 1.70	n = 60	[BC1] Beckman Coulter
78.5 ± 2.36	206.7 ± 5.63	41.9 ± 1.62	154.7 ± 4.54	49.9 ± 1.67	n = 49	[OL1] Beckman Coulter AU Series
85.7 ± 2.15	225.3 ± 10.68	45.2 ± 1.96	169.6 ± 6.96	54.0 ± 1.66	n = 5	[CR1] Carolina
100.2 ± 5.18	239.4 ± 7.70	63.7 ± 4.27	177.8 ± 5.75	69.6 ± 4.75	n = 47	[JJ1] Ortho Clinical Diagnostics
89.6 ± 2.72	240.0 ± 4.25	48.3 ± 1.95	180.2 ± 4.84	57.8 ± 1.97	n = 18	[RO4] Roche cobas c311/c501/c502/c701
89.1 ± 3.27	237.7 ± 6.41	48.2 ± 2.53	177.8 ± 4.85	57.5 ± 2.34	n = 36	[RO2] Roche Hitachi and Modular D/P
87.3 ± 3.33	232.9 ± 6.34	46.9 ± 2.06	175.9 ± 5.62	55.9 ± 2.14	n = 12	[RO1] Roche Integra and MIRA
90.7 ± 3.83	242.2 ± 8.10	49.7 ± 2.85	182.3 ± 6.87	59.5 ± 3.19	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
94.1 ± 4.06	235.6 ± 5.66	57.0 ± 5.30	180.7 ± 4.22	66.3 ± 5.36	n = 82	[DA5] Siemens Dimension
95.0 ± 3.23	235.6 ± 5.06	57.2 ± 4.10	182.6 ± 4.03	66.9 ± 4.04	n = 7	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Aspartate Aminotransferase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
81.7 ± 4.80	554.3 ± 49.13	58.3 ± 4.44	184.9 ± 9.71	69.8 ± 4.99	n = 363	[---] All Methods & Instruments
						<Instruments>
83.5 ± 1.86	535.0 ± 5.48	58.0 ± 1.80	184.4 ± 3.87	69.2 ± 2.36	n = 3	[AXA] Abaxis Piccolo
80.8 ± 1.89	550.0 ± 11.42	56.4 ± 1.31	184.4 ± 3.61	67.2 ± 1.30	n = 13	[ABJ] Abbott Architect c System
74.2 ± 2.47	496.1 ± 17.14	51.1 ± 1.86	166.1 ± 5.59	61.2 ± 2.15	n = 51	[OLC] Beckman Coulter AU Chemistry System
82.0 ± 4.91	535.1 ± 70.59	57.7 ± 5.01	183.9 ± 8.00	69.0 ± 4.52	n = 9	[BCS] Beckman Coulter CX
81.5 ± 2.48	531.9 ± 22.14	56.0 ± 0.69	182.4 ± 4.32	67.5 ± 1.86	n = 9	[BCX] Beckman Coulter LX-20
81.1 ± 2.24	531.3 ± 20.29	55.9 ± 1.05	183.2 ± 2.98	67.0 ± 1.35	n = 21	[BCG] Beckman Coulter UniCel DxC 600
82.4 ± 1.73	530.7 ± 22.21	56.2 ± 1.29	185.5 ± 3.51	67.6 ± 1.54	n = 23	[BCH] Beckman Coulter UniCel DxC 800
85.8 ± 3.04	683.6 ± 27.20	62.3 ± 1.86	191.9 ± 5.94	74.8 ± 2.14	n = 13	[JJE] Ortho Vitros 250/350/950
84.0 ± 2.57	666.1 ± 30.84	60.6 ± 1.81	186.4 ± 3.59	72.6 ± 1.95	n = 22	[JJF] Ortho Vitros 5,1FS
83.9 ± 3.55	673.4 ± 31.10	60.4 ± 1.83	186.1 ± 9.36	73.4 ± 2.73	n = 11	[JJG] Ortho Vitros 5600
84.3 ± 1.96	578.6 ± 16.26	59.2 ± 3.57	191.1 ± 6.10	70.7 ± 4.04	n = 17	[ROC] Roche cobas c501
82.9 ± 1.25	573.2 ± 7.34	58.4 ± 1.41	190.8 ± 2.79	69.4 ± 1.25	n = 12	[ROT] Roche Cobas INTEGRA
84.0 ± 3.32	567.2 ± 18.72	59.5 ± 2.68	190.6 ± 6.28	71.0 ± 2.84	n = 35	[ROD] Roche MODULAR D/P
89.8 ± 3.26	602.0 ± 12.33	64.5 ± 2.72	203.4 ± 4.72	76.3 ± 2.88	n = 16	[BYE] Siemens ADVIA 1800
87.5 ± 6.32	587.6 ± 32.02	60.8 ± 4.11	198.0 ± 10.94	73.0 ± 4.51	n = 3	[BYB] Siemens ADVIA 2400
80.4 ± 1.80	551.7 ± 9.89	59.7 ± 2.12	182.3 ± 2.51	72.1 ± 1.81	n = 11	[DUE] Siemens Dimension EXL
80.6 ± 2.95	548.3 ± 15.13	61.4 ± 2.54	183.3 ± 5.06	73.0 ± 2.57	n = 29	[DUR] Siemens Dimension RxL
