

Clinical Chemistry Proficiency Testing – January 28, 2013

Enclosed are results from the clinical chemistry proficiency survey shipped January 28, 2013. 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 °C. Five specimens (**C81, C82, C83, C84, C85**) 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 $\geq 80\%$ 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 a pound sign (#).

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 January 2013 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>

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: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
67.4 ± 3.11	290.7 ± 6.57	119.5 ± 3.28	202.4 ± 4.86	99.2 ± 2.98	n = 387	[---] All Methods & Instruments
<Instruments>						
70.6 ± 1.02	288.5 ± 2.74	122.5 ± 1.86	201.5 ± 1.86	103.4 ± 1.02	n = 3	[AXA] Abaxis Piccolo
65.1 ± 1.20	296.1 ± 5.00	118.4 ± 1.66	202.8 ± 3.34	98.9 ± 1.75	n = 22	[ABJ] Abbott Architect c System
65.5 ± 1.46	288.8 ± 5.67	118.5 ± 2.40	201.3 ± 3.94	98.9 ± 2.07	n = 65	[OLC] Beckman Coulter AU Chemistry System
66.3 ± 2.26	293.8 ± 3.23	120.5 ± 2.74	203.4 ± 2.56	99.8 ± 2.36	n = 3	[BCX] Beckman Coulter LX-20
66.2 ± 3.33	290.0 ± 5.79	118.9 ± 2.49	202.4 ± 4.77	98.5 ± 2.31	n = 17	[BCG] Beckman Coulter UniCel DxC 600
63.6 ± 2.19	289.9 ± 3.46	118.2 ± 1.80	201.3 ± 2.90	97.2 ± 2.03	n = 8	[BCH] Beckman Coulter UniCel DxC 800
96.5 ± 4.53	328.3 ± 3.37	147.5 ± 4.61	223.8 ± 3.23	132.8 ± 1.54	n = 3	[HEC] HemoCue Glucose 201
66.2 ± 0.80	290.9 ± 5.38	118.4 ± 1.69	202.3 ± 2.18	99.0 ± 1.00	n = 5	[IAA] i-STAT
68.9 ± 0.92	291.9 ± 4.56	119.0 ± 0.00	200.9 ± 2.82	97.4 ± 0.98	n = 9	[JJE] Ortho Vitros 250/350/950
68.1 ± 1.56	288.8 ± 5.46	117.5 ± 2.37	199.2 ± 4.42	95.6 ± 2.05	n = 19	[JJF] Ortho Vitros 5,1FS
68.1 ± 1.46	287.3 ± 3.95	116.9 ± 2.55	198.2 ± 4.39	95.6 ± 2.04	n = 19	[JJG] Ortho Vitros 5600
66.4 ± 1.02	291.5 ± 5.43	119.3 ± 1.37	202.3 ± 3.16	99.8 ± 2.36	n = 3	[ROK] Roche cobas c111
65.8 ± 0.93	290.0 ± 4.90	119.4 ± 2.72	202.5 ± 3.50	99.4 ± 2.17	n = 17	[ROC] Roche cobas c501
65.2 ± 1.46	287.5 ± 2.83	118.3 ± 2.43	199.3 ± 0.90	98.4 ± 2.64	n = 4	[ROH] Roche cobas c701
65.8 ± 1.02	290.3 ± 3.37	119.2 ± 1.31	202.2 ± 3.28	99.3 ± 1.58	n = 8	[ROS] Roche Cobas INTEGRA 400
63.5 ± 2.17	285.4 ± 7.53	115.0 ± 3.36	200.1 ± 5.47	97.4 ± 2.31	n = 4	[ROT] Roche Cobas INTEGRA 800
66.8 ± 1.93	293.7 ± 7.13	120.3 ± 3.27	203.5 ± 4.49	100.0 ± 2.56	n = 31	[ROD] Roche MODULAR D/P
65.6 ± 1.31	287.4 ± 5.60	117.9 ± 2.42	200.5 ± 4.18	97.8 ± 2.32	n = 22	[BYE] Siemens ADVIA 1800
66.3 ± 1.37	291.8 ± 3.23	119.6 ± 1.02	203.5 ± 1.86	99.3 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
71.6 ± 1.69	292.6 ± 5.34	123.2 ± 2.33	206.0 ± 3.01	102.0 ± 2.04	n = 18	[DUE] Siemens Dimension EXL
72.3 ± 1.70	295.1 ± 7.55	124.1 ± 2.17	207.9 ± 4.74	103.1 ± 1.54	n = 23	[DUR] Siemens Dimension RxL
70.1 ± 1.30	290.0 ± 7.48	120.6 ± 2.41	203.0 ± 4.75	100.2 ± 2.26	n = 41	[DUT] Siemens Dimension Vista
71.6 ± 2.01	293.2 ± 6.97	123.3 ± 2.78	206.4 ± 4.70	101.9 ± 2.13	n = 20	[DUX] Siemens Dimension Xpand
<Reagents>						
70.6 ± 1.02	288.5 ± 2.74	122.5 ± 1.86	201.5 ± 1.86	103.4 ± 1.02	n = 3	[AX1] Abaxis
65.1 ± 1.20	296.1 ± 5.00	118.4 ± 1.66	202.8 ± 3.34	98.9 ± 1.75	n = 22	[AB1] Abbott
65.3 ± 3.02	289.7 ± 5.14	118.7 ± 2.26	201.8 ± 4.06	98.3 ± 2.25	n = 31	[BC1] Beckman Coulter
65.4 ± 1.32	288.9 ± 5.75	118.5 ± 2.39	201.3 ± 3.88	98.8 ± 2.06	n = 59	[OL1] Beckman Coulter AU Series
69.3 ± 0.51	289.1 ± 6.58	121.1 ± 2.86	202.8 ± 5.90	101.1 ± 2.86	n = 3	[CR1] Carolina
91.6 ± 7.79	325.1 ± 7.95	141.7 ± 9.44	217.8 ± 9.41	126.7 ± 9.43	n = 5	[HE1] HemoCue
66.2 ± 0.80	290.9 ± 5.38	118.4 ± 1.69	202.3 ± 2.18	99.0 ± 1.00	n = 5	[IA1] i-STAT
68.3 ± 1.53	288.7 ± 5.20	117.4 ± 2.42	199.0 ± 4.46	95.9 ± 2.09	n = 50	[JJ1] Ortho Clinical Diagnostics
66.4 ± 1.02	291.5 ± 5.43	119.3 ± 1.37	202.3 ± 3.16	99.8 ± 2.36	n = 3	[R08] Roche cobas c111
65.7 ± 1.02	289.2 ± 4.32	119.1 ± 2.61	201.6 ± 3.29	99.1 ± 2.21	n = 23	[R04] Roche cobas c311/c501/c502/c701
66.8 ± 1.93	293.7 ± 7.13	120.3 ± 3.27	203.5 ± 4.49	100.0 ± 2.56	n = 31	[R02] Roche Hitachi and Modular D/P
65.2 ± 1.77	289.3 ± 4.77	118.4 ± 2.62	201.8 ± 3.95	98.8 ± 1.95	n = 12	[R01] Roche Integra and MIRA
65.7 ± 1.30	288.4 ± 5.73	118.2 ± 2.34	201.2 ± 4.16	98.1 ± 2.17	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
71.1 ± 1.90	292.2 ± 7.18	122.3 ± 2.90	205.3 ± 4.93	101.5 ± 2.44	n = 102	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Urea Nitrogen (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
27.7 ± 1.61	16.4 ± 1.10	39.9 ± 2.26	11.3 ± 0.78	33.1 ± 1.84	n = 372	[---] All Methods & Instruments
<Instruments>						
25.3 ± 0.51	15.7 ± 0.51	36.7 ± 0.51	11.3 ± 1.37	29.7 ± 0.51	n = 3	[AXA] Abaxis Piccolo
28.0 ± 0.62	16.5 ± 0.57	40.5 ± 0.95	11.2 ± 0.47	33.5 ± 0.76	n = 21	[ABJ] Abbott Architect c System
28.0 ± 1.03	16.8 ± 0.66	40.3 ± 1.25	11.4 ± 0.62	33.7 ± 1.05	n = 63	[OLC] Beckman Coulter AU Chemistry System
25.2 ± 2.36	13.7 ± 2.26	36.7 ± 2.26	8.6 ± 2.56	30.8 ± 1.54	n = 3	[BCX] Beckman Coulter LX-20
28.7 ± 0.54	17.2 ± 0.51	40.8 ± 1.01	12.0 ± 0.00	33.8 ± 0.78	n = 16	[BCG] Beckman Coulter UniCel DxC 600
25.1 ± 1.43	14.1 ± 1.20	36.5 ± 1.79	8.5 ± 1.95	30.8 ± 0.94	n = 9	[BCH] Beckman Coulter UniCel DxC 800
30.8 ± 0.80	18.6 ± 0.55	45.2 ± 0.80	12.0 ± 0.00	36.2 ± 1.07	n = 5	[IAA] i-STAT
24.2 ± 0.80	14.5 ± 0.57	35.0 ± 0.00	10.5 ± 0.57	29.5 ± 0.83	n = 10	[JJE] Ortho Vitros 250/350/950
24.5 ± 0.69	14.2 ± 0.56	35.0 ± 0.78	10.1 ± 0.42	29.3 ± 0.66	n = 19	[JJF] Ortho Vitros 5,1FS
24.2 ± 0.73	14.1 ± 0.42	34.8 ± 0.80	10.0 ± 0.00	29.1 ± 0.77	n = 19	[JJG] Ortho Vitros 5600
27.7 ± 0.51	16.7 ± 0.51	39.4 ± 1.02	11.0 ± 0.00	33.4 ± 1.02	n = 3	[ROK] Roche cobas c111
27.7 ± 0.56	16.0 ± 0.00	39.9 ± 0.91	11.0 ± 0.00	33.1 ± 0.69	n = 17	[ROC] Roche cobas c501
28.0 ± 0.75	16.5 ± 0.57	39.8 ± 0.41	11.0 ± 0.00	33.2 ± 0.41	n = 4	[ROH] Roche cobas c701
27.7 ± 0.51	16.3 ± 0.51	40.7 ± 0.97	11.3 ± 0.51	33.2 ± 0.73	n = 6	[ROS] Roche Cobas INTEGRA 400
27.5 ± 0.57	16.3 ± 0.90	39.7 ± 0.82	10.8 ± 0.41	32.9 ± 1.13	n = 4	[ROT] Roche Cobas INTEGRA 800
28.2 ± 0.83	16.9 ± 0.49	40.3 ± 0.90	11.6 ± 0.55	33.5 ± 0.92	n = 30	[ROD] Roche MODULAR D/P
28.1 ± 0.79	16.7 ± 0.55	40.6 ± 1.21	11.7 ± 0.53	33.8 ± 0.82	n = 22	[BYE] Siemens ADVIA 1800
29.3 ± 0.51	17.0 ± 0.00	41.6 ± 1.02	12.3 ± 0.51	35.0 ± 0.90	n = 3	[BYB] Siemens ADVIA 2400
28.3 ± 0.90	17.0 ± 0.66	41.0 ± 0.99	11.3 ± 0.78	33.5 ± 1.07	n = 18	[DUE] Siemens Dimension EXL
28.5 ± 1.56	17.0 ± 0.85	41.2 ± 1.71	11.6 ± 0.86	34.4 ± 1.78	n = 22	[DUR] Siemens Dimension RxL
27.7 ± 0.97	16.5 ± 0.75	40.4 ± 1.51	11.3 ± 0.64	33.5 ± 1.22	n = 41	[DUT] Siemens Dimension Vista
28.2 ± 0.94	17.0 ± 0.00	40.8 ± 1.19	11.2 ± 0.46	33.7 ± 0.96	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
25.3 ± 0.51	15.7 ± 0.51	36.7 ± 0.51	11.3 ± 1.37	29.7 ± 0.51	n = 3	[AX1] Abaxis
28.0 ± 0.62	16.5 ± 0.57	40.5 ± 0.95	11.2 ± 0.47	33.5 ± 0.76	n = 21	[AB1] Abbott
27.4 ± 1.92	16.1 ± 1.75	39.3 ± 2.51	11.1 ± 1.52	32.7 ± 1.75	n = 31	[BC1] Beckman Coulter
28.0 ± 1.04	16.8 ± 0.67	40.4 ± 1.27	11.4 ± 0.62	33.7 ± 1.03	n = 58	[OL1] Beckman Coulter AU Series
30.8 ± 0.80	18.6 ± 0.55	45.2 ± 0.80	12.0 ± 0.00	36.2 ± 1.07	n = 5	[IA1] i-STAT
24.3 ± 0.78	14.3 ± 0.57	34.9 ± 0.78	10.2 ± 0.50	29.3 ± 0.81	n = 52	[JJ1] Ortho Clinical Diagnostics
27.7 ± 0.51	16.7 ± 0.51	39.4 ± 1.02	11.0 ± 0.00	33.4 ± 1.02	n = 3	[RO8] Roche cobas c111
27.6 ± 0.63	16.2 ± 0.49	39.8 ± 0.79	11.0 ± 0.00	33.1 ± 0.57	n = 23	[RO4] Roche cobas c311/c501/c502/c701
28.2 ± 0.83	16.9 ± 0.49	40.3 ± 0.90	11.6 ± 0.55	33.5 ± 0.92	n = 30	[RO2] Roche Hitachi and Modular D/P
27.6 ± 0.55	16.3 ± 0.67	40.3 ± 1.07	11.1 ± 0.49	33.1 ± 0.84	n = 10	[RO1] Roche Integra and MIRA
28.2 ± 0.85	16.8 ± 0.50	40.7 ± 1.31	11.7 ± 0.57	33.9 ± 0.87	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
28.1 ± 1.19	16.7 ± 0.77	40.7 ± 1.47	11.3 ± 0.69	33.7 ± 1.33	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Creatinine (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
2.42 ± 0.16	1.12 ± 0.21	3.29 ± 0.15	1.59 ± 0.17	2.70 ± 0.12	n = 377	[---] All Methods & Instruments
2.40 ± 0.17	1.06 ± 0.18	3.28 ± 0.16	1.56 ± 0.18	2.68 ± 0.12	n = 205	[---] All IDMS Traceable Methods
2.45 ± 0.15	1.20 ± 0.22	3.31 ± 0.13	1.63 ± 0.16	2.73 ± 0.11	n = 170	[---] All Non-IDMS Traceable Methods
2.47 ± 0.12	1.26 ± 0.17	3.32 ± 0.11	1.66 ± 0.13	2.74 ± 0.09	n = 138	[-G-] Alkaline picrate/Jaffe
2.42 ± 0.12	1.13 ± 0.13	3.28 ± 0.13	1.62 ± 0.15	2.69 ± 0.09	n = 138	[-H-] Alkaline picrate/Jaffe-IDMS calibration
2.29 ± 0.20	0.87 ± 0.17	3.27 ± 0.21	1.45 ± 0.19	2.67 ± 0.17	n = 32	[-I-] Enzymatic
2.34 ± 0.23	0.89 ± 0.16	3.31 ± 0.22	1.44 ± 0.17	2.68 ± 0.18	n = 67	[-J-] Enzymatic-IDMS-traceable calibration
<Instruments>						
2.14 ± 0.10	0.83 ± 0.14	3.23 ± 0.14	1.37 ± 0.05	2.58 ± 0.15	n = 3	[AXA] Abaxis Piccolo
2.63 ± 0.07	1.31 ± 0.06	3.52 ± 0.06	1.83 ± 0.05	2.85 ± 0.06	n = 21	[ABJ] Abbott Architect c System
2.42 ± 0.06	1.11 ± 0.02	3.26 ± 0.06	1.59 ± 0.04	2.68 ± 0.06	n = 65	[OLC] Beckman Coulter AU Chemistry System
2.43 ± 0.05	1.07 ± 0.05	3.33 ± 0.05	1.60 ± 0.00	2.77 ± 0.05	n = 3	[BCX] Beckman Coulter LX-20
2.31 ± 0.09	0.98 ± 0.05	3.16 ± 0.13	1.39 ± 0.06	2.66 ± 0.07	n = 17	[BCG] Beckman Coulter UniCel DxC 600
2.30 ± 0.05	1.03 ± 0.06	3.27 ± 0.06	1.52 ± 0.05	2.69 ± 0.04	n = 9	[BCH] Beckman Coulter UniCel DxC 800
2.30 ± 0.18	1.12 ± 0.13	3.42 ± 0.20	1.75 ± 0.17	2.97 ± 0.27	n = 4	[IAA] i-STAT
2.40 ± 0.21	0.82 ± 0.17	3.41 ± 0.17	1.42 ± 0.19	2.74 ± 0.20	n = 11	[JJE] Ortho Vitros 250/350/950
2.41 ± 0.26	0.84 ± 0.16	3.37 ± 0.21	1.42 ± 0.20	2.70 ± 0.21	n = 19	[JJF] Ortho Vitros 5,1FS
2.42 ± 0.20	0.86 ± 0.16	3.40 ± 0.16	1.43 ± 0.20	2.70 ± 0.17	n = 19	[JJG] Ortho Vitros 5600
2.25 ± 0.13	0.88 ± 0.07	3.12 ± 0.08	1.44 ± 0.03	2.64 ± 0.04	n = 3	[ROK] Roche cobas c111
2.31 ± 0.10	0.90 ± 0.00	3.21 ± 0.10	1.40 ± 0.00	2.69 ± 0.07	n = 19	[ROC] Roche cobas c501
2.39 ± 0.11	1.07 ± 0.19	3.30 ± 0.12	1.57 ± 0.15	2.74 ± 0.11	n = 4	[ROH] Roche cobas c701
2.28 ± 0.07	1.00 ± 0.00	3.20 ± 0.00	1.50 ± 0.05	2.63 ± 0.07	n = 7	[ROS] Roche Cobas INTEGRA 400
2.28 ± 0.04	0.95 ± 0.06	3.17 ± 0.16	1.40 ± 0.01	2.66 ± 0.10	n = 4	[ROT] Roche Cobas INTEGRA 800
2.46 ± 0.21	1.17 ± 0.22	3.31 ± 0.16	1.67 ± 0.20	2.72 ± 0.12	n = 30	[ROD] Roche MODULAR D/P
2.41 ± 0.10	1.17 ± 0.08	3.32 ± 0.11	1.75 ± 0.06	2.68 ± 0.07	n = 22	[BYE] Siemens ADVIA 1800
2.49 ± 0.02	1.24 ± 0.06	3.36 ± 0.03	1.78 ± 0.02	2.71 ± 0.01	n = 3	[BYB] Siemens ADVIA 2400
2.46 ± 0.14	1.36 ± 0.07	3.29 ± 0.12	1.63 ± 0.13	2.73 ± 0.10	n = 18	[DUE] Siemens Dimension EXL
2.48 ± 0.20	1.29 ± 0.20	3.31 ± 0.16	1.62 ± 0.14	2.73 ± 0.15	n = 22	[DUR] Siemens Dimension RxL
2.45 ± 0.11	1.30 ± 0.12	3.29 ± 0.12	1.68 ± 0.11	2.71 ± 0.10	n = 41	[DUT] Siemens Dimension Vista
2.49 ± 0.12	1.34 ± 0.08	3.30 ± 0.13	1.67 ± 0.11	2.72 ± 0.11	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
2.14 ± 0.10	0.83 ± 0.14	3.23 ± 0.14	1.37 ± 0.05	2.58 ± 0.15	n = 3	[AX1] Abaxis
2.63 ± 0.07	1.30 ± 0.07	3.51 ± 0.07	1.83 ± 0.05	2.84 ± 0.07	n = 22	[AB1] Abbott
2.33 ± 0.08	1.01 ± 0.07	3.23 ± 0.10	1.46 ± 0.11	2.68 ± 0.07	n = 32	[BC1] Beckman Coulter
2.42 ± 0.06	1.11 ± 0.02	3.26 ± 0.06	1.59 ± 0.04	2.68 ± 0.06	n = 59	[OL1] Beckman Coulter AU Series
2.35 ± 0.19	1.12 ± 0.15	3.42 ± 0.24	1.82 ± 0.15	3.07 ± 0.23	n = 3	[IA1] i-STAT
2.44 ± 0.24	0.86 ± 0.18	3.41 ± 0.21	1.44 ± 0.21	2.73 ± 0.20	n = 52	[JJ1] Ortho Clinical Diagnostics
2.25 ± 0.13	0.88 ± 0.07	3.12 ± 0.08	1.44 ± 0.03	2.64 ± 0.04	n = 3	[RO8] Roche cobas c111
2.33 ± 0.11	0.95 ± 0.13	3.23 ± 0.10	1.46 ± 0.11	2.69 ± 0.07	n = 25	[RO4] Roche cobas c311/c501/c502/c701
2.46 ± 0.21	1.17 ± 0.22	3.31 ± 0.16	1.67 ± 0.20	2.72 ± 0.12	n = 30	[RO2] Roche Hitachi and Modular D/P
2.28 ± 0.06	0.99 ± 0.04	3.18 ± 0.08	1.46 ± 0.06	2.64 ± 0.08	n = 11	[RO1] Roche Integra and MIRA
2.43 ± 0.10	1.18 ± 0.08	3.33 ± 0.10	1.75 ± 0.06	2.69 ± 0.07	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
2.46 ± 0.14	1.32 ± 0.13	3.30 ± 0.13	1.66 ± 0.12	2.72 ± 0.12	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Glomerular filtration rate (mL/min/1.73 m²)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
25.0 ± 2.21	57.2 ± 10.38	17.5 ± 1.15	41.0 ± 5.68	22.1 ± 1.34	n = 290	[---] All Methods & Instruments
25.3 ± 2.30	60.6 ± 11.39	17.4 ± 1.14	41.9 ± 6.18	22.1 ± 1.29	n = 166	[-A-] IDMS-traceable MDRD Study Equation
24.6 ± 1.74	51.6 ± 4.81	17.8 ± 1.04	39.2 ± 3.75	22.2 ± 1.32	n = 96	[-B-] Original MDRD Study Equation (4-variable)
24.9 ± 2.39	63.7 ± 7.76	17.3 ± 1.22	40.8 ± 3.08	21.8 ± 1.49	n = 23	[-F-] CKD-EPI Equation
31.5 ± 5.13	69.0 ± 1.14	21.5 ± 2.85	54.0 ± 11.40	27.0 ± 2.28	n = 2	[-D-] Cockcroft-Gault Equation
25.8 ± 4.89	71.0 ± 20.52	16.7 ± 2.26	44.1 ± 8.93	21.6 ± 2.56	n = 3	[-Z-] Other

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

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Method
25 (18-32)	64 (48-81)	17 (13-22)	41 (30-52)	22 (16-28)	IDMS-traceable MDRD Study Equation
26 (19-33)	59 (44-74)	18 (13-23)	42 (31-52)	23 (17-29)	Original MDRD Study Equation
25 (18-31)	67 (50-83)	17 (12-22)	42 (31-52)	22 (16-28)	CKD-EPI Equation
34 (25-42)	73 (54-91)	25 (18-31)	51 (38-64)	30 (22-38)	Cockcroft-Gault Equation

Laboratories were asked to report Estimated Glomerular Filtration Rate (eGFR) for samples C81-C85 for a 59-year-old African American woman weighing 85 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 ± 25% of the target eGFR for all samples/equations.

Note: the NKDEP recommends reporting estimated GFR values greater than or equal to 60 mL/min/1.73 m² 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 as > 60 mL/min/1.73 m². These data were removed from the calculations of mean and standard deviation since their inclusion would have skewed results. Participant results for specimen C82 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: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
4.59 ± 0.24	7.30 ± 0.34	3.45 ± 0.21	9.45 ± 0.46	2.87 ± 0.20	n = 333	[---] All Methods & Instruments
<Instruments>						
4.47 ± 0.08	7.40 ± 0.07	3.31 ± 0.08	9.64 ± 0.07	2.74 ± 0.06	n = 21	[ABJ] Abbott Architect c System
4.92 ± 0.12	7.77 ± 0.16	3.76 ± 0.10	10.08 ± 0.22	3.16 ± 0.09	n = 61	[OLC] Beckman Coulter AU Chemistry System
4.41 ± 0.37	7.15 ± 0.46	3.45 ± 0.27	9.38 ± 0.59	2.90 ± 0.27	n = 3	[BCS] Beckman Coulter CX
4.27 ± 0.05	6.87 ± 0.05	3.27 ± 0.05	8.70 ± 0.09	2.80 ± 0.09	n = 3	[BCX] Beckman Coulter LX-20
4.26 ± 0.06	6.97 ± 0.08	3.24 ± 0.06	8.83 ± 0.10	2.71 ± 0.05	n = 15	[BCG] Beckman Coulter UniCel DxC 600
4.21 ± 0.08	6.91 ± 0.13	3.21 ± 0.08	8.77 ± 0.13	2.70 ± 0.07	n = 9	[BCH] Beckman Coulter UniCel DxC 800
4.51 ± 0.18	7.15 ± 0.30	3.32 ± 0.12	9.21 ± 0.37	2.72 ± 0.12	n = 6	[JJE] Ortho Vitros 250/350/950
4.50 ± 0.11	7.17 ± 0.17	3.32 ± 0.10	9.22 ± 0.23	2.69 ± 0.09	n = 18	[JJF] Ortho Vitros 5,1FS
4.50 ± 0.12	7.12 ± 0.15	3.31 ± 0.09	9.19 ± 0.21	2.71 ± 0.09	n = 19	[JJG] Ortho Vitros 5600
4.55 ± 0.17	7.35 ± 0.24	3.37 ± 0.11	9.54 ± 0.35	2.80 ± 0.10	n = 17	[ROC] Roche cobas c501
4.62 ± 0.15	7.45 ± 0.19	3.37 ± 0.05	9.60 ± 0.18	2.77 ± 0.05	n = 3	[ROH] Roche cobas c701
4.50 ± 0.08	7.35 ± 0.06	3.32 ± 0.04	9.55 ± 0.06	2.75 ± 0.06	n = 4	[ROT] Roche Cobas INTEGRA 800
4.46 ± 0.13	7.29 ± 0.15	3.33 ± 0.09	9.50 ± 0.18	2.76 ± 0.07	n = 29	[ROD] Roche MODULAR D/P
4.51 ± 0.10	7.35 ± 0.14	3.37 ± 0.09	9.47 ± 0.17	2.81 ± 0.07	n = 22	[BYE] Siemens ADVIA 1800
4.60 ± 0.09	7.43 ± 0.14	3.47 ± 0.05	9.70 ± 0.18	2.87 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
4.76 ± 0.11	7.31 ± 0.15	3.57 ± 0.15	9.54 ± 0.15	2.98 ± 0.08	n = 16	[DUE] Siemens Dimension EXL
4.78 ± 0.12	7.37 ± 0.16	3.62 ± 0.11	9.51 ± 0.19	2.99 ± 0.09	n = 20	[DUR] Siemens Dimension RxL
4.55 ± 0.11	6.88 ± 0.15	3.47 ± 0.08	8.96 ± 0.19	2.92 ± 0.09	n = 40	[DUT] Siemens Dimension Vista
4.78 ± 0.09	7.36 ± 0.16	3.63 ± 0.11	9.55 ± 0.14	3.05 ± 0.10	n = 13	[DUX] Siemens Dimension Xpand
<Reagents>						
4.47 ± 0.08	7.40 ± 0.07	3.31 ± 0.08	9.64 ± 0.07	2.74 ± 0.06	n = 21	[AB1] Abbott
4.25 ± 0.07	6.93 ± 0.11	3.24 ± 0.07	8.80 ± 0.12	2.72 ± 0.08	n = 31	[BC1] Beckman Coulter
4.93 ± 0.11	7.78 ± 0.16	3.76 ± 0.10	10.09 ± 0.21	3.16 ± 0.08	n = 58	[OL1] Beckman Coulter AU Series
4.51 ± 0.12	7.15 ± 0.18	3.32 ± 0.10	9.21 ± 0.23	2.71 ± 0.10	n = 45	[JJ1] Ortho Clinical Diagnostics
4.55 ± 0.17	7.36 ± 0.22	3.36 ± 0.09	9.54 ± 0.32	2.78 ± 0.09	n = 22	[RO4] Roche cobas c311/c501/c502/c701
4.46 ± 0.13	7.29 ± 0.15	3.33 ± 0.09	9.50 ± 0.18	2.76 ± 0.07	n = 29	[RO2] Roche Hitachi and Modular D/P
4.50 ± 0.06	7.33 ± 0.05	3.30 ± 0.00	9.49 ± 0.11	2.73 ± 0.05	n = 6	[RO1] Roche Integra and MIRA
4.52 ± 0.10	7.37 ± 0.15	3.39 ± 0.10	9.51 ± 0.18	2.82 ± 0.07	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
4.67 ± 0.16	7.15 ± 0.30	3.54 ± 0.13	9.29 ± 0.35	2.97 ± 0.10	n = 89	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Bilirubin (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
1.29 ± 0.15	2.43 ± 0.20	1.11 ± 0.14	3.85 ± 0.27	0.91 ± 0.12	n = 362	[---] All Methods & Instruments
<Instruments>						
1.43 ± 0.05	2.67 ± 0.05	1.27 ± 0.05	4.07 ± 0.05	1.03 ± 0.05	n = 3	[AXA] Abaxis Piccolo
1.41 ± 0.16	2.65 ± 0.23	1.21 ± 0.15	4.20 ± 0.26	1.00 ± 0.12	n = 21	[ABJ] Abbott Architect c System
1.31 ± 0.08	2.32 ± 0.09	1.16 ± 0.06	3.61 ± 0.12	0.98 ± 0.06	n = 62	[OLC] Beckman Coulter AU Chemistry System
1.43 ± 0.05	2.75 ± 0.19	1.29 ± 0.20	4.05 ± 0.27	1.04 ± 0.10	n = 3	[BCX] Beckman Coulter LX-20
1.52 ± 0.11	2.70 ± 0.15	1.27 ± 0.10	4.17 ± 0.14	1.04 ± 0.13	n = 16	[BCG] Beckman Coulter UniCel DxC 600
1.43 ± 0.17	2.67 ± 0.27	1.25 ± 0.18	4.03 ± 0.31	1.03 ± 0.15	n = 10	[BCH] Beckman Coulter UniCel DxC 800
1.45 ± 0.14	2.42 ± 0.16	1.26 ± 0.14	3.94 ± 0.14	1.01 ± 0.14	n = 10	[JJE] Ortho Vitros 250/350/950
1.35 ± 0.08	2.45 ± 0.09	1.15 ± 0.08	4.03 ± 0.11	0.93 ± 0.07	n = 19	[JJF] Ortho Vitros 5,1FS
1.36 ± 0.08	2.44 ± 0.09	1.15 ± 0.06	3.97 ± 0.13	0.91 ± 0.07	n = 19	[JJG] Ortho Vitros 5600
1.06 ± 0.09	2.23 ± 0.10	0.90 ± 0.00	3.63 ± 0.16	0.70 ± 0.06	n = 16	[ROC] Roche cobas c501
0.98 ± 0.04	2.10 ± 0.08	0.85 ± 0.06	3.50 ± 0.08	0.68 ± 0.04	n = 4	[ROH] Roche cobas c701
1.04 ± 0.06	2.20 ± 0.00	0.90 ± 0.05	3.63 ± 0.05	0.70 ± 0.00	n = 7	[ROS] Roche Cobas INTEGRA 400
1.01 ± 0.11	2.17 ± 0.09	0.85 ± 0.12	3.55 ± 0.12	0.70 ± 0.08	n = 4	[ROT] Roche Cobas INTEGRA 800
1.13 ± 0.08	2.31 ± 0.11	0.95 ± 0.09	3.74 ± 0.14	0.79 ± 0.05	n = 30	[ROD] Roche MODULAR D/P
1.36 ± 0.06	2.69 ± 0.09	1.19 ± 0.04	4.24 ± 0.12	0.98 ± 0.05	n = 22	[BYE] Siemens ADVIA 1800
1.40 ± 0.00	2.76 ± 0.10	1.23 ± 0.05	4.37 ± 0.14	1.00 ± 0.00	n = 3	[BYB] Siemens ADVIA 2400
1.27 ± 0.08	2.48 ± 0.12	1.10 ± 0.08	3.81 ± 0.10	0.86 ± 0.08	n = 18	[DUE] Siemens Dimension EXL
1.25 ± 0.06	2.47 ± 0.08	1.07 ± 0.06	3.86 ± 0.10	0.90 ± 0.00	n = 22	[DUR] Siemens Dimension RxL
1.29 ± 0.05	2.47 ± 0.07	1.10 ± 0.05	3.83 ± 0.11	0.90 ± 0.00	n = 41	[DUT] Siemens Dimension Vista
1.25 ± 0.06	2.42 ± 0.08	1.09 ± 0.09	3.80 ± 0.14	0.87 ± 0.07	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
1.43 ± 0.05	2.67 ± 0.05	1.27 ± 0.05	4.07 ± 0.05	1.03 ± 0.05	n = 3	[AX1] Abaxis
1.41 ± 0.16	2.65 ± 0.23	1.21 ± 0.15	4.20 ± 0.26	1.00 ± 0.12	n = 21	[AB1] Abbott
1.48 ± 0.14	2.68 ± 0.21	1.27 ± 0.14	4.10 ± 0.24	1.04 ± 0.13	n = 32	[BC1] Beckman Coulter
1.30 ± 0.08	2.32 ± 0.09	1.16 ± 0.06	3.60 ± 0.11	0.98 ± 0.06	n = 58	[OL1] Beckman Coulter AU Series
1.37 ± 0.10	2.44 ± 0.11	1.16 ± 0.09	4.00 ± 0.14	0.93 ± 0.08	n = 52	[JJ1] Ortho Clinical Diagnostics
1.05 ± 0.09	2.21 ± 0.11	0.89 ± 0.05	3.61 ± 0.15	0.70 ± 0.06	n = 22	[RO4] Roche cobas c311/c501/c502/c701
1.13 ± 0.08	2.31 ± 0.11	0.95 ± 0.09	3.74 ± 0.14	0.79 ± 0.05	n = 30	[RO2] Roche Hitachi and Modular D/P
1.03 ± 0.08	2.17 ± 0.08	0.89 ± 0.08	3.60 ± 0.10	0.71 ± 0.04	n = 11	[RO1] Roche Integra and MIRA
1.37 ± 0.05	2.70 ± 0.09	1.20 ± 0.00	4.26 ± 0.13	0.98 ± 0.04	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
1.27 ± 0.06	2.46 ± 0.09	1.09 ± 0.07	3.83 ± 0.12	0.89 ± 0.06	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Phosphorus (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
4.17 ± 0.23	5.16 ± 0.26	3.28 ± 0.19	4.35 ± 0.25	2.73 ± 0.17	n = 335	[---] All Methods & Instruments
<Instruments>						
4.18 ± 0.10	5.16 ± 0.08	3.28 ± 0.09	4.36 ± 0.12	2.76 ± 0.08	n = 20	[ABJ] Abbott Architect c System
4.03 ± 0.12	5.00 ± 0.15	3.17 ± 0.11	4.23 ± 0.13	2.67 ± 0.09	n = 60	[OLC] Beckman Coulter AU Chemistry System
4.33 ± 0.05	5.43 ± 0.05	3.37 ± 0.05	4.76 ± 0.10	2.88 ± 0.15	n = 3	[BCX] Beckman Coulter LX-20
4.28 ± 0.12	5.24 ± 0.15	3.33 ± 0.11	4.42 ± 0.15	2.77 ± 0.08	n = 16	[BCG] Beckman Coulter UniCel DxC 600
4.21 ± 0.13	5.30 ± 0.12	3.33 ± 0.09	4.56 ± 0.15	2.75 ± 0.10	n = 9	[BCH] Beckman Coulter UniCel DxC 800
4.70 ± 0.15	5.80 ± 0.16	3.82 ± 0.12	4.95 ± 0.12	3.26 ± 0.11	n = 8	[JJE] Ortho Vitros 250/350/950
4.67 ± 0.10	5.79 ± 0.11	3.70 ± 0.00	4.92 ± 0.12	3.17 ± 0.10	n = 18	[JFF] Ortho Vitros 5,1FS
4.64 ± 0.11	5.75 ± 0.13	3.73 ± 0.07	4.89 ± 0.13	3.20 ± 0.09	n = 19	[JJG] Ortho Vitros 5600
4.22 ± 0.07	5.24 ± 0.11	3.31 ± 0.07	4.40 ± 0.06	2.76 ± 0.06	n = 18	[ROC] Roche cobas c501
4.15 ± 0.06	5.15 ± 0.12	3.30 ± 0.00	4.38 ± 0.04	2.70 ± 0.00	n = 4	[ROH] Roche cobas c701
4.20 ± 0.00	5.16 ± 0.06	3.30 ± 0.00	4.40 ± 0.00	2.70 ± 0.00	n = 5	[ROS] Roche Cobas INTEGRA 400
4.28 ± 0.04	5.28 ± 0.04	3.32 ± 0.04	4.42 ± 0.04	2.78 ± 0.04	n = 4	[ROT] Roche Cobas INTEGRA 800
4.20 ± 0.15	5.21 ± 0.11	3.31 ± 0.10	4.40 ± 0.10	2.74 ± 0.09	n = 29	[ROD] Roche MODULAR D/P
4.18 ± 0.09	5.14 ± 0.12	3.27 ± 0.08	4.31 ± 0.12	2.74 ± 0.10	n = 22	[BYE] Siemens ADVIA 1800
4.10 ± 0.09	5.10 ± 0.00	3.27 ± 0.05	4.27 ± 0.05	2.70 ± 0.00	n = 3	[BYB] Siemens ADVIA 2400
4.12 ± 0.09	5.07 ± 0.10	3.24 ± 0.08	4.25 ± 0.09	2.70 ± 0.09	n = 15	[DUE] Siemens Dimension EXL
4.11 ± 0.12	5.10 ± 0.13	3.21 ± 0.09	4.23 ± 0.10	2.67 ± 0.09	n = 20	[DUR] Siemens Dimension RxL
3.97 ± 0.11	4.95 ± 0.15	3.11 ± 0.11	4.13 ± 0.13	2.57 ± 0.09	n = 40	[DUT] Siemens Dimension Vista
4.11 ± 0.09	5.04 ± 0.09	3.22 ± 0.07	4.23 ± 0.10	2.69 ± 0.09	n = 15	[DUX] Siemens Dimension Xpand
<Reagents>						
4.18 ± 0.10	5.16 ± 0.08	3.28 ± 0.09	4.36 ± 0.12	2.76 ± 0.08	n = 20	[AB1] Abbott
4.27 ± 0.15	5.28 ± 0.17	3.33 ± 0.12	4.48 ± 0.21	2.77 ± 0.11	n = 31	[BC1] Beckman Coulter
4.04 ± 0.11	5.01 ± 0.13	3.18 ± 0.10	4.24 ± 0.12	2.67 ± 0.08	n = 56	[OL1] Beckman Coulter AU Series
4.66 ± 0.12	5.78 ± 0.13	3.75 ± 0.09	4.92 ± 0.13	3.20 ± 0.11	n = 47	[JJ1] Ortho Clinical Diagnostics
4.20 ± 0.07	5.23 ± 0.11	3.31 ± 0.06	4.40 ± 0.00	2.75 ± 0.06	n = 23	[RO4] Roche cobas c311/c501/c502/c701
4.20 ± 0.15	5.21 ± 0.11	3.31 ± 0.10	4.40 ± 0.10	2.74 ± 0.09	n = 29	[RO2] Roche Hitachi and Modular D/P
4.22 ± 0.07	5.21 ± 0.08	3.30 ± 0.00	4.40 ± 0.00	2.74 ± 0.06	n = 9	[RO1] Roche Integra and MIRA
4.16 ± 0.10	5.12 ± 0.11	3.26 ± 0.08	4.30 ± 0.11	2.73 ± 0.10	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
4.05 ± 0.13	5.02 ± 0.15	3.18 ± 0.11	4.19 ± 0.13	2.64 ± 0.11	n = 90	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Calcium (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
12.10 ± 0.33	8.71 ± 0.21	12.82 ± 0.33	7.39 ± 0.20	10.68 ± 0.27	n = 368	[---] All Methods & Instruments
<Instruments>						
12.05 ± 0.27	8.73 ± 0.05	12.92 ± 0.24	7.21 ± 0.20	10.76 ± 0.26	n = 3	[AXA] Abaxis Piccolo
12.51 ± 0.20	8.79 ± 0.14	13.17 ± 0.20	7.54 ± 0.09	10.86 ± 0.19	n = 21	[ABJ] Abbott Architect c System
12.10 ± 0.20	8.86 ± 0.14	12.70 ± 0.22	7.47 ± 0.12	10.60 ± 0.19	n = 64	[OLC] Beckman Coulter AU Chemistry System
11.75 ± 0.19	8.47 ± 0.23	12.45 ± 0.27	7.30 ± 0.00	10.54 ± 0.10	n = 3	[BCX] Beckman Coulter LX-20
11.63 ± 0.10	8.54 ± 0.11	12.48 ± 0.17	7.28 ± 0.10	10.49 ± 0.15	n = 17	[BCG] Beckman Coulter UniCel DxC 600
11.76 ± 0.09	8.65 ± 0.10	12.65 ± 0.07	7.38 ± 0.09	10.65 ± 0.13	n = 9	[BCH] Beckman Coulter UniCel DxC 800
12.23 ± 0.09	8.66 ± 0.13	13.00 ± 0.12	7.48 ± 0.14	10.92 ± 0.15	n = 9	[JJE] Ortho Vitros 250/350/950
12.23 ± 0.15	8.69 ± 0.13	12.94 ± 0.16	7.39 ± 0.14	10.89 ± 0.16	n = 19	[JJF] Ortho Vitros 5,1FS
12.16 ± 0.28	8.60 ± 0.20	12.86 ± 0.24	7.37 ± 0.16	10.79 ± 0.21	n = 19	[JJG] Ortho Vitros 5600
12.27 ± 0.05	8.67 ± 0.05	13.23 ± 0.14	7.10 ± 0.00	10.90 ± 0.09	n = 3	[ROK] Roche cobas c111
12.41 ± 0.34	8.75 ± 0.23	13.33 ± 0.23	7.39 ± 0.21	10.98 ± 0.34	n = 18	[ROC] Roche cobas c501
12.30 ± 0.17	8.74 ± 0.18	13.16 ± 0.35	7.25 ± 0.12	10.87 ± 0.16	n = 4	[ROH] Roche cobas c701
12.30 ± 0.34	8.75 ± 0.15	13.28 ± 0.36	7.14 ± 0.08	10.97 ± 0.24	n = 7	[ROS] Roche Cobas INTEGRA 400
11.88 ± 0.37	8.61 ± 0.30	12.95 ± 0.63	6.97 ± 0.31	10.53 ± 0.42	n = 4	[ROT] Roche Cobas INTEGRA 800
12.29 ± 0.19	8.83 ± 0.18	12.95 ± 0.23	7.45 ± 0.13	10.82 ± 0.15	n = 30	[ROD] Roche MODULAR D/P
12.13 ± 0.27	8.82 ± 0.15	12.75 ± 0.29	7.51 ± 0.19	10.65 ± 0.22	n = 22	[BYE] Siemens ADVIA 1800
12.34 ± 0.39	9.03 ± 0.31	12.94 ± 0.10	7.79 ± 0.20	10.61 ± 0.29	n = 3	[BYB] Siemens ADVIA 2400
11.79 ± 0.29	8.51 ± 0.24	12.60 ± 0.31	7.15 ± 0.20	10.44 ± 0.27	n = 18	[DUE] Siemens Dimension EXL
11.92 ± 0.18	8.66 ± 0.13	12.68 ± 0.18	7.37 ± 0.16	10.55 ± 0.13	n = 22	[DUR] Siemens Dimension RxL
12.03 ± 0.22	8.56 ± 0.17	12.72 ± 0.27	7.32 ± 0.18	10.55 ± 0.22	n = 41	[DUT] Siemens Dimension Vista
11.85 ± 0.27	8.56 ± 0.24	12.69 ± 0.33	7.20 ± 0.23	10.50 ± 0.23	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
12.05 ± 0.27	8.73 ± 0.05	12.92 ± 0.24	7.21 ± 0.20	10.76 ± 0.26	n = 3	[AX1] Abaxis
12.51 ± 0.20	8.79 ± 0.14	13.17 ± 0.20	7.54 ± 0.09	10.86 ± 0.19	n = 21	[AB1] Abbott
11.70 ± 0.18	8.59 ± 0.15	12.56 ± 0.15	7.33 ± 0.11	10.54 ± 0.15	n = 32	[BC1] Beckman Coulter
12.11 ± 0.20	8.86 ± 0.14	12.71 ± 0.22	7.47 ± 0.13	10.60 ± 0.19	n = 60	[OL1] Beckman Coulter AU Series
12.21 ± 0.20	8.66 ± 0.16	12.93 ± 0.18	7.40 ± 0.15	10.86 ± 0.19	n = 50	[JJ1] Ortho Clinical Diagnostics
12.27 ± 0.05	8.67 ± 0.05	13.23 ± 0.14	7.10 ± 0.00	10.90 ± 0.09	n = 3	[RO8] Roche cobas c111
12.38 ± 0.27	8.75 ± 0.21	13.28 ± 0.26	7.33 ± 0.19	10.95 ± 0.25	n = 22	[RO4] Roche cobas c311/c501/c502/c701
12.30 ± 0.17	8.83 ± 0.18	12.96 ± 0.22	7.45 ± 0.13	10.83 ± 0.14	n = 29	[RO2] Roche Hitachi and Modular D/P
12.14 ± 0.41	8.71 ± 0.21	13.19 ± 0.49	7.06 ± 0.23	10.83 ± 0.37	n = 11	[RO1] Roche Integra and MIRA
11.63 ± 0.43	8.48 ± 0.31	12.29 ± 0.54	7.42 ± 0.13	10.38 ± 0.39	n = 4	[GZ1] Sekisui Diagnostics (Genzyme)
12.16 ± 0.29	8.84 ± 0.18	12.79 ± 0.27	7.55 ± 0.22	10.65 ± 0.23	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
11.94 ± 0.26	8.58 ± 0.20	12.69 ± 0.28	7.28 ± 0.21	10.52 ± 0.22	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Magnesium (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
1.17 ± 0.11	4.59 ± 0.17	2.79 ± 0.11	1.70 ± 0.09	2.32 ± 0.10	n = 334	[---] All Methods & Instruments
<Instruments>						
1.07 ± 0.07	4.39 ± 0.13	2.65 ± 0.10	1.57 ± 0.10	2.19 ± 0.10	n = 20	[ABJ] Abbott Architect c System
1.20 ± 0.00	4.54 ± 0.13	2.74 ± 0.08	1.71 ± 0.05	2.29 ± 0.05	n = 59	[OLC] Beckman Coulter AU Chemistry System
1.23 ± 0.05	4.54 ± 0.10	2.80 ± 0.00	1.77 ± 0.05	2.30 ± 0.00	n = 3	[BCX] Beckman Coulter LX-20
1.25 ± 0.06	4.50 ± 0.09	2.79 ± 0.05	1.72 ± 0.08	2.31 ± 0.07	n = 17	[BCG] Beckman Coulter UniCel Dx C 600
1.23 ± 0.06	4.58 ± 0.16	2.80 ± 0.15	1.70 ± 0.00	2.31 ± 0.09	n = 9	[BCH] Beckman Coulter UniCel Dx C 800
1.20 ± 0.00	4.69 ± 0.13	2.92 ± 0.10	1.68 ± 0.07	2.47 ± 0.07	n = 6	[JJE] Ortho Vitros 250/350/950
1.17 ± 0.06	4.51 ± 0.13	2.86 ± 0.11	1.62 ± 0.07	2.35 ± 0.10	n = 19	[JFF] Ortho Vitros 5,1FS
1.20 ± 0.00	4.52 ± 0.14	2.85 ± 0.07	1.64 ± 0.05	2.40 ± 0.00	n = 18	[JJG] Ortho Vitros 5600
1.21 ± 0.05	4.51 ± 0.12	2.75 ± 0.06	1.73 ± 0.06	2.31 ± 0.05	n = 16	[ROC] Roche cobas c501
1.20 ± 0.08	4.32 ± 0.20	2.73 ± 0.09	1.68 ± 0.04	2.28 ± 0.04	n = 4	[ROH] Roche cobas c701
1.22 ± 0.04	4.57 ± 0.09	2.80 ± 0.08	1.75 ± 0.06	2.38 ± 0.04	n = 4	[ROT] Roche Cobas INTEGRA 800
1.23 ± 0.06	4.53 ± 0.09	2.81 ± 0.06	1.74 ± 0.05	2.33 ± 0.06	n = 28	[ROD] Roche MODULAR D/P
1.53 ± 0.10	4.66 ± 0.10	3.01 ± 0.09	1.84 ± 0.07	2.49 ± 0.07	n = 21	[BYE] Siemens ADVIA 1800
1.43 ± 0.05	4.80 ± 0.18	3.17 ± 0.31	1.93 ± 0.05	2.47 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
1.06 ± 0.06	4.68 ± 0.13	2.78 ± 0.07	1.65 ± 0.08	2.26 ± 0.08	n = 15	[DUE] Siemens Dimension EXL
1.08 ± 0.07	4.69 ± 0.14	2.78 ± 0.10	1.69 ± 0.06	2.28 ± 0.11	n = 21	[DUR] Siemens Dimension RxL
1.10 ± 0.08	4.78 ± 0.09	2.82 ± 0.09	1.70 ± 0.08	2.33 ± 0.07	n = 41	[DUT] Siemens Dimension Vista
1.08 ± 0.06	4.76 ± 0.10	2.77 ± 0.08	1.70 ± 0.07	2.27 ± 0.08	n = 18	[DUX] Siemens Dimension Xpand
<Reagents>						
1.07 ± 0.07	4.39 ± 0.13	2.65 ± 0.10	1.57 ± 0.10	2.19 ± 0.10	n = 20	[AB1] Abbott
1.24 ± 0.06	4.51 ± 0.12	2.77 ± 0.07	1.72 ± 0.07	2.30 ± 0.07	n = 31	[BC1] Beckman Coulter
1.20 ± 0.00	4.55 ± 0.12	2.75 ± 0.07	1.72 ± 0.05	2.30 ± 0.06	n = 56	[OL1] Beckman Coulter AU Series
1.20 ± 0.00	4.53 ± 0.15	2.87 ± 0.09	1.64 ± 0.07	2.39 ± 0.09	n = 45	[JJ1] Ortho Clinical Diagnostics
1.21 ± 0.06	4.49 ± 0.14	2.75 ± 0.07	1.72 ± 0.06	2.30 ± 0.05	n = 20	[RO4] Roche cobas c311/c501/c502/c701
1.23 ± 0.06	4.53 ± 0.09	2.81 ± 0.06	1.74 ± 0.06	2.33 ± 0.06	n = 27	[RO2] Roche Hitachi and Modular D/P
1.22 ± 0.05	4.54 ± 0.09	2.80 ± 0.05	1.74 ± 0.06	2.34 ± 0.06	n = 7	[RO1] Roche Integra and MIRA
1.51 ± 0.10	4.67 ± 0.12	3.01 ± 0.09	1.86 ± 0.09	2.49 ± 0.08	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
1.08 ± 0.07	4.75 ± 0.12	2.79 ± 0.09	1.69 ± 0.08	2.30 ± 0.09	n = 94	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Iron (µg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
128.7 ± 5.76	117.2 ± 7.50	104.2 ± 4.22	99.4 ± 6.72	86.0 ± 3.24	n = 266	[---] All Methods & Instruments
<Instruments>						
127.7 ± 4.86	119.8 ± 3.93	104.2 ± 4.49	104.5 ± 3.26	86.5 ± 3.85	n = 14	[ABJ] Abbott Architect c System
131.7 ± 3.28	119.7 ± 3.01	106.9 ± 2.69	100.4 ± 3.29	87.6 ± 2.54	n = 54	[OLC] Beckman Coulter AU Chemistry System
129.1 ± 3.72	112.8 ± 2.36	106.7 ± 2.26	94.1 ± 2.05	87.0 ± 2.70	n = 3	[BCX] Beckman Coulter LX-20
128.4 ± 3.56	110.1 ± 2.83	103.7 ± 3.25	93.8 ± 1.54	85.1 ± 2.38	n = 11	[BCG] Beckman Coulter UniCel Dx C 600
130.2 ± 4.22	111.1 ± 3.19	104.9 ± 3.78	93.7 ± 3.81	86.7 ± 2.94	n = 7	[BCH] Beckman Coulter UniCel Dx C 800
144.4 ± 7.22	140.8 ± 7.45	111.7 ± 8.02	120.7 ± 7.45	87.5 ± 6.38	n = 17	[JJF] Ortho Vitros 5,1FS
143.5 ± 7.23	138.1 ± 5.40	108.3 ± 4.48	115.7 ± 5.32	84.7 ± 4.15	n = 19	[JJG] Ortho Vitros 5600
128.9 ± 3.48	120.0 ± 3.11	104.7 ± 2.79	101.5 ± 2.70	87.2 ± 2.15	n = 9	[ROC] Roche cobas c501
130.4 ± 1.02	118.7 ± 0.51	105.4 ± 1.02	103.3 ± 3.37	90.3 ± 2.26	n = 3	[ROT] Roche Cobas INTEGRA 800
127.9 ± 2.33	118.2 ± 2.46	104.0 ± 2.16	100.4 ± 2.16	86.6 ± 2.12	n = 27	[ROD] Roche MODULAR D/P
125.6 ± 2.89	116.4 ± 2.75	102.4 ± 2.94	100.1 ± 2.72	85.1 ± 2.29	n = 21	[BYE] Siemens ADVIA 1800
127.3 ± 0.51	118.7 ± 0.51	103.7 ± 0.51	101.7 ± 0.51	86.3 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
124.0 ± 1.21	111.1 ± 1.44	100.3 ± 1.93	93.4 ± 1.69	83.1 ± 1.47	n = 10	[DUE] Siemens Dimension EXL
123.9 ± 3.17	110.8 ± 3.17	100.3 ± 2.94	93.3 ± 2.02	83.9 ± 2.09	n = 13	[DUR] Siemens Dimension RxL
125.7 ± 2.70	112.3 ± 3.21	101.4 ± 3.21	94.4 ± 2.25	84.7 ± 2.19	n = 36	[DUT] Siemens Dimension Vista
124.0 ± 5.41	111.7 ± 4.22	100.0 ± 4.60	92.7 ± 4.22	82.7 ± 4.22	n = 3	[DUX] Siemens Dimension Xpand
<Reagents>						
128.3 ± 3.20	119.5 ± 3.92	104.6 ± 2.67	104.2 ± 3.28	87.0 ± 2.64	n = 11	[AB3] Abbott-Iron/6K95
129.1 ± 3.76	111.6 ± 3.72	105.0 ± 3.52	94.2 ± 2.60	86.1 ± 2.74	n = 24	[BC1] Beckman Coulter
132.6 ± 2.12	120.4 ± 2.35	107.3 ± 2.02	101.1 ± 2.44	88.2 ± 2.01	n = 42	[OL1] Beckman Coulter AU Series
143.4 ± 7.26	138.7 ± 6.29	109.0 ± 6.29	117.3 ± 6.90	85.5 ± 5.38	n = 39	[JJ1] Ortho Clinical Diagnostics
129.3 ± 2.83	120.0 ± 2.50	104.6 ± 2.29	101.7 ± 2.20	87.5 ± 1.65	n = 14	[RO4] Roche cobas c311/c501/c502/c701
127.9 ± 2.33	118.2 ± 2.46	104.0 ± 2.16	100.4 ± 2.16	86.6 ± 2.12	n = 27	[RO2] Roche Hitachi and Modular D/P
130.3 ± 1.10	119.6 ± 1.33	104.9 ± 1.27	103.0 ± 2.42	89.2 ± 2.10	n = 5	[RO1] Roche Integra and MIRA
125.5 ± 3.67	115.5 ± 3.53	102.9 ± 4.64	97.1 ± 4.10	84.6 ± 4.08	n = 8	[GZ1] Sekisui Diagnostics (Genzyme)
126.0 ± 2.59	116.9 ± 2.43	102.7 ± 2.35	100.4 ± 2.24	85.4 ± 1.95	n = 24	[BY1] Siemens ADVIA/ADVIA Centaur
124.9 ± 3.10	111.6 ± 3.17	100.9 ± 3.08	93.9 ± 2.23	84.2 ± 2.25	n = 62	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Sodium (mmol/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
160.9 ± 3.94	148.0 ± 2.33	151.2 ± 2.51	140.5 ± 2.12	126.2 ± 2.02	n = 375	[---] All Methods & Instruments
<Instruments>						
161.8 ± 3.23	145.7 ± 2.26	146.1 ± 2.05	144.1 ± 8.46	127.2 ± 4.10	n = 3	[AXA] Abaxis Piccolo
163.5 ± 1.28	148.5 ± 0.74	151.5 ± 0.88	140.5 ± 0.75	124.6 ± 0.67	n = 21	[ABJ] Abbott Architect c System
160.2 ± 2.09	147.1 ± 1.35	150.1 ± 1.11	139.5 ± 1.21	125.0 ± 1.34	n = 64	[OLC] Beckman Coulter AU Chemistry System
159.3 ± 0.51	146.2 ± 1.54	148.2 ± 2.36	139.7 ± 1.37	125.7 ± 0.51	n = 3	[BCX] Beckman Coulter LX-20