77.6 ± 4.34	547.7 ± 14.22	56.8 ± 2.86	181.5 ± 5.29	69.2 ± 3.68	n = 32	[DUT] Siemens Dimension Vista
82.7 ± 2.59	549.5 ± 21.64	61.4 ± 1.53	185.3 ± 5.29	73.0 ± 2.42	n = 19	[DUX] Siemens Dimension Xpand
						<Reagents>
83.5 ± 1.86	535.0 ± 5.48	58.0 ± 1.80	184.4 ± 3.87	69.2 ± 2.36	n = 3	[AX1] Abaxis
80.8 ± 1.89	550.0 ± 11.42	56.4 ± 1.31	184.4 ± 3.61	67.2 ± 1.30	n = 13	[AB1] Abbott
81.5 ± 2.29	530.2 ± 22.01	56.0 ± 1.28	183.9 ± 4.00	67.4 ± 1.66	n = 60	[BC1] Beckman Coulter
74.2 ± 2.36	496.1 ± 17.00	51.1 ± 1.79	166.1 ± 5.46	61.2 ± 2.12	n = 49	[OL1] Beckman Coulter AU Series
85.7 ± 3.56	588.0 ± 28.03	61.2 ± 3.60	190.9 ± 6.47	72.0 ± 2.64	n = 5	[CR1] Carolina
84.5 ± 3.04	674.0 ± 31.70	61.0 ± 2.03	187.9 ± 5.50	73.4 ± 2.35	n = 47	[JJ1] Ortho Clinical Diagnostics
84.5 ± 2.19	579.6 ± 16.18	59.3 ± 3.36	191.5 ± 6.11	70.7 ± 3.80	n = 18	[RO4] Roche cobas c311/c501/c502/c701
83.9 ± 3.30	567.1 ± 18.19	59.4 ± 2.62	190.6 ± 6.14	70.9 ± 2.77	n = 36	[RO2] Roche Hitachi and Modular D/P
82.9 ± 1.32	574.0 ± 7.17	58.2 ± 1.16	191.0 ± 2.87	69.3 ± 1.16	n = 11	[RO1] Roche Integra and MIRA
88.9 ± 3.83	595.5 ± 19.37	63.7 ± 3.35	201.0 ± 7.18	75.4 ± 3.31	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
80.3 ± 3.96	548.1 ± 15.40	59.8 ± 3.45	182.8 ± 5.26	71.7 ± 3.43	n = 86	[DA5] Siemens Dimension
79.5 ± 1.86	558.4 ± 10.30	58.1 ± 2.05	185.0 ± 3.61	71.8 ± 1.54	n = 3	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

α-Amylase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
271.1 ± 45.33	53.8 ± 7.79	122.8 ± 16.45	80.3 ± 8.05	146.3 ± 20.14	n = 319	[---] All Methods & Instruments
						<Instruments>
293.5 ± 5.72	54.0 ± 1.27	131.0 ± 2.58	85.7 ± 2.04	156.3 ± 2.75	n = 10	[ABJ] Abbott Architect c System
233.3 ± 12.36	41.5 ± 2.47	103.8 ± 6.61	66.8 ± 4.02	123.7 ± 7.31	n = 42	[OLC] Beckman Coulter AU Chemistry System
368.8 ± 92.69	64.7 ± 3.77	162.2 ± 36.87	104.2 ± 20.34	192.2 ± 38.51	n = 4	[BCS] Beckman Coulter CX
287.5 ± 8.42	60.4 ± 2.10	130.1 ± 2.65	87.4 ± 2.47	156.5 ± 4.12	n = 9	[BCX] Beckman Coulter LX-20
283.9 ± 10.21	60.2 ± 1.77	129.9 ± 4.14	86.5 ± 2.90	154.5 ± 4.99	n = 17	[BCG] Beckman Coulter UniCel DxC 600
289.2 ± 4.73	61.1 ± 1.45	130.8 ± 4.45	87.9 ± 1.76	156.1 ± 4.43	n = 23	[BCH] Beckman Coulter UniCel DxC 800
166.7 ± 9.41	54.5 ± 5.31	80.1 ± 3.60	64.7 ± 4.32	95.0 ± 5.45	n = 10	[JJE] Ortho Vitros 250/350/950
168.9 ± 9.77	57.2 ± 5.42	82.2 ± 6.93	68.9 ± 5.31	98.3 ± 8.31	n = 21	[JJF] Ortho Vitros 5,1FS
169.6 ± 4.97	57.0 ± 5.38	81.4 ± 7.12	66.8 ± 4.84	96.5 ± 5.67	n = 11	[JJG] Ortho Vitros 5600
264.1 ± 4.36	58.6 ± 1.07	122.0 ± 1.84	83.2 ± 1.40	145.9 ± 3.04	n = 17	[ROC] Roche cobas c501
262.4 ± 4.32	58.8 ± 0.65	121.4 ± 1.29	82.7 ± 0.55	144.1 ± 1.20	n = 9	[ROT] Roche Cobas INTEGRA
262.0 ± 2.83	58.5 ± 1.55	121.5 ± 1.86	83.4 ± 1.60	145.4 ± 2.56	n = 31	[ROD] Roche MODULAR D/P
274.3 ± 5.08	59.3 ± 1.16	124.9 ± 2.51	85.1 ± 1.89	150.4 ± 3.14	n = 15	[BYE] Siemens ADVIA 1800
257.7 ± 2.26	55.3 ± 0.51	117.0 ± 0.90	80.0 ± 0.90	140.3 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
319.1 ± 5.52	49.4 ± 0.98	136.2 ± 2.41	83.0 ± 2.46	163.0 ± 2.75	n = 9	[DUE] Siemens Dimension EXL
316.4 ± 7.50	49.5 ± 1.47	136.9 ± 3.52	83.1 ± 1.71	163.2 ± 3.39	n = 29	[DUR] Siemens Dimension RxL
303.1 ± 5.61	45.7 ± 1.06	131.0 ± 1.83	78.4 ± 1.74	155.9 ± 3.33	n = 31	[DUT] Siemens Dimension Vista
319.8 ± 6.79	49.4 ± 1.26	137.1 ± 3.51	83.2 ± 1.60	163.1 ± 3.82	n = 17	[DUX] Siemens Dimension Xpand
						<Reagents>
293.5 ± 5.72	54.0 ± 1.27	131.0 ± 2.58	85.7 ± 2.04	156.3 ± 2.75	n = 10	[AB1] Abbott
287.1 ± 8.10	60.7 ± 1.83	130.4 ± 3.86	87.3 ± 2.53	155.9 ± 4.49	n = 52	[BC2] Beckman Coulter IFCC Standardized
232.9 ± 12.36	41.5 ± 2.38	103.6 ± 6.45	66.6 ± 3.88	123.4 ± 7.21	n = 41	[OL1] Beckman Coulter AU Series
168.9 ± 8.97	56.8 ± 6.06	81.3 ± 6.48	67.7 ± 5.94	97.1 ± 7.62	n = 44	[JJ1] Ortho Clinical Diagnostics
263.9 ± 4.31	58.5 ± 1.03	122.0 ± 1.78	83.2 ± 1.34	145.8 ± 2.98	n = 18	[RO4] Roche cobas c311/c501/c502/c701
262.1 ± 3.04	58.5 ± 1.51	121.6 ± 1.83	83.5 ± 1.60	145.5 ± 2.68	n = 32	[RO2] Roche Hitachi and Modular D/P
262.4 ± 4.32	58.8 ± 0.65	121.4 ± 1.29	82.7 ± 0.55	144.1 ± 1.20	n = 9	[RO1] Roche Integra and MIRA
269.8 ± 9.39	58.2 ± 2.15	122.8 ± 4.35	83.7 ± 2.89	147.7 ± 5.44	n = 22	[BY1] Siemens ADVIA/ADVIA Centaur
312.7 ± 10.09	48.2 ± 2.31	134.7 ± 4.23	81.4 ± 3.08	160.7 ± 4.96	n = 85	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Alkaline Phosphatase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
187.8 ± 19.97	44.7 ± 8.39	235.7 ± 20.30	93.2 ± 14.63	285.0 ± 24.77	n = 360	[---] All Methods & Instruments
						<Instruments>
162.5 ± 5.43	32.1 ± 2.86	207.7 ± 1.37	77.9 ± 6.08	251.9 ± 4.38	n = 3	[AXA] Abaxis Piccolo
196.2 ± 5.73	45.3 ± 1.53	252.3 ± 8.54	95.3 ± 3.40	301.4 ± 10.26	n = 13	[ABJ] Abbott Architect c System
172.7 ± 7.91	39.2 ± 2.49	222.9 ± 11.03	83.4 ± 4.21	266.3 ± 13.07	n = 50	[OLC] Beckman Coulter AU Chemistry System
167.3 ± 4.57	39.0 ± 1.38	219.0 ± 7.50	81.8 ± 3.41	259.9 ± 11.91	n = 9	[BCS] Beckman Coulter CX
170.9 ± 6.36	37.4 ± 0.73	222.3 ± 8.72	82.0 ± 3.11	264.4 ± 9.77	n = 9	[BCX] Beckman Coulter LX-20
169.4 ± 6.09	39.1 ± 2.14	218.9 ± 8.02	81.8 ± 3.48	262.3 ± 9.30	n = 21	[BCG] Beckman Coulter UniCel DxC 600
172.7 ± 5.83	40.2 ± 1.91	221.7 ± 8.06	83.5 ± 3.37	266.3 ± 6.76	n = 24	[BCH] Beckman Coulter UniCel DxC 800
214.7 ± 10.28	64.3 ± 3.08	232.8 ± 13.94	126.1 ± 6.39	296.6 ± 16.16	n = 12	[JJE] Ortho Vitros 250/350/950
218.5 ± 6.18	64.3 ± 2.57	232.2 ± 8.60	127.7 ± 3.69	294.2 ± 10.47	n = 22	[JJF] Ortho Vitros 5,1FS
213.6 ± 6.13	63.5 ± 4.39	225.6 ± 6.88	125.6 ± 5.03	289.5 ± 17.60	n = 11	[JJG] Ortho Vitros 5600