159.6 ± 1.75	147.4 ± 1.00	150.1 ± 1.28	140.3 ± 0.53	125.5 ± 1.10	n = 17	[BCG] Beckman Coulter UniCel DxC 600
159.4 ± 1.91	147.3 ± 1.00	149.8 ± 1.35	140.7 ± 1.11	125.7 ± 1.07	n = 9	[BCH] Beckman Coulter UniCel DxC 800
155.5 ± 1.39	146.8 ± 0.73	148.5 ± 0.57	138.8 ± 0.73	124.0 ± 0.55	n = 6	[IAA] i-STAT
169.1 ± 1.65	157.4 ± 1.86	157.9 ± 1.05	147.0 ± 1.21	130.1 ± 1.36	n = 9	[JJE] Ortho Vitros 250/350/950
169.2 ± 2.06	155.8 ± 1.87	157.1 ± 2.06	145.6 ± 1.54	128.7 ± 1.56	n = 19	[JJF] Ortho Vitros 5,1FS
169.1 ± 2.04	155.9 ± 1.85	157.2 ± 1.57	145.7 ± 1.28	128.6 ± 1.15	n = 19	[JJG] Ortho Vitros 5600
157.6 ± 1.02	146.7 ± 1.37	149.4 ± 1.02	139.0 ± 0.90	125.8 ± 1.54	n = 3	[ROK] Roche cobas c111
160.9 ± 1.63	147.2 ± 1.53	150.0 ± 1.64	139.3 ± 1.33	125.1 ± 1.51	n = 17	[ROC] Roche cobas c501
162.2 ± 2.11	148.8 ± 1.46	152.1 ± 2.35	140.9 ± 2.04	126.8 ± 1.27	n = 4	[ROH] Roche cobas c701
160.0 ± 1.37	147.0 ± 0.90	149.9 ± 1.13	138.6 ± 0.79	123.8 ± 0.73	n = 6	[ROS] Roche Cobas INTEGRA 400
159.8 ± 1.27	146.7 ± 1.58	150.0 ± 0.75	139.1 ± 1.13	125.0 ± 1.14	n = 4	[ROT] Roche Cobas INTEGRA 800
162.9 ± 2.51	149.3 ± 1.75	151.9 ± 2.31	140.9 ± 1.71	125.3 ± 1.82	n = 29	[ROD] Roche MODULAR D/P
162.8 ± 1.04	149.4 ± 0.93	152.5 ± 0.90	141.7 ± 0.70	127.4 ± 0.91	n = 22	[BYE] Siemens ADVIA 1800
162.3 ± 0.51	148.7 ± 0.51	151.7 ± 0.51	141.0 ± 0.90	127.7 ± 0.51	n = 3	[BYB] Siemens ADVIA 2400
160.3 ± 0.77	147.8 ± 0.92	151.0 ± 0.84	140.0 ± 0.73	126.3 ± 1.02	n = 19	[DUE] Siemens Dimension EXL
157.9 ± 1.71	146.2 ± 1.60	149.8 ± 1.69	139.2 ± 1.40	125.7 ± 1.17	n = 21	[DUR] Siemens Dimension RxL
156.3 ± 1.70	147.2 ± 1.71	150.9 ± 1.69	140.0 ± 1.77	128.2 ± 1.42	n = 41	[DUT] Siemens Dimension Vista
160.2 ± 1.33	147.6 ± 1.34	151.1 ± 1.53	140.1 ± 1.41	126.9 ± 1.27	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
161.8 ± 3.23	145.7 ± 2.26	146.1 ± 2.05	144.1 ± 8.46	127.2 ± 4.10	n = 3	[AX1] Abaxis
163.5 ± 1.30	148.4 ± 0.80	151.4 ± 0.98	140.4 ± 0.74	124.7 ± 0.66	n = 22	[AB1] Abbott
159.5 ± 1.59	147.3 ± 0.93	150.0 ± 1.27	140.4 ± 0.94	125.5 ± 1.02	n = 32	[BC1] Beckman Coulter
160.3 ± 2.07	147.2 ± 1.38	150.1 ± 1.14	139.5 ± 1.25	125.0 ± 1.34	n = 61	[OL1] Beckman Coulter AU Series
155.5 ± 1.62	146.8 ± 0.80	148.4 ± 0.55	138.6 ± 0.55	124.0 ± 0.00	n = 5	[IA1] i-STAT
160.5 ± 1.86	151.3 ± 0.51	154.0 ± 0.90	141.0 ± 0.00	126.6 ± 1.02	n = 3	[IL1] Instrumentation Lab
169.3 ± 2.08	156.2 ± 2.05	157.4 ± 1.74	145.9 ± 1.59	129.0 ± 1.54	n = 50	[JJ1] Ortho Clinical Diagnostics
157.6 ± 1.02	146.7 ± 1.37	149.4 ± 1.02	139.0 ± 0.90	125.8 ± 1.54	n = 3	[RO8] Roche cobas c111
161.2 ± 1.76	147.5 ± 1.57	150.4 ± 1.97	139.6 ± 1.63	125.4 ± 1.57	n = 23	[RO4] Roche cobas c311/c501/c502/c701
162.9 ± 2.51	149.3 ± 1.75	151.9 ± 2.31	140.9 ± 1.71	125.3 ± 1.82	n = 29	[RO2] Roche Hitachi and Modular D/P
159.9 ± 1.34	146.9 ± 1.19	150.0 ± 0.97	138.8 ± 0.90	124.2 ± 1.04	n = 10	[RO1] Roche Integra and MIRA
162.8 ± 1.02	149.3 ± 0.90	152.3 ± 0.89	141.7 ± 0.73	127.4 ± 0.91	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
158.0 ± 2.51	147.2 ± 1.58	150.7 ± 1.55	139.9 ± 1.52	127.0 ± 1.63	n = 99	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Potassium (mmol/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
6.24 ± 0.15	4.19 ± 0.11	3.49 ± 0.10	5.24 ± 0.11	2.90 ± 0.09	n = 375	[---] All Methods & Instruments
<Instruments>						
6.39 ± 0.29	4.48 ± 0.24	3.74 ± 0.10	5.34 ± 0.10	2.90 ± 0.00	n = 3	[AXA] Abaxis Piccolo
6.27 ± 0.06	4.20 ± 0.00	3.50 ± 0.00	5.22 ± 0.04	2.90 ± 0.00	n = 21	[ABJ] Abbott Architect c System
6.22 ± 0.10	4.20 ± 0.00	3.50 ± 0.00	5.21 ± 0.05	2.92 ± 0.05	n = 64	[OLC] Beckman Coulter AU Chemistry System
6.27 ± 0.05	4.13 ± 0.05	3.40 ± 0.09	5.20 ± 0.09	2.83 ± 0.05	n = 3	[BCX] Beckman Coulter LX-20
6.30 ± 0.09	4.19 ± 0.05	3.46 ± 0.06	5.25 ± 0.07	2.83 ± 0.06	n = 17	[BCG] Beckman Coulter UniCel DxC 600
6.28 ± 0.07	4.19 ± 0.05	3.46 ± 0.06	5.29 ± 0.05	2.84 ± 0.06	n = 9	[BCH] Beckman Coulter UniCel DxC 800
6.00 ± 0.00	4.10 ± 0.00	3.40 ± 0.00	5.20 ± 0.00	2.80 ± 0.00	n = 6	[IAA] i-STAT
6.44 ± 0.09	4.40 ± 0.00	3.60 ± 0.00	5.47 ± 0.06	3.00 ± 0.00	n = 9	[JJE] Ortho Vitros 250/350/950
6.44 ± 0.10	4.41 ± 0.06	3.62 ± 0.05	5.43 ± 0.07	3.00 ± 0.00	n = 19	[JJF] Ortho Vitros 5,1FS
6.42 ± 0.07	4.41 ± 0.05	3.62 ± 0.06	5.46 ± 0.08	3.02 ± 0.06	n = 19	[JJG] Ortho Vitros 5600
6.17 ± 0.05	4.20 ± 0.00	3.50 ± 0.00	5.23 ± 0.05	2.93 ± 0.05	n = 3	[ROK] Roche cobas c111
6.24 ± 0.12	4.12 ± 0.11	3.40 ± 0.13	5.17 ± 0.09	2.82 ± 0.10	n = 17	[ROC] Roche cobas c501
6.30 ± 0.08	4.17 ± 0.08	3.48 ± 0.04	5.23 ± 0.09	2.90 ± 0.08	n = 4	[ROH] Roche cobas c701
6.30 ± 0.06	4.20 ± 0.00	3.50 ± 0.00	5.27 ± 0.05	2.90 ± 0.00	n = 6	[ROS] Roche Cobas INTEGRA 400
6.30 ± 0.08	4.22 ± 0.04	3.50 ± 0.00	5.27 ± 0.09	2.92 ± 0.04	n = 4	[ROT] Roche Cobas INTEGRA 800
6.22 ± 0.12	4.14 ± 0.08	3.42 ± 0.10	5.19 ± 0.07	2.83 ± 0.11	n = 29	[ROD] Roche MODULAR D/P
6.32 ± 0.06	4.26 ± 0.06	3.60 ± 0.00	5.30 ± 0.00	3.00 ± 0.00	n = 22	[BYE] Siemens ADVIA 1800
6.62 ± 0.49	4.09 ± 0.20	3.52 ± 0.15	5.19 ± 0.20	2.92 ± 0.15	n = 3	[BYB] Siemens ADVIA 2400
6.20 ± 0.00	4.14 ± 0.06	3.40 ± 0.00	5.20 ± 0.00	2.80 ± 0.00	n = 18	[DUE] Siemens Dimension EXL
6.17 ± 0.08	4.14 ± 0.07	3.43 ± 0.06	5.18 ± 0.07	2.83 ± 0.05	n = 22	[DUR] Siemens Dimension RxL
6.01 ± 0.06	4.10 ± 0.00	3.47 ± 0.06	5.12 ± 0.07	2.90 ± 0.00	n = 41	[DUT] Siemens Dimension Vista
6.23 ± 0.08	4.13 ± 0.06	3.43 ± 0.05	5.23 ± 0.06	2.85 ± 0.06	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
6.39 ± 0.29	4.48 ± 0.24	3.74 ± 0.10	5.34 ± 0.10	2.90 ± 0.00	n = 3	[AX1] Abaxis
6.27 ± 0.07	4.20 ± 0.00	3.50 ± 0.00	5.21 ± 0.04	2.90 ± 0.00	n = 22	[AB1] Abbott
6.28 ± 0.08	4.19 ± 0.05	3.46 ± 0.06	5.26 ± 0.07	2.84 ± 0.06	n = 32	[BC1] Beckman Coulter
6.22 ± 0.10	4.20 ± 0.00	3.50 ± 0.00	5.21 ± 0.05	2.92 ± 0.05	n = 61	[OL1] Beckman Coulter AU Series
6.00 ± 0.00	4.10 ± 0.00	3.40 ± 0.00	5.20 ± 0.00	2.80 ± 0.00	n = 5	[IA1] i-STAT
6.10 ± 0.00	4.10 ± 0.00	3.33 ± 0.05	5.17 ± 0.05	2.80 ± 0.00	n = 3	[IL1] Instrumentation Lab
6.44 ± 0.09	4.40 ± 0.05	3.63 ± 0.05	5.45 ± 0.07	3.01 ± 0.04	n = 50	[JJ1] Ortho Clinical Diagnostics
6.17 ± 0.05	4.20 ± 0.00	3.50 ± 0.00	5.23 ± 0.05	2.93 ± 0.05	n = 3	[RO8] Roche cobas c111
6.25 ± 0.11	4.12 ± 0.10	3.41 ± 0.12	5.18 ± 0.09	2.83 ± 0.10	n = 23	[RO4] Roche cobas c311/c501/c502/c701
6.22 ± 0.12	4.14 ± 0.08	3.42 ± 0.10	5.19 ± 0.07	2.83 ± 0.11	n = 29	[RO2] Roche Hitachi and Modular D/P
6.30 ± 0.06	4.20 ± 0.00	3.50 ± 0.00	5.27 ± 0.07	2.90 ± 0.00	n = 10	[RO1] Roche Integra and MIRA
6.33 ± 0.06	4.26 ± 0.06	3.60 ± 0.00	5.30 ± 0.00	3.00 ± 0.00	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
6.13 ± 0.13	4.13 ± 0.06	3.44 ± 0.06	5.18 ± 0.08	2.86 ± 0.06	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Chloride (mmol/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
105.3 ± 2.90	110.9 ± 2.50	111.5 ± 2.07	106.2 ± 2.58	92.0 ± 2.15	n = 370	[---] All Methods & Instruments
<Instruments>						
104.3 ± 1.37	111.7 ± 0.51	112.3 ± 0.51	106.6 ± 1.02	92.7 ± 1.37	n = 3	[AXA] Abaxis Piccolo
104.5 ± 0.97	111.9 ± 0.70	112.5 ± 0.90	107.3 ± 0.80	93.4 ± 0.66	n = 20	[ABJ] Abbott Architect c System
102.7 ± 1.07	110.0 ± 1.14	110.6 ± 0.99	105.5 ± 1.18	91.8 ± 1.07	n = 63	[OLC] Beckman Coulter AU Chemistry System
103.3 ± 0.51	111.2 ± 1.54	111.6 ± 2.56	106.9 ± 2.05	93.7 ± 0.51	n = 3	[BCX] Beckman Coulter LX-20
104.7 ± 1.47	112.5 ± 1.37	113.3 ± 1.64	108.0 ± 1.60	94.1 ± 0.93	n = 17	[BCG] Beckman Coulter UniCel DxC 600
104.4 ± 1.90	112.6 ± 1.59	113.0 ± 1.36	107.7 ± 1.31	93.7 ± 1.15	n = 9	[BCH] Beckman Coulter UniCel DxC 800
113.5 ± 1.07	122.1 ± 1.27	121.0 ± 1.00	115.2 ± 0.80	100.0 ± 1.28	n = 5	[IAA] i-STAT
105.7 ± 1.30	112.5 ± 1.86	112.8 ± 1.57	108.7 ± 1.68	93.7 ± 1.37	n = 9	[JJE] Ortho Vitros 250/350/950
106.3 ± 1.03	113.3 ± 1.42	113.3 ± 1.21	108.7 ± 1.21	93.8 ± 1.24	n = 19	[JJF] Ortho Vitros 5,1FS
107.0 ± 1.84	113.8 ± 1.71	113.9 ± 1.61	109.2 ± 1.78	94.1 ± 1.66	n = 19	[JJG] Ortho Vitros 5600
105.4 ± 1.02	112.3 ± 2.26	112.0 ± 0.00	107.0 ± 0.90	93.5 ± 1.86	n = 3	[ROK] Roche cobas c111
100.4 ± 1.34	106.7 ± 1.30	107.5 ± 1.43	101.9 ± 1.26	87.4 ± 1.72	n = 17	[ROC] Roche cobas c501
102.0 ± 0.75	107.2 ± 1.27	109.0 ± 1.76	103.2 ± 1.27	88.5 ± 1.22	n = 4	[ROH] Roche cobas c701
105.4 ± 1.22	112.1 ± 1.23	111.8 ± 1.45	106.3 ± 1.21	91.7 ± 1.21	n = 6	[ROS] Roche Cobas INTEGRA 400
105.8 ± 0.41	112.0 ± 1.76	112.3 ± 0.90	107.0 ± 1.76	93.0 ± 1.50	n = 4	[ROT] Roche Cobas INTEGRA 800
103.1 ± 1.30	109.6 ± 1.34	110.0 ± 1.58	104.5 ± 1.27	89.9 ± 1.38	n = 29	[ROD] Roche MODULAR D/P
105.0 ± 0.53	111.2 ± 0.99	110.9 ± 1.08	106.1 ± 0.97	91.5 ± 1.06	n = 22	[BYE] Siemens ADVIA 1800
105.9 ± 2.05	109.9 ± 3.72	109.5 ± 3.63	103.5 ± 4.53	89.5 ± 3.63	n = 3	[BYB] Siemens ADVIA 2400
108.3 ± 0.97	109.1 ± 0.75	110.8 ± 0.72	104.1 ± 0.85	90.9 ± 0.63	n = 18	[DUE] Siemens Dimension EXL
109.1 ± 2.14	108.7 ± 1.68	110.9 ± 1.62	103.5 ± 1.32	89.9 ± 1.25	n = 22	[DUR] Siemens Dimension RxL
107.0 ± 1.24	112.8 ± 1.47	112.6 ± 1.48	107.8 ± 1.19	93.0 ± 0.98	n = 41	[DUT] Siemens Dimension Vista
108.2 ± 0.95	108.7 ± 1.04	110.7 ± 0.97	103.8 ± 1.03	91.0 ± 0.78	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
104.3 ± 1.37	111.7 ± 0.51	112.3 ± 0.51	106.6 ± 1.02	92.7 ± 1.37	n = 3	[AX1] Abaxis
104.5 ± 0.95	111.9 ± 0.72	112.4 ± 0.88	107.2 ± 0.84	93.3 ± 0.71	n = 21	[AB1] Abbott
104.3 ± 1.68	112.2 ± 1.59	112.9 ± 1.71	107.7 ± 1.71	93.9 ± 1.18	n = 32	[BC1] Beckman Coulter
102.8 ± 1.09	110.0 ± 1.16	110.6 ± 0.99	105.5 ± 1.17	91.8 ± 1.05	n = 60	[OL1] Beckman Coulter AU Series
113.5 ± 1.07	122.1 ± 1.27	121.0 ± 1.00	115.2 ± 0.80	100.0 ± 1.28	n = 5	[IA1] i-STAT
106.6 ± 1.60	113.4 ± 1.70	113.6 ± 1.55	109.0 ± 1.61	93.9 ± 1.43	n = 50	[JJ1] Ortho Clinical Diagnostics
105.4 ± 1.02	112.3 ± 2.26	112.0 ± 0.00	107.0 ± 0.90	93.5 ± 1.86	n = 3	[RO8] Roche cobas c111
100.8 ± 1.52	106.9 ± 1.36	107.7 ± 1.48	102.2 ± 1.43	87.7 ± 1.59	n = 22	[RO4] Roche cobas c311/c501/c502/c701
103.1 ± 1.30	109.6 ± 1.34	110.0 ± 1.58	104.5 ± 1.27	89.9 ± 1.38	n = 29	[RO2] Roche Hitachi and Modular D/P
105.5 ± 1.20	111.8 ± 1.81	111.8 ± 1.37	106.3 ± 1.60	91.9 ± 1.55	n = 11	[RO1] Roche Integra and MIRA
105.0 ± 0.73	111.2 ± 1.00	110.9 ± 1.16	106.0 ± 1.16	91.4 ± 1.22	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
107.9 ± 1.56	110.4 ± 2.50	111.5 ± 1.55	105.3 ± 2.46	91.5 ± 1.61	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Albumin (g/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
5.02 ± 0.25	5.02 ± 0.24	4.16 ± 0.19	3.96 ± 0.22	3.45 ± 0.21	n = 359	[---] All Methods & Instruments
<Instruments>						
5.20 ± 0.09	5.13 ± 0.05	4.33 ± 0.05	4.06 ± 0.10	3.63 ± 0.05	n = 3	[AXA] Abaxis Piccolo
4.52 ± 0.12	4.62 ± 0.13	3.80 ± 0.13	3.67 ± 0.14	3.20 ± 0.11	n = 21	[ABJ] Abbott Architect c System
4.93 ± 0.10	5.02 ± 0.10	4.20 ± 0.08	4.03 ± 0.07	3.54 ± 0.07	n = 64	[OLC] Beckman Coulter AU Chemistry System
4.46 ± 0.10	4.58 ± 0.15	3.70 ± 0.09	3.50 ± 0.09	3.10 ± 0.09	n = 3	[BCX] Beckman Coulter LX-20
4.50 ± 0.09	4.71 ± 0.10	3.76 ± 0.08	3.61 ± 0.09	3.16 ± 0.06	n = 16	[BCG] Beckman Coulter UniCel DxC 600
4.53 ± 0.05	4.70 ± 0.00	3.79 ± 0.05	3.60 ± 0.00	3.16 ± 0.07	n = 9	[BCH] Beckman Coulter UniCel DxC 800
5.30 ± 0.00	4.73 ± 0.05	4.00 ± 0.07	3.82 ± 0.07	3.20 ± 0.07	n = 9	[JJE] Ortho Vitros 250/350/950
5.31 ± 0.15	4.69 ± 0.15	3.99 ± 0.11	3.77 ± 0.06	3.14 ± 0.11	n = 18	[JJF] Ortho Vitros 5,1FS
5.39 ± 0.11	4.77 ± 0.12	4.06 ± 0.10	3.82 ± 0.11	3.19 ± 0.09	n = 19	[JJG] Ortho Vitros 5600
5.12 ± 0.11	5.19 ± 0.09	4.37 ± 0.10	4.26 ± 0.13	3.69 ± 0.11	n = 16	[ROC] Roche cobas c501
5.11 ± 0.26	5.11 ± 0.19	4.36 ± 0.23	4.23 ± 0.16	3.63 ± 0.15	n = 4	[ROH] Roche cobas c701
5.02 ± 0.07	5.04 ± 0.08	4.23 ± 0.05	4.10 ± 0.06	3.60 ± 0.00	n = 6	[ROS] Roche Cobas INTEGRA 400
4.90 ± 0.11	5.00 ± 0.08	4.20 ± 0.08	4.05 ± 0.06	3.55 ± 0.06	n = 4	[ROT] Roche Cobas INTEGRA 800
5.13 ± 0.14	5.21 ± 0.11	4.33 ± 0.12	4.22 ± 0.11	3.65 ± 0.14	n = 30	[ROD] Roche MODULAR D/P
5.09 ± 0.09	5.05 ± 0.06	4.31 ± 0.07	4.17 ± 0.07	3.63 ± 0.06	n = 22	[BYE] Siemens ADVIA 1800
5.10 ± 0.00	5.10 ± 0.00	4.33 ± 0.05	4.20 ± 0.00	3.60 ± 0.00	n = 3	[BYB] Siemens ADVIA 2400
5.01 ± 0.08	5.17 ± 0.10	4.16 ± 0.09	3.89 ± 0.07	3.42 ± 0.07	n = 18	[DUE] Siemens Dimension EXL
5.01 ± 0.08	5.12 ± 0.09	4.17 ± 0.07	3.91 ± 0.07	3.44 ± 0.07	n = 22	[DUR] Siemens Dimension RxL
5.08 ± 0.10	5.22 ± 0.10	4.22 ± 0.09	3.99 ± 0.09	3.53 ± 0.08	n = 41	[DUT] Siemens Dimension Vista
5.00 ± 0.08	5.12 ± 0.10	4.12 ± 0.09	3.89 ± 0.07	3.40 ± 0.08	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
5.20 ± 0.09	5.13 ± 0.05	4.33 ± 0.05	4.06 ± 0.10	3.63 ± 0.05	n = 3	[AX1] Abaxis
4.52 ± 0.12	4.62 ± 0.13	3.80 ± 0.13	3.67 ± 0.14	3.20 ± 0.11	n = 21	[AB1] Abbott
4.50 ± 0.09	4.71 ± 0.12	3.76 ± 0.08	3.59 ± 0.08	3.15 ± 0.07	n = 30	[BC1] Beckman Coulter
4.93 ± 0.10	5.03 ± 0.09	4.21 ± 0.08	4.04 ± 0.07	3.54 ± 0.07	n = 59	[OL1] Beckman Coulter AU Series
5.35 ± 0.11	4.73 ± 0.11	4.02 ± 0.10	3.80 ± 0.09	3.17 ± 0.09	n = 49	[JJ1] Ortho Clinical Diagnostics
5.11 ± 0.12	5.17 ± 0.11	4.35 ± 0.11	4.24 ± 0.14	3.67 ± 0.12	n = 22	[RO4] Roche cobas c311/c501/c502/c701
5.13 ± 0.14	5.21 ± 0.11	4.34 ± 0.11	4.23 ± 0.10	3.66 ± 0.13	n = 29	[RO2] Roche Hitachi and Modular D/P
4.98 ± 0.10	5.02 ± 0.08	4.22 ± 0.06	4.08 ± 0.06	3.58 ± 0.05	n = 10	[RO1] Roche Integra and MIRA
5.09 ± 0.08	5.06 ± 0.06	4.31 ± 0.07	4.17 ± 0.06	3.62 ± 0.05	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
5.03 ± 0.10	5.17 ± 0.11	4.18 ± 0.09	3.93 ± 0.10	3.46 ± 0.09	n = 100	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Total Protein (g/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
8.60 ± 0.26	8.02 ± 0.24	7.23 ± 0.21	7.04 ± 0.21	6.04 ± 0.17	n = 360	[---] All Methods & Instruments
<Instruments>						
8.73 ± 0.14	8.06 ± 0.10	7.33 ± 0.05	7.28 ± 0.32	6.20 ± 0.09	n = 3	[AXA] Abaxis Piccolo
8.69 ± 0.11	8.07 ± 0.10	7.25 ± 0.10	7.09 ± 0.08	5.98 ± 0.08	n = 21	[ABJ] Abbott Architect c System
8.36 ± 0.13	7.82 ± 0.14	7.05 ± 0.13	6.85 ± 0.11	5.89 ± 0.12	n = 64	[OLC] Beckman Coulter AU Chemistry System
8.41 ± 0.23	7.71 ± 0.30	7.09 ± 0.27	6.82 ± 0.27	5.84 ± 0.16	n = 4	[BCX] Beckman Coulter LX-20
8.48 ± 0.15	8.00 ± 0.12	7.16 ± 0.11	6.91 ± 0.13	5.96 ± 0.12	n = 15	[BCG] Beckman Coulter UniCel DxC 600
8.31 ± 0.16	7.83 ± 0.22	7.07 ± 0.09	6.80 ± 0.11	5.85 ± 0.12	n = 9	[BCH] Beckman Coulter UniCel DxC 800
8.59 ± 0.14	7.98 ± 0.09	7.17 ± 0.13	7.10 ± 0.12	6.08 ± 0.09	n = 9	[JJE] Ortho Vitros 250/350/950
8.65 ± 0.20	8.03 ± 0.20	7.17 ± 0.13	7.03 ± 0.16	6.00 ± 0.12	n = 19	[JJF] Ortho Vitros 5,1FS
8.66 ± 0.16	8.02 ± 0.15	7.18 ± 0.14	7.06 ± 0.18	6.02 ± 0.09	n = 19	[JJG] Ortho Vitros 5600
8.42 ± 0.19	7.85 ± 0.17	7.18 ± 0.13	6.92 ± 0.12	6.02 ± 0.13	n = 16	[ROC] Roche cobas c501
8.33 ± 0.15	7.80 ± 0.08	7.07 ± 0.09	6.78 ± 0.13	5.91 ± 0.11	n = 4	[ROH] Roche cobas c701
8.37 ± 0.17	7.77 ± 0.12	7.14 ± 0.09	6.83 ± 0.10	5.91 ± 0.11	n = 6	[ROS] Roche Cobas INTEGRA 400
8.42 ± 0.04	7.82 ± 0.04	7.12 ± 0.04	6.87 ± 0.09	5.92 ± 0.04	n = 4	[ROT] Roche Cobas INTEGRA 800
8.50 ± 0.15	7.88 ± 0.14	7.16 ± 0.12	6.95 ± 0.11	6.01 ± 0.12	n = 30	[ROD] Roche MODULAR D/P
8.58 ± 0.15	8.04 ± 0.14	7.25 ± 0.14	7.10 ± 0.12	6.05 ± 0.10	n = 22	[BYE] Siemens ADVIA 1800
8.63 ± 0.05	8.07 ± 0.14	7.30 ± 0.09	7.13 ± 0.05	6.13 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
8.86 ± 0.14	8.25 ± 0.13	7.44 ± 0.12	7.24 ± 0.11	6.21 ± 0.08	n = 18	[DUE] Siemens Dimension EXL
8.88 ± 0.11	8.29 ± 0.14	7.47 ± 0.13	7.25 ± 0.12	6.22 ± 0.11	n = 22	[DUR] Siemens Dimension RxL
8.86 ± 0.11	8.25 ± 0.12	7.46 ± 0.10	7.25 ± 0.08	6.20 ± 0.10	n = 41	[DUT] Siemens Dimension Vista
8.86 ± 0.13	8.27 ± 0.14	7.47 ± 0.11	7.25 ± 0.11	6.24 ± 0.11	n = 19	[DUX] Siemens Dimension Xpand
<Reagents>						
8.73 ± 0.14	8.06 ± 0.10	7.33 ± 0.05	7.28 ± 0.32	6.20 ± 0.09	n = 3	[AX1] Abaxis
8.69 ± 0.11	8.07 ± 0.10	7.25 ± 0.10	7.09 ± 0.08	5.98 ± 0.08	n = 21	[AB1] Abbott
8.40 ± 0.21	7.90 ± 0.23	7.12 ± 0.14	6.87 ± 0.16	5.90 ± 0.15	n = 31	[BC1] Beckman Coulter
8.37 ± 0.13	7.83 ± 0.13	7.06 ± 0.12	6.86 ± 0.11	5.90 ± 0.11	n = 60	[OL1] Beckman Coulter AU Series
8.65 ± 0.17	8.01 ± 0.14	7.17 ± 0.14	7.06 ± 0.16	6.02 ± 0.11	n = 49	[JJ1] Ortho Clinical Diagnostics
8.39 ± 0.18	7.82 ± 0.14	7.15 ± 0.12	6.89 ± 0.13	5.99 ± 0.13	n = 21	[RO4] Roche cobas c311/c501/c502/c701
8.50 ± 0.15	7.88 ± 0.14	7.16 ± 0.12	6.95 ± 0.11	6.01 ± 0.12	n = 30	[RO2] Roche Hitachi and Modular D/P
8.40 ± 0.12	7.80 ± 0.10	7.14 ± 0.07	6.84 ± 0.10	5.91 ± 0.09	n = 10	[RO1] Roche Integra and MIRA
8.60 ± 0.14	8.05 ± 0.14	7.27 ± 0.13	7.11 ± 0.12	6.06 ± 0.11	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
8.87 ± 0.12	8.26 ± 0.13	7.46 ± 0.11	7.25 ± 0.10	6.22 ± 0.10	n = 99	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Cholesterol (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
169.0 ± 7.37	180.7 ± 7.67	163.9 ± 6.70	243.2 ± 8.70	136.5 ± 5.92	n = 328	[---] All Methods & Instruments
<Instruments>						
170.5 ± 2.74	182.3 ± 3.16	164.0 ± 0.90	246.5 ± 3.63	137.7 ± 3.37	n = 3	[AXA] Abaxis Piccolo
175.4 ± 2.00	185.4 ± 1.76	169.0 ± 1.39	246.5 ± 1.89	141.6 ± 1.84	n = 17	[ABJ] Abbott Architect c System
167.5 ± 3.37	179.0 ± 3.62	162.4 ± 3.20	240.6 ± 5.00	135.0 ± 2.86	n = 69	[OLC] Beckman Coulter AU Chemistry System
164.1 ± 4.38	177.0 ± 7.24	160.9 ± 5.72	240.6 ± 7.08	132.2 ± 6.95	n = 3	[BCS] Beckman Coulter CX
167.5 ± 1.86	182.5 ± 1.86	163.1 ± 3.72	247.3 ± 3.16	134.7 ± 0.51	n = 3	[BCX] Beckman Coulter LX-20
166.8 ± 1.74	179.9 ± 3.61	159.8 ± 1.80	243.8 ± 4.73	133.8 ± 2.15	n = 14	[BCG] Beckman Coulter UniCel DxC 600
164.9 ± 1.82	179.4 ± 2.45	161.0 ± 3.92	240.2 ± 1.00	134.8 ± 1.53	n = 8	[BCH] Beckman Coulter UniCel DxC 800
192.8 ± 5.00	200.9 ± 4.38	180.9 ± 5.72	260.9 ± 5.22	147.6 ± 2.56	n = 3	[JJE] Ortho Vitros 250/350/950
193.3 ± 7.35	202.9 ± 6.73	179.0 ± 7.14	263.2 ± 8.11	146.5 ± 5.82	n = 17	[JJF] Ortho Vitros 5,1FS
193.1 ± 7.78	202.9 ± 7.19	179.3 ± 6.18	264.3 ± 8.81	146.6 ± 3.91	n = 19	[JJG] Ortho Vitros 5600
176.0 ± 2.87	186.3 ± 3.53	169.6 ± 3.47	249.4 ± 5.18	141.6 ± 3.36	n = 15	[ROC] Roche cobas c501
170.4 ± 3.44	179.6 ± 5.71	164.0 ± 3.36	243.6 ± 3.21	136.3 ± 2.65	n = 4	[ROH] Roche cobas c701
171.9 ± 3.48	185.4 ± 3.68	168.1 ± 3.32	247.5 ± 4.38	140.9 ± 0.96	n = 6	[ROS] Roche Cobas INTEGRA 400
176.1 ± 1.88	186.5 ± 1.94	168.7 ± 1.58	251.3 ± 3.77	140.9 ± 2.33	n = 4	[ROT] Roche Cobas INTEGRA 800
172.3 ± 4.06	184.4 ± 3.87	166.3 ± 3.86	246.5 ± 4.97	139.3 ± 3.26	n = 31	[ROD] Roche MODULAR D/P
167.3 ± 4.93	181.6 ± 4.83	162.0 ± 4.85	241.6 ± 5.96	135.6 ± 3.85	n = 22	[BYE] Siemens ADVIA 1800
173.9 ± 8.93	182.5 ± 1.86	163.3 ± 1.37	242.8 ± 2.36	135.0 ± 1.80	n = 3	[BYB] Siemens ADVIA 2400
162.5 ± 5.23	173.4 ± 4.66	157.4 ± 4.83	236.0 ± 6.57	130.2 ± 3.82	n = 15	[DUE] Siemens Dimension EXL
161.6 ± 4.32	172.0 ± 4.25	157.3 ± 4.63	235.6 ± 5.84	129.3 ± 3.48	n = 16	[DUR] Siemens Dimension RxL
167.3 ± 4.06	176.7 ± 4.26	162.2 ± 4.94	239.1 ± 7.03	133.8 ± 3.79	n = 36	[DUT] Siemens Dimension Vista
161.1 ± 5.66	172.2 ± 4.44	156.8 ± 4.68	233.9 ± 5.57	128.8 ± 4.49	n = 13	[DUX] Siemens Dimension Xpand
<Reagents>						
170.5 ± 2.74	182.3 ± 3.16	164.0 ± 0.90	246.5 ± 3.63	137.7 ± 3.37	n = 3	[AX1] Abaxis
175.4 ± 2.00	185.4 ± 1.76	169.0 ± 1.39	246.5 ± 1.89	141.6 ± 1.84	n = 17	[AB1] Abbott
166.2 ± 2.34	180.1 ± 3.21	160.9 ± 3.40	243.2 ± 5.10	134.4 ± 2.01	n = 30	[BC1] Beckman Coulter
167.6 ± 3.26	179.2 ± 3.49	162.5 ± 3.21	240.7 ± 4.84	135.1 ± 2.74	n = 62	[OL1] Beckman Coulter AU Series
193.1 ± 7.36	202.7 ± 6.79	179.3 ± 6.52	263.6 ± 8.24	146.5 ± 4.64	n = 39	[JJ1] Ortho Clinical Diagnostics
174.9 ± 3.89	185.2 ± 4.84	168.5 ± 4.21	248.1 ± 5.37	140.5 ± 3.91	n = 19	[RO4] Roche cobas c311/c501/c502/c701
172.2 ± 4.14	184.3 ± 4.10	166.4 ± 4.08	246.5 ± 5.12	139.2 ± 3.32	n = 31	[RO2] Roche Hitachi and Modular D/P
173.9 ± 3.52	186.4 ± 2.16	168.6 ± 2.27	249.1 ± 4.35	140.6 ± 2.04	n = 10	[RO1] Roche Integra and MIRA
167.4 ± 5.01	181.5 ± 4.60	162.0 ± 4.59	241.6 ± 5.45	135.3 ± 3.45	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
164.4 ± 5.34	174.4 ± 4.83	159.4 ± 5.36	236.8 ± 6.93	131.4 ± 4.33	n = 80	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

HDL-Cholesterol (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
32.3 ± 3.59	50.1 ± 4.73	38.6 ± 3.89	65.3 ± 6.99	32.1 ± 2.95	n = 314	[---] All Methods & Instruments
34.2 ± 4.56	53.0 ± 6.70	41.4 ± 3.51	71.9 ± 11.15	32.1 ± 3.62	n = 19	[---] All Precipitation Methods
32.2 ± 3.46	50.0 ± 4.47	38.5 ± 3.76	65.0 ± 6.45	32.1 ± 2.91	n = 295	[---] All Homogeneous (Direct) Methods
22.3 ± 0.51	33.6 ± 2.56	22.8 ± 2.36	50.4 ± 1.02	19.3 ± 1.37	n = 3	[AX1] Abaxis
31.8 ± 1.44	48.9 ± 2.17	36.5 ± 1.74	65.0 ± 2.26	30.4 ± 1.60	n = 16	[AB1] Abbott
34.7 ± 1.32	53.2 ± 1.60	39.4 ± 1.60	73.0 ± 2.16	32.3 ± 1.64	n = 26	[BC1] Beckman Coulter
31.2 ± 1.27	48.6 ± 1.86	35.9 ± 1.48	65.5 ± 2.32	29.6 ± 1.28	n = 44	[OL1] Beckman Coulter AU Series
38.3 ± 2.23	58.3 ± 2.94	43.3 ± 2.33	80.1 ± 3.56	33.6 ± 1.55	n = 30	[JJ1] Ortho Clinical Diagnostics
31.9 ± 1.53	49.1 ± 1.73	38.4 ± 1.81	62.4 ± 1.99	32.6 ± 1.44	n = 16	[RO4] Roche cobas c311/c501/c502/c701
33.1 ± 2.42	51.1 ± 2.68	40.8 ± 3.01	64.5 ± 2.78	34.3 ± 2.61	n = 28	[RO2] Roche Hitachi and Modular D/P
32.9 ± 2.37	51.2 ± 2.31	40.2 ± 2.30	64.5 ± 2.33	34.1 ± 2.00	n = 10	[RO1] Roche Integra and MIRA
32.5 ± 1.62	50.2 ± 0.41	37.7 ± 1.99	69.0 ± 1.92	31.2 ± 1.55	n = 5	[GZ1] Sekisui Diagnostics (Genzyme)
23.5 ± 1.00	38.2 ± 1.61	27.4 ± 1.33	53.5 ± 2.14	22.2 ± 1.13	n = 27	[BY1] Siemens ADVIA/ADVIA Centaur
31.7 ± 1.60	49.2 ± 1.95	38.9 ± 1.74	63.1 ± 2.09	32.7 ± 1.62	n = 73	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