188.4 ± 4.76	43.8 ± 1.26	243.7 ± 6.01	92.2 ± 2.61	290.4 ± 7.01	n = 17	[ROC] Roche cobas c501
186.6 ± 4.86	42.5 ± 1.23	242.4 ± 3.61	90.7 ± 3.24	288.9 ± 4.39	n = 10	[ROT] Roche Cobas INTEGRA
182.3 ± 4.82	42.9 ± 1.52	234.6 ± 6.54	90.2 ± 2.90	280.3 ± 8.48	n = 34	[ROD] Roche MODULAR D/P
198.1 ± 6.96	44.6 ± 1.75	256.1 ± 8.21	95.5 ± 3.41	307.0 ± 10.55	n = 16	[BYE] Siemens ADVIA 1800
189.9 ± 2.05	42.0 ± 0.90	243.2 ± 2.36	90.5 ± 1.86	291.7 ± 1.37	n = 3	[BYB] Siemens ADVIA 2400
220.0 ± 9.73	59.5 ± 6.22	283.4 ± 6.01	112.3 ± 4.72	336.0 ± 9.52	n = 11	[DUE] Siemens Dimension EXL
211.8 ± 10.79	55.7 ± 7.44	278.2 ± 15.13	110.6 ± 8.49	328.6 ± 13.22	n = 29	[DUR] Siemens Dimension RxL
177.7 ± 10.05	42.8 ± 2.09	229.0 ± 11.38	88.3 ± 4.26	274.2 ± 13.03	n = 32	[DUT] Siemens Dimension Vista
201.1 ± 4.57	51.8 ± 3.65	261.2 ± 4.03	103.2 ± 3.64	314.8 ± 7.86	n = 19	[DUX] Siemens Dimension Xpand
						<Reagents>
162.5 ± 5.43	32.1 ± 2.86	207.7 ± 1.37	77.9 ± 6.08	251.9 ± 4.38	n = 3	[AX1] Abaxis
196.2 ± 5.73	45.3 ± 1.53	252.3 ± 8.54	95.3 ± 3.40	301.4 ± 10.26	n = 13	[AB1] Abbott
170.6 ± 5.95	39.2 ± 2.05	220.3 ± 7.86	82.5 ± 3.48	263.9 ± 8.92	n = 58	[BC1] Beckman Coulter
172.7 ± 7.53	39.1 ± 2.39	222.7 ± 10.43	83.4 ± 4.04	266.1 ± 12.27	n = 49	[OL1] Beckman Coulter AU Series
153.9 ± 31.07	40.4 ± 4.70	199.4 ± 40.04	75.3 ± 14.32	241.8 ± 42.85	n = 4	[CR1] Carolina
216.1 ± 8.17	64.1 ± 3.16	230.7 ± 10.26	126.8 ± 4.96	293.3 ± 13.23	n = 46	[JJ1] Ortho Clinical Diagnostics
188.2 ± 4.64	43.8 ± 1.23	243.3 ± 5.97	92.1 ± 2.54	290.1 ± 6.89	n = 18	[RO4] Roche cobas c311/c501/c502/c701
182.2 ± 4.67	43.0 ± 1.54	234.6 ± 6.29	90.2 ± 2.86	280.3 ± 8.16	n = 36	[RO2] Roche Hitachi and Modular D/P
185.9 ± 5.19	42.4 ± 1.17	241.8 ± 4.30	90.3 ± 3.04	288.2 ± 4.84	n = 11	[RO1] Roche Integra and MIRA
194.9 ± 8.36	43.9 ± 2.09	251.8 ± 10.66	93.8 ± 4.20	301.6 ± 13.20	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
199.9 ± 20.73	50.4 ± 8.57	259.5 ± 27.50	101.6 ± 12.72	309.6 ± 31.02	n = 90	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

γ-Glutamyltransferase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
47.0 ± 11.19	99.6 ± 23.50	70.0 ± 15.96	24.2 ± 5.85	83.8 ± 18.96	n = 305	[---] All Methods & Instruments
						<Instruments>
48.1 ± 2.35	102.4 ± 4.53	71.9 ± 3.35	24.6 ± 1.64	86.6 ± 3.80	n = 12	[ABJ] Abbott Architect c System
37.1 ± 1.99	76.9 ± 3.93	54.5 ± 2.81	20.6 ± 1.22	65.4 ± 3.58	n = 48	[OLC] Beckman Coulter AU Chemistry System
36.4 ± 4.53	76.8 ± 14.51	54.5 ± 9.11	20.3 ± 3.01	64.8 ± 11.69	n = 8	[BCS] Beckman Coulter CX
41.2 ± 1.86	94.9 ± 3.38	66.2 ± 3.18	19.6 ± 1.34	78.9 ± 3.29	n = 7	[BCX] Beckman Coulter LX-20
41.7 ± 1.87	95.9 ± 3.17	66.9 ± 1.83	19.3 ± 0.60	80.4 ± 3.22	n = 16	[BCG] Beckman Coulter UniCel DxC 600
42.7 ± 1.45	98.1 ± 2.46	68.0 ± 2.17	19.9 ± 2.38	81.8 ± 3.06	n = 18	[BCH] Beckman Coulter UniCel DxC 800