LDL-Cholesterol (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
111.6 ± 12.58	107.3 ± 12.55	101.4 ± 13.04	145.6 ± 15.01	84.2 ± 11.81	n = 300	[---] All Methods & Instruments
118.6 ± 8.95	113.5 ± 9.14	109.2 ± 7.90	152.0 ± 9.18	91.3 ± 7.43	n = 148	[--A] All Calculated Results Friedewald formula [LDL=TC-HDL-(Trigs+5)]
104.0 ± 11.13	100.0 ± 12.45	92.5 ± 11.70	137.2 ± 16.86	76.2 ± 10.04	n = 150	[---] All Homogeneous (Direct) Methods
104.6 ± 2.58	98.5 ± 3.53	92.5 ± 3.31	133.6 ± 3.80	76.2 ± 1.55	n = 6	[AB1] Abbott
100.2 ± 5.45	94.0 ± 5.43	87.2 ± 5.06	128.5 ± 5.15	71.9 ± 4.27	n = 12	[BC1] Beckman Coulter
90.9 ± 4.37	85.9 ± 5.05	79.6 ± 3.15	118.9 ± 5.72	65.9 ± 3.47	n = 26	[OL1] Beckman Coulter AU Series
110.5 ± 4.16	108.1 ± 2.85	96.7 ± 2.51	158.0 ± 6.14	76.5 ± 2.16	n = 16	[JJ1] Ortho Clinical Diagnostics
121.5 ± 3.69	121.5 ± 3.20	113.0 ± 3.85	163.2 ± 5.95	94.4 ± 2.99	n = 6	[RO4] Roche cobas c311/c501/c502/c701
111.7 ± 4.15	112.1 ± 4.39	103.1 ± 3.45	153.6 ± 4.06	86.5 ± 3.57	n = 13	[RO2] Roche Hitachi and Modular D/P
56.0 ± 10.02	63.3 ± 10.52	54.7 ± 11.20	104.9 ± 11.81	45.4 ± 10.55	n = 4	[RO1] Roche Integra 800
87.9 ± 3.82	82.9 ± 4.96	76.0 ± 3.54	117.6 ± 10.52	63.0 ± 3.74	n = 12	[GZ1] Sekisui Diagnostics (Genzyme)
98.1 ± 2.40	96.4 ± 3.28	86.7 ± 3.13	135.8 ± 4.40	70.5 ± 1.93	n = 13	[BY1] Siemens ADVIA/ADVIA Centaur
108.8 ± 5.50	104.9 ± 5.40	98.7 ± 5.38	140.7 ± 7.57	82.1 ± 4.74	n = 36	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Triglycerides (mg/dL)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
104.9 ± 7.58	100.0 ± 6.34	91.2 ± 5.43	136.6 ± 7.47	74.9 ± 4.68	n = 319	[---] All Methods & Instruments
<Instruments>						
121.1 ± 2.86	116.5 ± 2.74	107.2 ± 4.10	159.4 ± 2.56	86.4 ± 1.02	n = 3	[AXA] Abaxis Piccolo
100.9 ± 1.54	98.6 ± 0.97	88.2 ± 1.81	134.0 ± 1.48	72.6 ± 1.51	n = 18	[ABJ] Abbott Architect c System
101.6 ± 3.62	97.0 ± 2.78	88.6 ± 2.93	133.1 ± 3.96	73.2 ± 2.33	n = 64	[OLC] Beckman Coulter AU Chemistry System
113.4 ± 1.02	106.5 ± 1.86	96.2 ± 1.54	147.7 ± 2.26	77.3 ± 2.26	n = 3	[BCX] Beckman Coulter LX-20
113.3 ± 2.57	106.2 ± 2.70	95.7 ± 2.64	148.2 ± 3.16	77.2 ± 2.95	n = 13	[BCG] Beckman Coulter UniCel DxC 600
112.6 ± 3.75	106.0 ± 2.05	94.2 ± 3.75	145.7 ± 3.41	77.3 ± 2.65	n = 8	[BCH] Beckman Coulter UniCel DxC 800
125.9 ± 8.46	115.4 ± 7.44	105.0 ± 6.42	151.6 ± 9.79	84.9 ± 5.72	n = 3	[JJE] Ortho Vitros 250/350/950
116.5 ± 3.20	106.9 ± 3.44	96.0 ± 3.28	140.6 ± 3.06	77.5 ± 3.00	n = 17	[JJF] Ortho Vitros 5,1FS
116.0 ± 2.39	106.6 ± 2.20	96.2 ± 2.13	141.1 ± 3.63	78.2 ± 1.68	n = 19	[JJG] Ortho Vitros 5600
105.4 ± 3.04	98.1 ± 2.93	93.1 ± 2.50	134.0 ± 3.07	77.4 ± 2.36	n = 13	[ROC] Roche cobas c501
105.0 ± 1.76	98.1 ± 1.13	93.0 ± 0.75	135.2 ± 1.27	76.0 ± 0.75	n = 4	[ROH] Roche cobas c701
102.3 ± 2.93	94.5 ± 2.20	90.7 ± 2.61	129.0 ± 3.15	74.9 ± 2.14	n = 6	[ROS] Roche Cobas INTEGRA 400
103.8 ± 1.96	95.0 ± 1.50	91.5 ± 1.22	129.7 ± 1.58	75.3 ± 0.82	n = 4	[ROT] Roche Cobas INTEGRA 800
102.7 ± 3.50	97.8 ± 2.99	89.9 ± 2.58	134.4 ± 3.85	75.0 ± 2.57	n = 31	[ROD] Roche MODULAR D/P
103.7 ± 3.02	100.6 ± 2.85	90.7 ± 2.65	138.2 ± 3.84	75.0 ± 3.11	n = 22	[BYE] Siemens ADVIA 1800
102.8 ± 2.36	99.8 ± 1.54	90.3 ± 1.37	137.5 ± 1.86	74.0 ± 0.90	n = 3	[BYB] Siemens ADVIA 2400
96.2 ± 3.67	92.1 ± 3.26	83.8 ± 2.87	130.9 ± 3.30	67.8 ± 2.37	n = 15	[DUE] Siemens Dimension EXL
96.3 ± 2.44	93.8 ± 3.03	83.4 ± 3.12	131.1 ± 4.04	67.3 ± 1.88	n = 16	[DUR] Siemens Dimension RxL
110.5 ± 3.25	106.7 ± 2.95	96.5 ± 2.87	146.6 ± 4.16	79.5 ± 2.31	n = 38	[DUT] Siemens Dimension Vista
95.6 ± 2.71	92.0 ± 3.85	82.3 ± 3.53	130.5 ± 5.08	66.5 ± 3.41	n = 11	[DUX] Siemens Dimension Xpand
<Reagents>						
121.1 ± 2.86	116.5 ± 2.74	107.2 ± 4.10	159.4 ± 2.56	86.4 ± 1.02	n = 3	[AX1] Abaxis
100.9 ± 1.54	98.6 ± 0.97	88.2 ± 1.81	134.0 ± 1.48	72.6 ± 1.51	n = 18	[AB1] Abbott
113.1 ± 2.97	105.9 ± 3.20	95.1 ± 3.58	147.3 ± 3.85	77.0 ± 2.81	n = 27	[BC1] Beckman Coulter
101.7 ± 3.19	97.1 ± 2.68	88.7 ± 2.68	133.4 ± 3.78	73.1 ± 2.22	n = 57	[OL1] Beckman Coulter AU Series
101.1 ± 15.70	88.9 ± 17.23	89.0 ± 12.85	127.8 ± 24.37	72.8 ± 12.46	n = 3	[CR1] Carolina
116.2 ± 2.96	106.8 ± 3.05	96.1 ± 2.85	140.8 ± 3.49	78.0 ± 2.63	n = 39	[JJ1] Ortho Clinical Diagnostics
105.4 ± 2.70	98.2 ± 2.48	93.2 ± 2.06	134.4 ± 2.60	76.9 ± 2.07	n = 17	[RO4] Roche cobas c311/c501/c502/c701
102.7 ± 3.50	97.8 ± 2.99	89.9 ± 2.58	134.4 ± 3.85	75.0 ± 2.57	n = 31	[RO2] Roche Hitachi and Modular D/P
103.0 ± 2.66	94.7 ± 1.92	91.2 ± 1.98	129.4 ± 2.31	75.3 ± 1.54	n = 10	[RO1] Roche Integra and MIRA
103.7 ± 2.84	100.4 ± 2.62	90.6 ± 2.34	138.1 ± 3.45	74.8 ± 2.77	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
102.9 ± 8.59	99.4 ± 8.44	89.7 ± 7.88	138.2 ± 9.52	73.0 ± 7.33	n = 79	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Homocysteine (µmol/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
12.69 ± 1.62	11.85 ± 1.79	21.07 ± 2.18	10.28 ± 1.46	17.29 ± 2.07	n = 113	[---] All Methods & Instruments
<Instruments>						
12.60 ± 0.70	11.64 ± 0.75	20.91 ± 1.21	10.02 ± 0.65	17.37 ± 1.18	n = 12	[ABH] Abbott Architect i System
13.55 ± 1.23	12.95 ± 1.03	21.83 ± 1.18	11.16 ± 1.01	18.13 ± 1.04	n = 23	[OLC] Beckman Coulter AU Chemistry System
14.47 ± 0.73	13.10 ± 0.62	22.12 ± 0.58	11.71 ± 0.62	17.97 ± 0.68	n = 5	[JJG] Ortho Vitros 5600
13.20 ± 0.80	12.32 ± 0.87	22.69 ± 0.34	10.48 ± 0.63	18.85 ± 0.39	n = 4	[ROC] Roche cobas c501
12.92 ± 1.20	14.23 ± 1.32	23.17 ± 1.19	11.76 ± 0.62	19.44 ± 1.34	n = 5	[ROD] Roche MODULAR D/P
14.81 ± 0.44	13.14 ± 0.97	22.93 ± 1.06	11.48 ± 0.78	19.31 ± 0.66	n = 3	[BYE] Siemens ADVIA 1800
10.92 ± 0.77	9.73 ± 0.61	18.37 ± 1.02	8.68 ± 0.70	14.69 ± 0.76	n = 25	[COB] Siemens ADVIA Centaur
12.85 ± 1.40	11.69 ± 1.40	21.49 ± 1.98	10.14 ± 1.05	17.44 ± 1.60	n = 15	[DPD] Siemens Immulite 2000
<Reagents>						
12.76 ± 0.75	11.55 ± 0.70	21.22 ± 1.37	9.94 ± 0.61	17.56 ± 1.27	n = 14	[AB1] Abbott
16.18 ± 2.21	14.92 ± 1.50	23.72 ± 2.04	12.93 ± 1.48	19.55 ± 1.91	n = 3	[AS1] Axis-Shield
15.26 ± 1.09	14.03 ± 0.33	22.85 ± 0.45	12.32 ± 0.37	18.87 ± 0.53	n = 6	[CR1] Carolina
13.03 ± 0.85	12.57 ± 0.90	21.74 ± 1.35	10.81 ± 0.81	18.14 ± 1.21	n = 32	[DZ1] Diazyme
14.19 ± 1.07	12.86 ± 0.95	21.90 ± 0.98	11.49 ± 0.86	17.70 ± 1.07	n = 6	[JJ1] Ortho Clinical Diagnostics
14.77 ± 0.60	14.13 ± 0.42	23.41 ± 1.45	12.17 ± 0.31	19.76 ± 1.11	n = 3	[GZ1] Sekisui Diagnostics (Genzyme)
10.92 ± 0.77	9.73 ± 0.61	18.37 ± 1.02	8.68 ± 0.70	14.69 ± 0.76	n = 25	[BY1] Siemens ADVIA/ADVIA Centaur
12.85 ± 1.40	11.69 ± 1.40	21.49 ± 1.98	10.14 ± 1.05	17.44 ± 1.60	n = 15	[DP5] Siemens Immulite