64.8 ± 1.18	153.2 ± 3.84	107.8 ± 2.87	28.2 ± 1.50	129.2 ± 2.76	n = 9	[JJE] Ortho Vitros 250/350/950
65.4 ± 2.15	151.7 ± 4.64	106.9 ± 3.63	28.9 ± 1.55	127.2 ± 4.26	n = 21	[JJF] Ortho Vitros 5,1FS
64.6 ± 1.51	149.0 ± 0.82	105.1 ± 2.30	28.2 ± 1.24	126.4 ± 2.60	n = 10	[JJG] Ortho Vitros 5600
39.7 ± 0.66	84.9 ± 2.14	60.5 ± 1.28	20.6 ± 0.64	72.8 ± 1.19	n = 15	[ROC] Roche cobas c501
38.3 ± 1.27	82.5 ± 1.67	58.2 ± 1.47	19.7 ± 0.85	69.6 ± 1.71	n = 9	[ROT] Roche Cobas INTEGRA
40.2 ± 1.34	87.0 ± 2.22	61.7 ± 1.93	20.5 ± 0.97	73.8 ± 1.82	n = 34	[ROD] Roche MODULAR D/P
44.5 ± 1.21	92.9 ± 2.17	66.2 ± 1.51	23.7 ± 0.99	79.5 ± 2.16	n = 16	[BYE] Siemens ADVIA 1800
41.0 ± 0.90	87.9 ± 2.05	61.2 ± 1.54	22.2 ± 1.54	76.3 ± 3.37	n = 3	[BYB] Siemens ADVIA 2400
59.0 ± 1.62	116.2 ± 2.84	81.9 ± 1.83	34.2 ± 2.23	97.8 ± 2.60	n = 10	[DUE] Siemens Dimension EXL
58.4 ± 2.76	116.6 ± 3.18	81.6 ± 2.52	33.7 ± 2.01	96.8 ± 3.23	n = 22	[DUR] Siemens Dimension RxL
56.9 ± 2.08	118.8 ± 2.61	82.3 ± 2.63	31.6 ± 2.34	98.1 ± 2.41	n = 29	[DUT] Siemens Dimension Vista
58.7 ± 1.75	117.3 ± 2.23	81.9 ± 2.22	34.4 ± 1.12	97.7 ± 2.23	n = 9	[DUX] Siemens Dimension Xpand
						<Reagents>
47.9 ± 1.94	101.9 ± 4.12	71.6 ± 2.84	24.4 ± 1.39	86.3 ± 3.18	n = 11	[AB1] Abbott
41.9 ± 2.07	96.7 ± 3.47	67.2 ± 2.46	19.5 ± 1.50	80.6 ± 3.55	n = 44	[BC1] Beckman Coulter
37.0 ± 2.00	76.7 ± 3.94	54.5 ± 2.74	20.5 ± 1.22	65.4 ± 3.54	n = 46	[OL1] Beckman Coulter AU Series
34.7 ± 0.90	67.5 ± 1.07	48.8 ± 0.80	21.6 ± 3.50	58.2 ± 4.50	n = 5	[CR1] Carolina
65.0 ± 1.82	151.7 ± 4.34	106.7 ± 3.36	28.5 ± 1.50	127.4 ± 3.81	n = 40	[JJ1] Ortho Clinical Diagnostics
39.7 ± 0.66	84.9 ± 2.14	60.5 ± 1.28	20.6 ± 0.64	72.8 ± 1.19	n = 15	[RO4] Roche cobas c311/c501/c502/c701
40.2 ± 1.35	87.0 ± 2.22	61.7 ± 1.93	20.5 ± 0.99	73.8 ± 1.82	n = 35	[RO2] Roche Hitachi and Modular D/P
38.3 ± 1.27	82.5 ± 1.67	58.2 ± 1.47	19.7 ± 0.85	69.6 ± 1.71	n = 9	[RO1] Roche Integra and MIRA
43.7 ± 2.16	91.7 ± 3.18	65.1 ± 2.77	23.2 ± 1.41	78.7 ± 2.90	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
58.0 ± 2.31	117.6 ± 2.96	82.0 ± 2.50	33.2 ± 2.37	97.7 ± 2.80	n = 66	[DA5] Siemens Dimension
55.8 ± 2.36	116.0 ± 0.90	81.3 ± 0.51	31.4 ± 2.56	97.0 ± 0.90	n = 3	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Creatine Kinase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
226.4 ± 18.94	277.6 ± 25.52	79.1 ± 7.76	154.0 ± 10.41	95.4 ± 8.04	n = 328	[---] All Methods & Instruments
						<Instruments>
246.6 ± 4.85	304.7 ± 7.92	84.3 ± 1.80	167.8 ± 2.45	102.9 ± 1.67	n = 11	[ABJ] Abbott Architect c System
195.4 ± 9.57	241.2 ± 15.03	68.0 ± 2.83	135.4 ± 5.55	82.2 ± 3.59	n = 45	[OLC] Beckman Coulter AU Chemistry System
195.2 ± 19.78	232.1 ± 26.69	71.2 ± 7.47	135.5 ± 11.38	87.9 ± 9.44	n = 7	[BCS] Beckman Coulter CX
227.7 ± 6.49	288.3 ± 14.61	82.8 ± 2.28	156.3 ± 3.50	99.1 ± 2.47	n = 9	[BCX] Beckman Coulter LX-20
224.4 ± 7.93	279.7 ± 14.80	81.6 ± 1.50	154.3 ± 3.80	98.2 ± 2.98	n = 18	[BCG] Beckman Coulter UniCel DxC 600
226.4 ± 6.43	280.9 ± 11.78	83.2 ± 2.30	154.7 ± 3.79	99.1 ± 2.72	n = 23	[BCH] Beckman Coulter UniCel DxC 800
242.8 ± 22.25	293.8 ± 26.68	92.3 ± 6.87	162.8 ± 11.92	107.4 ± 5.78	n = 10	[JJE] Ortho Vitros 250/350/950
242.3 ± 12.02	286.2 ± 18.78	95.3 ± 3.71	161.2 ± 7.68	107.1 ± 4.17	n = 20	[JJF] Ortho Vitros 5,1FS
242.0 ± 14.97	293.5 ± 21.60	96.0 ± 4.43	163.7 ± 9.66	107.8 ± 5.38	n = 10	[JJG] Ortho Vitros 5600
222.4 ± 8.51	280.6 ± 14.68	76.1 ± 2.25	151.9 ± 3.98	92.0 ± 2.54	n = 17	[ROC] Roche cobas c501
206.3 ± 7.60	254.4 ± 11.15	68.5 ± 3.46	138.6 ± 4.90	83.4 ± 4.02	n = 8	[ROT] Roche Cobas INTEGRA
230.9 ± 5.42	281.1 ± 11.63	79.3 ± 1.59	155.9 ± 3.43	95.6 ± 1.93	n = 34	[ROD] Roche MODULAR D/P
216.8 ± 10.30	266.5 ± 20.28	76.8 ± 1.97	154.9 ± 4.78	93.4 ± 2.45	n = 16	[BYE] Siemens ADVIA 1800
207.4 ± 12.55	248.0 ± 26.21	73.8 ± 2.36	146.5 ± 8.19	87.8 ± 2.36	n = 3	[BYB] Siemens ADVIA 2400
237.9 ± 8.24	290.1 ± 16.15	79.1 ± 2.10	158.0 ± 5.01	95.9 ± 2.83	n = 10	[DUE] Siemens Dimension EXL
238.3 ± 6.97	294.8 ± 10.00	79.9 ± 2.44	159.1 ± 3.84	97.0 ± 2.97	n = 30	[DUR] Siemens Dimension RxL
237.1 ± 5.44	284.8 ± 22.27	80.8 ± 1.40	155.5 ± 8.26	97.3 ± 1.96	n = 31	[DUT] Siemens Dimension Vista
236.7 ± 6.09	293.2 ± 12.35	78.7 ± 2.08	157.8 ± 4.02	95.6 ± 2.12	n = 16	[DUX] Siemens Dimension Xpand
						<Reagents>
246.6 ± 4.85	304.7 ± 7.92	84.3 ± 1.80	167.8 ± 2.45	102.9 ± 1.67	n = 11	[AB1] Abbott
225.4 ± 7.23	281.3 ± 14.21	82.5 ± 2.38	154.7 ± 4.25	98.6 ± 2.83	n = 53	[BC1] Beckman Coulter
195.2 ± 9.62	241.2 ± 14.37	67.9 ± 2.79	135.2 ± 5.51	82.1 ± 3.57	n = 43	[OL1] Beckman Coulter AU Series
184.6 ± 10.35	229.4 ± 8.79	68.2 ± 3.11	130.0 ± 5.88	82.2 ± 5.30	n = 5	[CR1] Carolina
242.7 ± 14.39	289.7 ± 21.24	95.0 ± 4.52	162.3 ± 8.99	107.4 ± 4.70	n = 40	[JJ1] Ortho Clinical Diagnostics
221.7 ± 8.72	277.9 ± 18.83	76.1 ± 2.16	152.0 ± 3.81	92.0 ± 2.43	n = 18	[RO4] Roche cobas c311/c501/c502/c701
230.7 ± 5.29	280.6 ± 11.56	79.3 ± 1.62	155.8 ± 3.47	95.5 ± 1.86	n = 33	[RO2] Roche Hitachi and Modular D/P
206.3 ± 7.60	254.4 ± 11.15	68.5 ± 3.46	138.6 ± 4.90	83.4 ± 4.02	n = 8	[RO1] Roche Integra and MIRA
214.6 ± 10.50	263.0 ± 20.65	76.1 ± 2.30	153.3 ± 5.98	92.2 ± 3.26	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
230.6 ± 18.92	277.3 ± 31.92	78.6 ± 5.50	154.0 ± 9.84	94.6 ± 6.47	n = 31	[DA5] Siemens Dimension
237.6 ± 6.71	293.4 ± 11.53	79.8 ± 2.50	158.7 ± 4.07	96.7 ± 2.75	n = 54	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Creatine Kinase-MB (ng/mL, U/L 37°C, %)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
27.79 ± 4.39	63.97 ± 10.43	0.94 ± 0.35	0.98 ± 0.36	1.08 ± 0.40	n = 196	[-A-] All Methods – Results reported in ng/mL