Summary of Participant Performance (Mean and Standard Deviation)

Troponin I (µg/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
0.017 ± 0.016	1.283 ± 0.277	0.017 ± 0.016	3.587 ± 3.338	0.018 ± 0.017	n = 226	[---] All Methods & Instruments
<Instruments>						
0.011 ± 0.006	6.415 ± 0.369	0.010 ± 0.005	12.088 ± 0.657	0.010 ± 0.005	n = 22	[ABH] Abbott Architect i System
0.008 ± 0.006	1.084 ± 0.087	0.008 ± 0.007	1.974 ± 0.143	0.008 ± 0.007	n = 24	[SAA] Beckman Coulter ACCESS
0.050 ± 0.000	0.359 ± 0.044	0.050 ± 0.000	1.127 ± 0.223	0.050 ± 0.000	n = 6	[BSA] BioSite Triage
0.034 ± 0.045	3.334 ± 0.301	0.034 ± 0.045	6.019 ± 0.586	0.034 ± 0.045	n = 4	[IAA] i-STAT
0.012 ± 0.007	3.950 ± 0.167	0.012 ± 0.007	8.860 ± 0.331	0.012 ± 0.007	n = 17	[JJG] Ortho Vitros 5600
0.010 ± 0.000	4.013 ± 0.199	0.010 ± 0.000	9.181 ± 0.481	0.010 ± 0.000	n = 11	[JJC] Ortho Vitros ECi/ECiQ
0.009 ± 0.006	1.491 ± 0.110	0.008 ± 0.007	3.170 ± 0.208	0.009 ± 0.006	n = 42	[COB] Siemens ADVIA Centaur
0.018 ± 0.020	1.386 ± 0.030	0.018 ± 0.020	2.840 ± 0.114	0.018 ± 0.020	n = 4	[BYP] Siemens ADVIA Centaur CP
0.063 ± 0.040	1.341 ± 0.091	0.067 ± 0.041	2.015 ± 0.127	0.064 ± 0.039	n = 13	[DUE] Siemens Dimension EXL
0.040 ± 0.000	0.985 ± 0.101	0.040 ± 0.000	1.764 ± 0.145	0.040 ± 0.000	n = 12	[DUR] Siemens Dimension RxL
0.020 ± 0.000	1.413 ± 0.110	0.020 ± 0.000	2.128 ± 0.135	0.024 ± 0.006	n = 39	[DUT] Siemens Dimension Vista
0.033 ± 0.023	0.954 ± 0.061	0.032 ± 0.018	1.702 ± 0.147	0.032 ± 0.018	n = 11	[DUX] Siemens Dimension Xpand
0.200 ± 0.000	2.867 ± 0.132	0.200 ± 0.000	5.212 ± 0.445	0.200 ± 0.000	n = 5	[DPD] Siemens Immulite 2000
0.060 ± 0.000	6.797 ± 0.346	0.060 ± 0.000	13.567 ± 0.404	0.060 ± 0.000	n = 5	[TOM] Tosoh Bioscience
<Reagents>						
0.010 ± 0.007	6.407 ± 0.361	0.009 ± 0.007	12.064 ± 0.644	0.009 ± 0.007	n = 27	[AB1] Abbott
0.008 ± 0.006	1.086 ± 0.083	0.008 ± 0.007	1.978 ± 0.137	0.008 ± 0.007	n = 26	[BC1] Beckman Coulter
0.050 ± 0.000	0.359 ± 0.044	0.050 ± 0.000	1.127 ± 0.223	0.050 ± 0.000	n = 6	[BS1] Biosite Diagnostics
0.010 ± 0.000	3.972 ± 0.183	0.010 ± 0.000	8.959 ± 0.435	0.010 ± 0.000	n = 28	[JJ1] Ortho Clinical Diagnostics
0.303 ± 0.005	0.754 ± 0.060	0.303 ± 0.005	1.394 ± 0.112	0.303 ± 0.005	n = 6	[RO3] Roche Elecsys/Modular E/e601/e411
0.009 ± 0.006	1.479 ± 0.110	0.008 ± 0.006	3.142 ± 0.224	0.009 ± 0.006	n = 46	[BY1] Siemens ADVIA/ADVIA Centaur
0.040 ± 0.000	0.981 ± 0.112	0.040 ± 0.000	1.758 ± 0.183	0.040 ± 0.000	n = 26	[DA5] Siemens Dimension
0.020 ± 0.000	1.398 ± 0.106	0.020 ± 0.000	2.106 ± 0.147	0.024 ± 0.007	n = 49	[DA6] Siemens Dimension LOCI
0.200 ± 0.000	2.867 ± 0.132	0.200 ± 0.000	5.212 ± 0.445	0.200 ± 0.000	n = 5	[DP5] Siemens Immulite
0.060 ± 0.000	6.713 ± 0.370	0.060 ± 0.000	13.450 ± 0.416	0.060 ± 0.000	n = 4	[TO2] Tosoh ST AIA

Summary of Participant Performance (Mean and Standard Deviation)

Troponin T (µg/L)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
0.010 ± 0.000	0.665 ± 0.043	0.010 ± 0.000	1.073 ± 0.076	0.010 ± 0.000	n = 33	[---] All Methods & Instruments
						<Instruments>
0.007 ± 0.005	0.507 ± 0.361	0.007 ± 0.005	0.776 ± 0.554	0.007 ± 0.005	n = 3	[ROF] Roche cobas e411
0.010 ± 0.000	0.656 ± 0.030	0.010 ± 0.000	1.063 ± 0.091	0.010 ± 0.000	n = 11	[ROA] Roche cobas e601
0.010 ± 0.000	0.673 ± 0.035	0.010 ± 0.000	1.104 ± 0.063	0.010 ± 0.000	n = 9	[BME] Roche Elecsys
0.010 ± 0.000	0.652 ± 0.055	0.010 ± 0.000	1.040 ± 0.075	0.010 ± 0.000	n = 8	[ROE] Roche MODULAR E
						<Reagents>
0.010 ± 0.000	0.667 ± 0.043	0.010 ± 0.000	1.076 ± 0.077	0.010 ± 0.000	n = 30	[RO3] Roche Elecsys/Modular E/e601/e411

Summary of Participant Performance (Mean and Standard Deviation)