27.80 ± 2.93	58.84 ± 8.24	0.86 ± 0.15	0.94 ± 0.16	1.04 ± 0.21	n = 18	[AB1] Abbott
31.39 ± 1.18	76.76 ± 4.05	2.10 ± 1.96	2.19 ± 1.90	2.27 ± 1.84	n = 22	[SAA] Beckman Coulter ACCESS
32.19 ± 1.34	77.82 ± 3.45	1.14 ± 0.06	1.28 ± 0.06	1.32 ± 0.07	n = 14	[BC-] Beckman Coulter DxC 600/DxI 800
19.76 ± 0.85	45.68 ± 5.46	1.00 ± 0.00	1.00 ± 0.00	1.00 ± 0.00	n = 5	[BS1] Biosite Diagnostics
20.63 ± 1.27	49.23 ± 3.19	0.78 ± 0.10	0.84 ± 0.12	0.91 ± 0.11	n = 20	[JJ1] Ortho Clinical Diagnostics
31.79 ± 1.30	64.79 ± 2.27	1.64 ± 0.13	1.50 ± 0.07	1.71 ± 0.08	n = 25	[RO3] Roche Elecsys/Modular E/e601/e411
26.66 ± 1.02	61.36 ± 2.13	0.75 ± 0.17	0.76 ± 0.16	0.85 ± 0.15	n = 33	[BY1] Siemens ADVIA/ADVIA Centaur
26.86 ± 2.28	69.74 ± 5.83	0.65 ± 0.28	0.62 ± 0.23	0.70 ± 0.27	n = 32	[DA5] Siemens Dimension
24.10 ± 0.80	56.06 ± 1.69	0.92 ± 0.12	0.84 ± 0.17	0.97 ± 0.18	n = 18	[DA6] Siemens Dimension LOCI
29.30 ± 0.36	65.22 ± 2.14	1.99 ± 0.37	1.96 ± 0.47	1.97 ± 0.23	n = 3	[DP5] Siemens Immulite
35.93 ± 0.68	86.53 ± 1.95	1.37 ± 0.05	1.53 ± 0.05	1.63 ± 0.05	n = 3	[TO2] Tosoh ST AIA
29.05 ± 4.44	67.22 ± 9.45	1.37 ± 0.99	2.11 ± 2.48	1.56 ± 1.01	n = 13	[-B-] All Methods – Results reported in U/L
11.00 ± 1.76	20.31 ± 2.65	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	n = 4	[-P-] All Methods – Results reported as %
10.53 ± 1.86	20.93 ± 2.86	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	n = 3	[HL1] Helena Laboratories

Summary of Participant Performance (Mean and Standard Deviation)

Lactate Dehydrogenase (U/L 37°C)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
178.3 ± 19.59	237.7 ± 23.50	94.7 ± 9.76	172.1 ± 18.63	114.4 ± 11.61	n = 316	[---] All Methods & Instruments
178.7 ± 19.48	238.2 ± 23.35	94.9 ± 9.70	172.5 ± 18.56	114.6 ± 11.55	n = 268	[-A-] All Methods - Lactate to Pyruvate
476.3 ± 16.52	641.1 ± 21.62	262.6 ± 23.04	482.8 ± 22.62	337.9 ± 24.38	n = 44	[-B-] All Methods - Pyruvate to Lactate
						<Instruments>
176.4 ± 7.92	235.8 ± 12.09	97.2 ± 3.68	172.4 ± 6.71	117.2 ± 4.30	n = 13	[ABJ] Abbott Architect c System
163.2 ± 6.98	220.8 ± 10.23	87.4 ± 4.05	156.8 ± 7.09	104.7 ± 4.81	n = 46	[OLC] Beckman Coulter AU Chemistry System
152.9 ± 7.14	205.0 ± 9.23	82.3 ± 6.14	151.4 ± 11.96	102.9 ± 6.56	n = 7	[BCS] Beckman Coulter CX
154.2 ± 5.17	210.6 ± 6.64	82.4 ± 3.14	150.7 ± 4.13	100.0 ± 2.78	n = 8	[BCX] Beckman Coulter LX-20
153.6 ± 4.87	208.8 ± 4.63	83.4 ± 1.90	148.3 ± 4.78	99.6 ± 3.13	n = 19	[BCG] Beckman Coulter UniCel DxC 600
154.7 ± 5.91	209.5 ± 5.80	82.8 ± 3.47	150.3 ± 4.45	101.0 ± 2.99	n = 21	[BCH] Beckman Coulter UniCel DxC 800
489.6 ± 10.55	650.2 ± 15.30	266.9 ± 18.80	497.6 ± 17.31	348.1 ± 23.22	n = 10	[JJE] Ortho Vitros 250/350/950
472.7 ± 17.40	638.0 ± 26.86	261.6 ± 26.75	478.3 ± 21.29	331.9 ± 23.48	n = 22	[JJF] Ortho Vitros 5,1FS