Alanine Aminotransferase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
49.7 ± 5.08	245.1 ± 15.77	164.2 ± 11.76	85.3 ± 6.85	136.0 ± 11.29	n = 360	[---] All Methods & Instruments
<Instruments>						
45.0 ± 3.61	219.0 ± 1.80	146.0 ± 2.70	78.3 ± 1.37	122.3 ± 0.51	n = 3	[AXA] Abaxis Piccolo
47.4 ± 1.98	250.2 ± 6.01	164.6 ± 4.37	85.0 ± 2.14	134.7 ± 4.37	n = 21	[ABJ] Abbott Architect c System
45.8 ± 1.96	219.3 ± 4.67	146.7 ± 3.76	77.7 ± 2.32	121.2 ± 3.54	n = 64	[OLC] Beckman Coulter AU Chemistry System
49.0 ± 0.90	234.1 ± 2.86	158.3 ± 2.26	83.4 ± 1.02	131.0 ± 0.90	n = 3	[BCX] Beckman Coulter LX-20
49.7 ± 1.15	238.0 ± 5.26	159.2 ± 4.07	83.0 ± 1.75	131.3 ± 2.83	n = 16	[BCG] Beckman Coulter UniCel DxC 600
49.1 ± 1.64	237.5 ± 7.29	159.5 ± 4.14	84.0 ± 2.90	132.3 ± 4.05	n = 8	[BCH] Beckman Coulter UniCel DxC 800
60.7 ± 1.35	264.7 ± 6.36	180.6 ± 4.89	99.0 ± 3.42	155.4 ± 3.71	n = 9	[JJE] Ortho Vitros 250/350/950
63.1 ± 6.56	262.9 ± 6.12	180.2 ± 4.88	99.0 ± 4.93	153.1 ± 4.98	n = 19	[JJF] Ortho Vitros 5,1FS
62.8 ± 5.09	264.0 ± 7.09	180.3 ± 6.21	99.4 ± 6.01	157.1 ± 6.61	n = 19	[JJG] Ortho Vitros 5600
49.5 ± 1.73	242.2 ± 7.42	162.1 ± 4.52	83.9 ± 2.49	134.2 ± 4.11	n = 16	[ROC] Roche cobas c501
47.3 ± 2.65	241.4 ± 3.21	160.2 ± 3.42	80.8 ± 1.96	132.0 ± 1.65	n = 4	[ROH] Roche cobas c701
45.9 ± 1.01	241.5 ± 5.29	161.0 ± 3.61	81.8 ± 2.00	133.5 ± 3.03	n = 7	[ROS] Roche Cobas INTEGRA 400
46.2 ± 0.41	234.7 ± 3.01	155.4 ± 2.64	80.8 ± 1.46	129.9 ± 2.33	n = 4	[ROT] Roche Cobas INTEGRA 800
48.7 ± 1.87	240.6 ± 6.25	159.9 ± 4.66	83.7 ± 2.88	132.6 ± 4.38	n = 30	[ROD] Roche MODULAR D/P
50.5 ± 2.69	256.7 ± 3.57	170.6 ± 3.30	88.1 ± 2.34	141.4 ± 3.36	n = 22	[BYE] Siemens ADVIA 1800
52.0 ± 0.00	255.0 ± 0.00	169.8 ± 1.54	88.5 ± 1.86	140.3 ± 1.37	n = 3	[BYB] Siemens ADVIA 2400
51.5 ± 3.69	254.2 ± 6.48	171.3 ± 5.74	88.4 ± 4.22	142.3 ± 3.95	n = 19	[DUE] Siemens Dimension EXL
56.7 ± 4.26	254.0 ± 4.69	173.5 ± 3.51	91.8 ± 3.68	144.9 ± 3.80	n = 21	[DUR] Siemens Dimension RxL
48.9 ± 2.01	247.0 ± 5.59	165.2 ± 3.53	84.6 ± 2.34	136.4 ± 3.44	n = 41	[DUT] Siemens Dimension Vista
55.6 ± 5.18	255.0 ± 4.88	173.4 ± 2.79	91.5 ± 4.97	144.6 ± 3.63	n = 18	[DUX] Siemens Dimension Xpand
<Reagents>						
45.0 ± 3.61	219.0 ± 1.80	146.0 ± 2.70	78.3 ± 1.37	122.3 ± 0.51	n = 3	[AX1] Abaxis
47.4 ± 1.98	250.2 ± 6.01	164.6 ± 4.37	85.0 ± 2.14	134.7 ± 4.37	n = 21	[AB1] Abbott
49.2 ± 1.63	236.9 ± 6.39	158.9 ± 4.40	83.1 ± 2.36	131.6 ± 3.48	n = 32	[BC1] Beckman Coulter
45.8 ± 2.00	219.3 ± 4.60	146.7 ± 3.65	77.7 ± 2.34	121.1 ± 3.40	n = 59	[OL1] Beckman Coulter AU Series
62.4 ± 5.51	263.3 ± 6.93	180.1 ± 5.77	98.9 ± 5.18	154.9 ± 6.01	n = 50	[JJ1] Ortho Clinical Diagnostics
49.4 ± 1.97	241.7 ± 5.45	161.6 ± 3.96	83.4 ± 2.61	133.2 ± 4.19	n = 22	[RO4] Roche cobas c311/c501/c502/c701
48.7 ± 1.87	240.6 ± 6.25	159.9 ± 4.66	83.7 ± 2.88	132.6 ± 4.38	n = 30	[RO2] Roche Hitachi and Modular D/P
46.1 ± 0.78	238.7 ± 5.62	159.0 ± 4.34	81.4 ± 1.86	132.2 ± 3.35	n = 11	[RO1] Roche Integra and MIRA
50.8 ± 2.54	256.4 ± 3.28	170.5 ± 3.07	88.1 ± 2.30	141.3 ± 3.13	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
53.6 ± 5.49	251.6 ± 5.80	170.5 ± 4.82	89.4 ± 4.98	142.3 ± 4.92	n = 56	[DA5] Siemens Dimension
49.7 ± 2.41	250.9 ± 7.84	168.4 ± 6.45	85.8 ± 3.84	138.8 ± 5.38	n = 42	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Aspartate Aminotransferase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
76.3 ± 4.51	499.6 ± 43.57	176.3 ± 10.29	104.4 ± 6.08	145.9 ± 8.97	n = 360	[---] All Methods & Instruments
<Instruments>						
75.0 ± 0.00	483.2 ± 7.82	173.8 ± 2.36	104.3 ± 1.37	144.6 ± 1.02	n = 3	[AXA] Abaxis Piccolo
75.6 ± 1.20	501.1 ± 8.63	176.0 ± 3.68	104.7 ± 1.77	146.0 ± 2.87	n = 21	[ABJ] Abbott Architect c System
70.4 ± 2.29	443.3 ± 14.44	157.3 ± 4.89	94.3 ± 3.23	130.2 ± 4.04	n = 64	[OLC] Beckman Coulter AU Chemistry System
75.7 ± 0.51	475.2 ± 14.06	171.3 ± 1.37	103.0 ± 0.90	141.9 ± 2.86	n = 3	[BCX] Beckman Coulter LX-20
75.6 ± 1.74	475.4 ± 19.92	171.5 ± 4.16	102.6 ± 2.93	141.7 ± 3.82	n = 16	[BCG] Beckman Coulter UniCel DxC 600
75.7 ± 2.16	476.4 ± 11.24	172.5 ± 3.57	103.2 ± 2.58	142.7 ± 3.87	n = 8	[BCH] Beckman Coulter UniCel DxC 800
81.7 ± 3.12	590.1 ± 29.78	180.7 ± 5.39	111.9 ± 3.49	148.1 ± 4.60	n = 9	[JJE] Ortho Vitros 250/350/950
81.9 ± 1.90	588.6 ± 18.12	180.6 ± 5.56	110.3 ± 3.68	146.0 ± 3.71	n = 19	[JJF] Ortho Vitros 5,1FS
82.4 ± 2.50	601.9 ± 15.61	179.3 ± 5.14	111.1 ± 3.24	147.2 ± 3.72	n = 19	[JJG] Ortho Vitros 5600
77.3 ± 2.51	509.2 ± 12.78	177.3 ± 5.03	105.3 ± 2.93	146.6 ± 4.24	n = 16	[ROC] Roche cobas c501
75.4 ± 3.21	497.1 ± 11.42	174.8 ± 2.80	104.0 ± 0.00	146.1 ± 3.00	n = 4	[ROH] Roche cobas c701
74.7 ± 1.64	511.4 ± 12.01	177.8 ± 3.89	104.3 ± 1.99	147.2 ± 3.57	n = 7	[ROS] Roche Cobas INTEGRA 400
75.5 ± 1.22	501.5 ± 8.28	176.3 ± 3.89	104.4 ± 2.31	146.3 ± 3.89	n = 4	[ROT] Roche Cobas INTEGRA 800
75.5 ± 3.00	486.7 ± 13.02	172.5 ± 5.07	103.1 ± 3.02	143.4 ± 4.05	n = 30	[ROD] Roche MODULAR D/P
81.5 ± 2.45	533.8 ± 6.50	188.4 ± 3.23	111.8 ± 1.98	157.0 ± 2.56	n = 22	[BYE] Siemens ADVIA 1800
82.3 ± 2.26	526.5 ± 3.63	187.4 ± 1.02	111.0 ± 0.00	156.0 ± 0.90	n = 3	[BYB] Siemens ADVIA 2400
77.1 ± 3.04	502.4 ± 12.91	180.9 ± 5.44	105.2 ± 2.66	150.1 ± 4.64	n = 18	[DUE] Siemens Dimension EXL
77.5 ± 2.95	506.6 ± 12.23	182.6 ± 5.15	106.7 ± 3.41	153.6 ± 5.04	n = 22	[DUR] Siemens Dimension RxL
75.9 ± 2.54	507.9 ± 10.64	181.8 ± 4.34	104.0 ± 3.21	150.2 ± 3.52	n = 41	[DUT] Siemens Dimension Vista
78.3 ± 2.48	509.4 ± 6.40	183.8 ± 2.79	107.7 ± 1.67	154.7 ± 2.31	n = 18	[DUX] Siemens Dimension Xpand
<Reagents>						
75.0 ± 0.00	483.2 ± 7.82	173.8 ± 2.36	104.3 ± 1.37	144.6 ± 1.02	n = 3	[AX1] Abaxis
75.6 ± 1.20	501.1 ± 8.63	176.0 ± 3.68	104.7 ± 1.77	146.0 ± 2.87	n = 21	[AB1] Abbott
75.5 ± 2.06	473.6 ± 21.54	171.9 ± 4.28	102.8 ± 3.01	142.2 ± 4.17	n = 32	[BC1] Beckman Coulter
70.3 ± 2.24	443.5 ± 13.98	157.3 ± 4.70	94.2 ± 3.14	130.2 ± 3.81	n = 59	[OL1] Beckman Coulter AU Series
81.9 ± 2.53	597.2 ± 24.51	179.8 ± 5.56	110.7 ± 3.51	146.6 ± 4.23	n = 50	[JJ1] Ortho Clinical Diagnostics
76.9 ± 2.48	505.4 ± 13.48	176.4 ± 4.35	104.9 ± 2.32	146.1 ± 3.79	n = 22	[RO4] Roche cobas c311/c501/c502/c701
75.5 ± 3.00	486.7 ± 13.02	172.5 ± 5.07	103.1 ± 3.02	143.4 ± 4.05	n = 30	[RO2] Roche Hitachi and Modular D/P
75.0 ± 1.55	507.8 ± 11.80	177.3 ± 3.96	104.3 ± 2.11	146.9 ± 3.71	n = 11	[RO1] Roche Integra and MIRA
81.5 ± 2.58	532.7 ± 6.94	188.2 ± 3.13	111.6 ± 1.96	156.8 ± 2.45	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
77.2 ± 2.64	507.9 ± 10.28	182.6 ± 4.22	105.8 ± 3.17	152.3 ± 4.14	n = 78	[DA5] Siemens Dimension
76.0 ± 3.25	505.2 ± 11.48	181.4 ± 5.87	104.7 ± 4.07	149.6 ± 5.28	n = 19	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

α-Amylase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
171.5 ± 19.28	52.8 ± 9.96	107.1 ± 10.15	398.6 ± 70.37	88.4 ± 9.88	n = 315	[---] All Methods & Instruments
<Instruments>						
186.1 ± 3.10	54.0 ± 1.01	114.0 ± 2.03	448.4 ± 6.64	94.5 ± 1.09	n = 19	[ABJ] Abbott Architect c System
146.0 ± 7.15	41.8 ± 2.27	89.0 ± 4.26	353.1 ± 18.14	74.9 ± 4.45	n = 55	[OLC] Beckman Coulter AU Chemistry System
185.0 ± 3.61	59.5 ± 1.86	117.2 ± 2.36	348.2 ± 149.51	96.9 ± 2.86	n = 3	[BCX] Beckman Coulter LX-20
189.7 ± 4.35	60.4 ± 1.71	119.5 ± 2.94	435.9 ± 9.08	98.2 ± 2.37	n = 13	[BCG] Beckman Coulter UniCel DxC 600
189.1 ± 4.49	60.7 ± 1.24	119.2 ± 2.80	433.0 ± 11.97	99.3 ± 2.83	n = 8	[BCH] Beckman Coulter UniCel DxC 800
143.9 ± 4.96	66.3 ± 3.98	98.7 ± 4.02	266.6 ± 3.14	77.3 ± 3.27	n = 7	[JJE] Ortho Vitros 250/350/950
148.4 ± 4.84	68.9 ± 4.09	97.7 ± 5.00	273.7 ± 8.18	73.1 ± 4.09	n = 18	[JFF] Ortho Vitros 5,1FS
145.6 ± 6.14	69.2 ± 4.20	98.8 ± 4.97	271.9 ± 6.96	74.7 ± 4.11	n = 19	[JJG] Ortho Vitros 5600
177.3 ± 2.47	58.7 ± 0.86	111.2 ± 1.96	393.3 ± 5.39	93.0 ± 1.42	n = 15	[ROC] Roche cobas c501
177.8 ± 3.23	58.6 ± 1.02	112.7 ± 1.37	393.0 ± 10.10	93.1 ± 2.05	n = 3	[ROS] Roche Cobas INTEGRA 400
172.4 ± 3.25	56.7 ± 0.90	107.5 ± 2.32	385.1 ± 5.67	90.3 ± 1.58	n = 4	[ROT] Roche Cobas INTEGRA 800
174.9 ± 2.79	57.7 ± 1.20	109.8 ± 1.74	387.3 ± 6.77	91.5 ± 1.70	n = 27	[ROD] Roche MODULAR D/P
175.3 ± 2.93	56.4 ± 1.14	109.7 ± 1.78	392.8 ± 6.64	90.9 ± 1.36	n = 21	[BYE] Siemens ADVIA 1800
172.0 ± 4.60	55.3 ± 1.37	108.3 ± 3.16	386.5 ± 9.09	89.5 ± 1.86	n = 3	[BYB] Siemens ADVIA 2400
189.5 ± 2.86	47.1 ± 1.07	113.5 ± 1.46	479.1 ± 6.66	95.6 ± 1.28	n = 13	[DUE] Siemens Dimension EXL
189.0 ± 3.71	47.0 ± 1.47	114.0 ± 2.50	477.1 ± 9.41	95.5 ± 2.28	n = 19	[DUR] Siemens Dimension RxL
178.8 ± 3.65	43.8 ± 1.01	107.1 ± 2.12	449.9 ± 8.51	89.9 ± 1.60	n = 40	[DUT] Siemens Dimension Vista
190.4 ± 2.35	47.3 ± 0.87	114.0 ± 1.38	482.2 ± 5.67	96.2 ± 1.36	n = 15	[DUX] Siemens Dimension Xpand
<Reagents>						
186.1 ± 3.10	54.0 ± 1.01	114.0 ± 2.03	448.4 ± 6.64	94.5 ± 1.09	n = 19	[AB1] Abbott
190.1 ± 4.58	60.2 ± 1.83	121.0 ± 2.62	437.0 ± 11.31	97.8 ± 2.99	n = 7	[BC1] Beckman Coulter
146.2 ± 7.14	41.9 ± 2.33	89.0 ± 4.27	352.9 ± 17.71	74.7 ± 4.43	n = 51	[OL1] Beckman Coulter AU Series
188.6 ± 4.13	60.5 ± 1.47	118.6 ± 2.56	433.6 ± 8.58	98.8 ± 2.42	n = 19	[BC2] Beckman Coulter IFCC Standardized
146.6 ± 5.65	68.6 ± 4.11	98.6 ± 5.06	272.3 ± 7.59	74.7 ± 4.28	n = 48	[JJ1] Ortho Clinical Diagnostics
177.1 ± 2.59	58.5 ± 0.88	111.0 ± 1.95	392.7 ± 5.90	92.8 ± 1.48	n = 19	[RO4] Roche cobas c311/c501/c502/c701
175.1 ± 2.87	57.8 ± 1.29	109.9 ± 1.87	387.7 ± 7.24	91.5 ± 1.70	n = 28	[RO2] Roche Hitachi and Modular D/P
174.7 ± 4.15	57.5 ± 1.33	109.8 ± 3.36	387.1 ± 7.13	91.4 ± 2.15	n = 7	[RO1] Roche Integra and MIRA
174.8 ± 3.59	56.2 ± 1.33	109.5 ± 2.11	391.8 ± 7.84	90.7 ± 1.59	n = 25	[BY1] Siemens ADVIA/ADVIA Centaur
184.9 ± 6.84	45.6 ± 2.19	110.9 ± 4.25	466.6 ± 18.30	93.1 ± 3.66	n = 87	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Alkaline Phosphatase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
175.6 ± 19.75	408.9 ± 45.05	274.6 ± 28.23	53.9 ± 10.77	226.0 ± 21.43	n = 360	[---] All Methods & Instruments
<Instruments>						
143.8 ± 5.90	337.9 ± 10.08	226.0 ± 6.37	42.7 ± 0.51	190.2 ± 4.11	n = 3	[AXA] Abaxis Piccolo
177.4 ± 4.47	413.9 ± 13.15	279.6 ± 7.07	52.5 ± 1.98	232.2 ± 7.43	n = 21	[ABJ] Abbott Architect c System
156.9 ± 9.07	369.7 ± 21.00	248.5 ± 14.57	45.7 ± 2.88	207.4 ± 12.52	n = 63	[OLC] Beckman Coulter AU Chemistry System
151.4 ± 6.14	349.2 ± 16.67	236.9 ± 8.08	44.1 ± 2.86	199.3 ± 6.76	n = 3	[BCX] Beckman Coulter LX-20
153.1 ± 7.65	356.9 ± 17.75	240.2 ± 12.82	44.6 ± 2.95	201.1 ± 10.36	n = 16	[BCG] Beckman Coulter UniCel DxC 600
156.3 ± 3.34	361.3 ± 13.39	245.5 ± 7.72	45.6 ± 2.76	204.5 ± 5.52	n = 9	[BCH] Beckman Coulter UniCel DxC 800
202.6 ± 10.41	495.8 ± 23.11	317.8 ± 12.26	74.9 ± 3.97	244.2 ± 10.64	n = 9	[JJE] Ortho Vitros 250/350/950
195.8 ± 10.81	463.4 ± 36.60	296.5 ± 17.64	72.1 ± 4.04	231.0 ± 13.10	n = 19	[JJF] Ortho Vitros 5,1FS
190.5 ± 9.43	464.3 ± 28.45	296.6 ± 17.55	70.2 ± 2.86	227.4 ± 10.30	n = 19	[JJG] Ortho Vitros 5600
172.6 ± 3.98	398.3 ± 10.82	271.3 ± 6.43	50.4 ± 1.78	225.9 ± 5.26	n = 16	[ROC] Roche cobas c501
171.6 ± 5.00	396.6 ± 5.37	268.6 ± 5.37	48.7 ± 0.90	223.0 ± 5.26	n = 4	[ROH] Roche cobas c701
169.1 ± 2.93	397.8 ± 11.71	268.4 ± 6.67	49.1 ± 0.59	224.9 ± 3.91	n = 6	[ROS] Roche Cobas INTEGRA 400
167.8 ± 2.68	396.6 ± 4.99	269.4 ± 6.10	47.1 ± 1.13	224.8 ± 3.27	n = 4	[ROT] Roche Cobas INTEGRA 800
168.0 ± 4.72	387.6 ± 8.98	263.1 ± 7.35	48.9 ± 1.44	219.0 ± 5.44	n = 29	[ROD] Roche MODULAR D/P
184.8 ± 6.47	437.0 ± 15.36	293.0 ± 10.59	53.7 ± 1.96	243.8 ± 8.43	n = 22	[BYE] Siemens ADVIA 1800
181.2 ± 4.11	428.6 ± 11.05	288.6 ± 6.45	53.0 ± 0.90	238.3 ± 5.09	n = 3	[BYB] Siemens ADVIA 2400
209.0 ± 8.41	466.9 ± 20.56	321.1 ± 11.92	70.6 ± 4.26	266.8 ± 11.08	n = 18	[DUE] Siemens Dimension EXL
202.6 ± 9.05	455.9 ± 18.69	309.4 ± 15.06	68.7 ± 6.76	261.3 ± 13.79	n = 22	[DUR] Siemens Dimension RxL
171.5 ± 9.53	399.2 ± 22.72	268.5 ± 12.65	51.8 ± 4.12	223.7 ± 13.11	n = 41	[DUT] Siemens Dimension Vista
196.2 ± 13.44	444.6 ± 24.47	303.4 ± 18.53	64.7 ± 5.22	254.5 ± 16.49	n = 18	[DUX] Siemens Dimension Xpand
<Reagents>						
143.8 ± 5.90	337.9 ± 10.08	226.0 ± 6.37	42.7 ± 0.51	190.2 ± 4.11	n = 3	[AX1] Abaxis
177.4 ± 4.47	413.9 ± 13.15	279.6 ± 7.07	52.5 ± 1.98	232.2 ± 7.43	n = 21	[AB1] Abbott
152.9 ± 7.12	355.4 ± 17.38	240.1 ± 11.87	44.5 ± 2.85	201.0 ± 9.38	n = 31	[BC1] Beckman Coulter
157.1 ± 8.41	370.1 ± 20.00	248.5 ± 13.61	45.7 ± 2.63	207.5 ± 11.87	n = 59	[OL1] Beckman Coulter AU Series
194.0 ± 11.13	468.2 ± 33.57	299.4 ± 19.12	71.6 ± 3.94	230.8 ± 13.32	n = 50	[JJ1] Ortho Clinical Diagnostics
172.1 ± 4.06	397.9 ± 9.24	270.4 ± 6.02	49.9 ± 1.67	225.1 ± 5.05	n = 22	[RO4] Roche cobas c311/c501/c502/c701
167.8 ± 4.76	387.2 ± 9.14	262.8 ± 7.31	48.8 ± 1.47	218.8 ± 5.38	n = 30	[RO2] Roche Hitachi and Modular D/P
168.5 ± 2.75	397.2 ± 8.45	268.4 ± 6.19	48.4 ± 1.30	224.9 ± 3.35	n = 11	[RO1] Roche Integra and MIRA
183.9 ± 6.89	434.9 ± 16.59	291.7 ± 11.15	53.5 ± 2.01	242.5 ± 9.04	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
190.1 ± 19.80	433.7 ± 37.56	294.1 ± 27.62	61.3 ± 10.23	246.0 ± 24.52	n = 99	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