472.1 ± 13.29	641.1 ± 18.05	259.1 ± 13.14	479.0 ± 18.60	337.2 ± 17.89	n = 11	[JJG] Ortho Vitros 5600
188.8 ± 3.83	249.4 ± 4.89	99.3 ± 2.28	181.5 ± 3.45	119.2 ± 2.93	n = 17	[ROC] Roche cobas c501
189.9 ± 3.25	248.3 ± 6.11	99.7 ± 2.78	181.3 ± 4.46	120.3 ± 2.24	n = 8	[ROT] Roche Cobas INTEGRA
187.9 ± 4.98	248.0 ± 6.53	98.6 ± 2.66	180.3 ± 3.98	118.9 ± 3.18	n = 32	[ROD] Roche MODULAR D/P
190.8 ± 6.27	253.6 ± 8.34	101.6 ± 3.73	183.7 ± 5.80	122.3 ± 4.11	n = 16	[BYE] Siemens ADVIA 1800
187.0 ± 3.61	245.8 ± 5.90	99.7 ± 3.16	179.5 ± 5.43	120.2 ± 3.23	n = 3	[BYB] Siemens ADVIA 2400
191.9 ± 3.79	254.3 ± 5.36	98.8 ± 2.92	186.8 ± 7.29	122.8 ± 3.97	n = 9	[DUE] Siemens Dimension EXL
197.3 ± 8.96	260.0 ± 11.23	104.1 ± 5.26	191.3 ± 12.42	124.1 ± 7.37	n = 21	[DUR] Siemens Dimension RxL
194.7 ± 13.53	256.5 ± 17.58	102.7 ± 7.76	185.6 ± 14.11	123.2 ± 9.75	n = 32	[DUT] Siemens Dimension Vista
193.0 ± 9.12	258.1 ± 8.02	100.0 ± 6.20	187.0 ± 8.45	123.0 ± 7.19	n = 12	[DUX] Siemens Dimension Xpand
						<Reagents>
176.4 ± 7.92	235.8 ± 12.09	97.2 ± 3.68	172.4 ± 6.71	117.2 ± 4.30	n = 13	[AB1] Abbott
154.0 ± 5.26	209.1 ± 5.48	82.8 ± 2.95	149.7 ± 4.46	100.3 ± 2.95	n = 51	[BC1] Beckman Coulter
163.2 ± 6.95	220.8 ± 10.10	87.4 ± 3.99	156.8 ± 7.03	104.6 ± 4.74	n = 45	[OL1] Beckman Coulter AU Series
153.6 ± 10.55	204.6 ± 13.21	85.8 ± 6.35	157.7 ± 19.18	104.8 ± 9.15	n = 4	[CR1] Carolina
476.7 ± 16.90	642.7 ± 21.66	261.4 ± 22.58	483.2 ± 21.50	337.0 ± 23.39	n = 43	[JJ1] Ortho Clinical Diagnostics
188.8 ± 3.83	249.4 ± 4.89	99.3 ± 2.28	181.5 ± 3.45	119.2 ± 2.93	n = 17	[RO4] Roche cobas c311/c501/c502/c701
188.0 ± 4.88	248.1 ± 6.42	98.6 ± 2.60	180.4 ± 4.00	118.9 ± 3.10	n = 33	[RO2] Roche Hitachi and Modular D/P
189.9 ± 3.25	248.3 ± 6.11	99.7 ± 2.78	181.3 ± 4.46	120.3 ± 2.24	n = 8	[RO1] Roche Integra and MIRA
188.9 ± 6.06	250.7 ± 8.50	100.6 ± 3.68	181.9 ± 5.93	121.3 ± 3.97	n = 23	[BY1] Siemens ADVIA/ADVIA Centaur
186.8 ± 19.43	246.0 ± 24.12	98.7 ± 9.40	179.5 ± 19.78	119.3 ± 11.75	n = 25	[DA5] Siemens Dimension
196.3 ± 7.53	259.8 ± 8.24	103.4 ± 5.22	189.6 ± 8.29	124.7 ± 6.06	n = 46	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

LDH Isoenzyme 1 (%)

Specimen: C61	Specimen: C62	Specimen: C63	Specimen: C64	Specimen: C65	Number	[Code] Instrument or Reagent System
52.4 ± 1.39	21.0 ± 3.67	30.7 ± 4.90	35.1 ± 3.18	31.6 ± 4.25	n = 8	[-P-] All Methods – Results reported as %
						<Instruments>
53.0 ± 0.75	24.0 ± 0.00	34.3 ± 1.58	37.8 ± 1.46	34.2 ± 0.41	n = 4	[HLS] Helena SPIFE
51.7 ± 1.58	17.5 ± 1.23	26.6 ± 3.39	32.5 ± 1.22	27.8 ± 3.59	n = 4	[SEE] Sebia Electrophoresis
						<Reagents>
53.0 ± 0.75	24.0 ± 0.00	34.3 ± 1.58	37.8 ± 1.46	34.2 ± 0.41	n = 4	[HL1] Helena Laboratories
51.7 ± 1.58	17.5 ± 1.23	26.6 ± 3.39	32.5 ± 1.22	27.8 ± 3.59	n = 4	[SE1] Sebia