γ-Glutamyltransferase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
161.9 ± 38.05	31.8 ± 7.71	79.6 ± 18.71	36.5 ± 9.12	66.6 ± 16.13	n = 299	[---] All Methods & Instruments
<Instruments>						
163.1 ± 9.47	30.7 ± 1.64	79.5 ± 4.15	35.2 ± 1.85	65.8 ± 3.28	n = 17	[ABJ] Abbott Architect c System
125.7 ± 6.96	25.3 ± 1.76	62.3 ± 3.69	29.3 ± 1.96	51.9 ± 3.07	n = 55	[OLC] Beckman Coulter AU Chemistry System
156.8 ± 4.11	26.6 ± 1.02	75.5 ± 1.86	30.5 ± 2.74	62.5 ± 1.86	n = 3	[BCX] Beckman Coulter LX-20
161.3 ± 6.21	27.5 ± 1.51	76.6 ± 2.59	31.1 ± 1.06	64.0 ± 2.47	n = 15	[BCG] Beckman Coulter UniCel DxC 600
159.2 ± 2.81	26.7 ± 1.20	75.0 ± 2.41	30.5 ± 0.90	62.9 ± 1.83	n = 8	[BCH] Beckman Coulter UniCel DxC 800
269.1 ± 7.55	42.7 ± 1.38	127.4 ± 2.05	51.0 ± 2.12	106.5 ± 2.17	n = 5	[JJE] Ortho Vitros 250/350/950
264.0 ± 5.51	42.7 ± 1.32	127.6 ± 1.98	52.4 ± 1.59	106.1 ± 1.78	n = 17	[JFF] Ortho Vitros 5,1FS
266.0 ± 5.37	42.6 ± 1.46	126.2 ± 2.13	51.7 ± 1.22	105.5 ± 1.70	n = 19	[JJG] Ortho Vitros 5600
136.7 ± 3.54	25.4 ± 0.56	67.4 ± 1.47	28.7 ± 0.79	55.7 ± 1.40	n = 13	[ROC] Roche cobas c501
140.0 ± 2.70	25.7 ± 0.51	67.5 ± 1.86	29.7 ± 0.51	56.4 ± 1.02	n = 3	[ROS] Roche Cobas INTEGRA 400
137.2 ± 4.33	26.3 ± 0.90	67.2 ± 1.46	29.5 ± 1.23	56.3 ± 1.58	n = 4	[ROT] Roche Cobas INTEGRA 800
143.1 ± 3.83	26.3 ± 1.15	69.9 ± 1.96	30.0 ± 0.91	57.6 ± 1.43	n = 28	[ROD] Roche MODULAR D/P
154.2 ± 4.08	28.9 ± 2.33	75.0 ± 3.13	33.6 ± 2.42	62.3 ± 2.81	n = 22	[BYE] Siemens ADVIA 1800
153.6 ± 3.87	29.3 ± 1.37	76.3 ± 2.26	35.1 ± 2.86	63.7 ± 2.26	n = 3	[BYB] Siemens ADVIA 2400
182.8 ± 2.67	40.6 ± 1.57	91.9 ± 2.24	45.6 ± 1.53	77.3 ± 1.83	n = 13	[DUE] Siemens Dimension EXL
182.4 ± 4.47	39.8 ± 1.49	91.1 ± 2.38	44.2 ± 1.94	76.6 ± 1.84	n = 15	[DUR] Siemens Dimension RxL
187.6 ± 3.74	37.5 ± 1.84	91.3 ± 2.36	42.8 ± 1.90	76.5 ± 1.72	n = 38	[DUT] Siemens Dimension Vista
182.5 ± 4.48	41.1 ± 2.35	92.1 ± 2.49	46.1 ± 1.65	78.1 ± 1.87	n = 9	[DUX] Siemens Dimension Xpand
<Reagents>						
162.2 ± 8.39	30.6 ± 1.42	79.1 ± 3.70	35.0 ± 1.65	65.5 ± 3.01	n = 16	[AB1] Abbott
159.6 ± 5.57	26.9 ± 1.59	75.9 ± 2.50	30.8 ± 1.44	63.3 ± 2.36	n = 29	[BC1] Beckman Coulter
125.9 ± 6.94	25.3 ± 1.76	62.3 ± 3.67	29.4 ± 1.95	51.9 ± 3.02	n = 52	[OL1] Beckman Coulter AU Series
265.2 ± 5.79	42.7 ± 1.36	126.7 ± 2.23	51.9 ± 1.55	105.8 ± 1.89	n = 43	[JJ1] Ortho Clinical Diagnostics
136.9 ± 3.30	25.6 ± 0.65	67.4 ± 1.37	28.8 ± 0.95	55.6 ± 1.46	n = 18	[RO4] Roche cobas c311/c501/c502/c701
143.1 ± 3.83	26.3 ± 1.15	69.9 ± 1.96	30.0 ± 0.91	57.6 ± 1.43	n = 28	[RO2] Roche Hitachi and Modular D/P
138.6 ± 3.91	26.0 ± 0.82	67.3 ± 1.62	29.3 ± 0.59	56.4 ± 1.34	n = 7	[RO1] Roche Integra and MIRA
154.1 ± 3.96	29.0 ± 2.40	75.3 ± 3.18	33.9 ± 2.69	62.6 ± 2.94	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
184.8 ± 4.47	39.1 ± 2.39	91.4 ± 2.42	44.0 ± 2.37	76.9 ± 1.92	n = 71	[DA5] Siemens Dimension
189.3 ± 3.37	37.0 ± 0.90	92.0 ± 0.00	44.3 ± 0.51	76.6 ± 1.02	n = 3	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Creatine Kinase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
66.3 ± 6.71	328.4 ± 23.50	115.4 ± 8.36	292.5 ± 20.07	95.6 ± 7.82	n = 327	[---] All Methods & Instruments
<Instruments>						
74.7 ± 2.10	341.1 ± 9.87	123.3 ± 4.54	304.0 ± 8.06	101.3 ± 3.18	n = 21	[ABJ] Abbott Architect c System
57.6 ± 2.93	287.1 ± 14.04	101.4 ± 6.18	260.3 ± 11.32	83.8 ± 4.90	n = 59	[OLC] Beckman Coulter AU Chemistry System
74.0 ± 0.90	344.6 ± 3.87	119.3 ± 1.37	310.5 ± 3.63	98.5 ± 2.74	n = 3	[BCX] Beckman Coulter LX-20
72.2 ± 3.06	344.0 ± 8.74	120.8 ± 3.67	312.5 ± 7.26	100.6 ± 2.57	n = 14	[BCG] Beckman Coulter UniCel DxC 600
72.2 ± 2.19	343.6 ± 10.98	121.3 ± 6.09	312.0 ± 8.76	102.2 ± 4.29	n = 9	[BCH] Beckman Coulter UniCel DxC 800
62.1 ± 2.62	349.3 ± 10.34	114.0 ± 9.60	311.5 ± 10.11	102.8 ± 3.09	n = 6	[JJE] Ortho Vitros 250/350/950
62.6 ± 2.87	353.0 ± 16.04	116.0 ± 5.39	310.4 ± 14.46	101.8 ± 4.51	n = 17	[JFF] Ortho Vitros 5,1FS
64.1 ± 2.81	357.0 ± 15.13	119.0 ± 5.70	311.4 ± 14.95	104.1 ± 4.72	n = 19	[JJG] Ortho Vitros 5600
64.4 ± 2.27	345.4 ± 9.84	118.5 ± 3.75	311.1 ± 9.36	97.4 ± 3.88	n = 16	[ROC] Roche cobas c501
72.7 ± 2.26	329.9 ± 4.38	120.3 ± 2.26	293.0 ± 2.70	99.5 ± 2.74	n = 3	[ROH] Roche cobas c701
62.8 ± 4.55	342.0 ± 5.15	113.9 ± 3.80	310.3 ± 4.93	93.1 ± 2.72	n = 4	[ROT] Roche Cobas INTEGRA 800
71.0 ± 2.35	331.8 ± 8.49	120.5 ± 3.69	295.5 ± 7.06	99.2 ± 3.15	n = 29	[ROD] Roche MODULAR D/P
59.7 ± 1.56	314.3 ± 7.13	108.0 ± 2.43	283.0 ± 5.05	88.5 ± 1.88	n = 21	[BYE] Siemens ADVIA 1800
60.0 ± 1.80	306.7 ± 4.22	109.1 ± 3.72	276.5 ± 6.32	89.5 ± 2.74	n = 3	[BYB] Siemens ADVIA 2400
67.1 ± 2.41	325.7 ± 4.95	115.8 ± 3.91	290.4 ± 3.89	94.7 ± 3.41	n = 16	[DUE] Siemens Dimension EXL
69.3 ± 2.79	329.5 ± 6.10	117.8 ± 3.07	291.8 ± 6.06	96.3 ± 3.34	n = 21	[DUR] Siemens Dimension RxL
70.3 ± 2.10	324.3 ± 6.97	116.2 ± 3.93	288.0 ± 7.71	95.8 ± 3.62	n = 40	[DUT] Siemens Dimension Vista
69.1 ± 2.80	329.7 ± 4.31	117.1 ± 3.45	290.8 ± 5.09	95.1 ± 3.24	n = 14	[DUX] Siemens Dimension Xpand
<Reagents>						
74.7 ± 2.10	341.1 ± 9.87	123.3 ± 4.54	304.0 ± 8.06	101.3 ± 3.18	n = 21	[AB1] Abbott
72.2 ± 2.82	343.4 ± 9.61	120.4 ± 4.70	311.6 ± 7.78	100.7 ± 3.81	n = 31	[BC1] Beckman Coulter
57.8 ± 2.81	287.7 ± 14.12	101.6 ± 5.89	261.0 ± 11.32	83.9 ± 4.70	n = 54	[OL1] Beckman Coulter AU Series
63.2 ± 2.96	353.7 ± 15.45	117.3 ± 5.99	310.6 ± 14.29	103.0 ± 4.76	n = 44	[JJ1] Ortho Clinical Diagnostics
65.2 ± 3.13	343.3 ± 10.33	118.9 ± 3.42	308.2 ± 10.78	97.7 ± 3.66	n = 21	[RO4] Roche cobas c311/c501/c502/c701
71.1 ± 2.36	331.8 ± 8.72	120.7 ± 3.63	295.4 ± 7.37	99.3 ± 3.18	n = 28	[RO2] Roche Hitachi and Modular D/P
66.4 ± 6.68	345.7 ± 6.83	118.2 ± 7.22	312.7 ± 4.68	97.1 ± 6.72	n = 6	[RO1] Roche Integra and MIRA
59.7 ± 1.63	312.5 ± 8.21	107.8 ± 2.83	281.9 ± 6.32	88.4 ± 2.24	n = 25	[BY1] Siemens ADVIA/ADVIA Centaur
70.2 ± 2.78	330.4 ± 6.44	118.6 ± 3.53	293.5 ± 6.05	96.8 ± 3.26	n = 19	[DA5] Siemens Dimension
69.2 ± 2.74	326.1 ± 6.25	116.3 ± 3.49	289.2 ± 5.99	95.4 ± 3.56	n = 71	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

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

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
0.63 ± 0.31	50.17 ± 7.88	0.56 ± 0.30	20.61 ± 3.48	0.52 ± 0.32	n = 203	[-A-] All Methods - Results reported in ng/mL
0.59 ± 0.07	51.96 ± 5.14	0.47 ± 0.09	22.33 ± 2.10	0.35 ± 0.08	n = 23	[AB1] Abbott
0.72 ± 0.05	61.15 ± 2.77	0.60 ± 0.00	24.55 ± 0.98	0.50 ± 0.00	n = 14	[SAA] Beckman Coulter ACCESS
0.71 ± 0.05	63.99 ± 4.89	0.60 ± 0.00	25.11 ± 1.74	0.50 ± 0.00	n = 14	[BC1] Beckman Coulter UniCel
< 1.00	35.58 ± 4.29	< 1.00	14.54 ± 2.42	< 1.00	n = 3	[BS1] Biosite Diagnostics
0.42 ± 0.06	37.00 ± 1.94	0.33 ± 0.07	15.13 ± 0.93	0.27 ± 0.06	n = 26	[JJ1] Ortho Clinical Diagnostics
1.06 ± 0.08	50.90 ± 3.26	0.95 ± 0.11	23.29 ± 1.25	0.98 ± 0.10	n = 28	[RO3] Roche Elecsys/Modular E/e601/e411
0.20 ± 0.08	47.63 ± 2.50	0.19 ± 0.10	20.04 ± 1.06	0.19 ± 0.11	n = 33	[BY1] Siemens ADVIA/ADVIA Centaur
0.53 ± 0.25	51.73 ± 3.96	0.51 ± 0.25	18.75 ± 1.54	0.49 ± 0.30	n = 29	[DA5] Siemens Dimension
0.71 ± 0.19	50.07 ± 2.33	0.70 ± 0.20	20.01 ± 1.10	0.73 ± 0.19	n = 28	[DA6] Siemens Dimension LOCI
0.90 ± 0.11	60.65 ± 1.31	0.75 ± 0.06	23.85 ± 1.08	0.65 ± 0.06	n = 2	[TOM] Tosoh
< 3.00	42.47 ± 5.17	< 3.00	18.55 ± 3.22	< 3.00	n = 4	[-B-] All Methods - Results reported in U/L
0.00 ± 0.00	13.86 ± 4.13	0.00 ± 0.00	7.73 ± 1.51	0.00 ± 0.00	n = 4	[-P-] All Methods - Results reported as %
0.00 ± 0.00	13.74 ± 4.96	0.00 ± 0.00	7.16 ± 1.54	0.00 ± 0.00	n = 3	[HL1] Helena Laboratories

Summary of Participant Performance (Mean and Standard Deviation)

Lactate Dehydrogenase (U/L 37°C)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
141.1 ± 13.15	239.1 ± 22.13	119.9 ± 10.82	264.3 ± 23.27	98.8 ± 9.38	n = 263	[-A-] All Methods - Lactate to Pyruvate
398.0 ± 15.55	630.5 ± 16.11	349.6 ± 14.38	678.6 ± 19.67	279.6 ± 14.91	n = 46	[-B-] All Methods - Pyruvate to Lactate
<Instruments>						
151.9 ± 5.68	249.1 ± 7.29	126.2 ± 5.02	278.0 ± 10.70	104.6 ± 5.01	n = 20	[ABJ] Abbott Architect c System
127.7 ± 6.62	213.9 ± 9.86	108.1 ± 5.22	240.4 ± 11.12	89.2 ± 4.65	n = 57	[OLC] Beckman Coulter AU Chemistry System
119.9 ± 2.05	206.3 ± 4.06	104.5 ± 1.86	223.1 ± 8.31	85.3 ± 4.22	n = 3	[BCX] Beckman Coulter LX-20
117.3 ± 3.48	201.2 ± 5.45	102.0 ± 4.15	221.8 ± 8.10	83.1 ± 2.86	n = 15	[BCG] Beckman Coulter UniCel DxC 600
119.9 ± 3.15	200.7 ± 5.67	102.3 ± 3.64	225.4 ± 6.63	83.9 ± 3.50	n = 9	[BCH] Beckman Coulter UniCel DxC 800
394.8 ± 14.76	627.7 ± 3.70	348.6 ± 9.04	677.5 ± 8.86	278.0 ± 8.59	n = 6	[JJE] Ortho Vitros 250/350/950
402.0 ± 16.33	627.4 ± 16.11	348.6 ± 15.56	680.4 ± 23.77	281.0 ± 16.28	n = 19	[JJF] Ortho Vitros 5,1FS
395.1 ± 14.54	634.9 ± 16.39	350.5 ± 15.31	676.4 ± 14.89	279.6 ± 14.04	n = 19	[JJG] Ortho Vitros 5600
142.6 ± 3.76	244.4 ± 3.97	121.9 ± 2.96	269.1 ± 6.14	100.6 ± 3.19	n = 15	[ROC] Roche cobas c501
144.8 ± 3.23	244.3 ± 3.37	122.1 ± 2.86	269.7 ± 5.91	102.4 ± 2.56	n = 3	[ROH] Roche cobas c701
145.2 ± 2.58	247.9 ± 4.41	123.0 ± 2.88	269.9 ± 5.86	101.4 ± 2.91	n = 4	[ROT] Roche Cobas INTEGRA 800
143.4 ± 4.95	246.9 ± 6.29	122.7 ± 3.69	270.0 ± 8.73	101.2 ± 3.02	n = 27	[ROD] Roche MODULAR D/P
149.6 ± 3.32	250.2 ± 5.91	127.3 ± 2.86	275.9 ± 5.62	104.9 ± 2.67	n = 22	[BYE] Siemens ADVIA 1800
145.0 ± 0.90	240.3 ± 3.37	123.0 ± 0.90	266.8 ± 4.11	102.6 ± 1.02	n = 3	[BYB] Siemens ADVIA 2400
147.5 ± 5.77	251.0 ± 8.24	126.6 ± 3.56	276.7 ± 8.35	103.5 ± 4.46	n = 13	[DUE] Siemens Dimension EXL
148.4 ± 6.46	254.7 ± 7.59	126.2 ± 5.37	279.9 ± 11.46	104.4 ± 5.86	n = 13	[DUR] Siemens Dimension RxL
150.2 ± 6.79	256.1 ± 6.05	127.7 ± 4.55	282.4 ± 7.78	104.7 ± 5.78	n = 41	[DUT] Siemens Dimension Vista
148.3 ± 2.94	252.6 ± 4.65	125.0 ± 3.79	279.7 ± 5.38	103.2 ± 2.45	n = 11	[DUX] Siemens Dimension Xpand
<Reagents>						
151.9 ± 5.68	249.1 ± 7.29	126.2 ± 5.02	278.0 ± 10.70	104.6 ± 5.01	n = 20	[AB1] Abbott
118.6 ± 3.86	202.0 ± 5.74	102.7 ± 3.65	223.7 ± 8.02	83.6 ± 3.06	n = 29	[BC1] Beckman Coulter
128.1 ± 6.52	214.7 ± 9.44	108.4 ± 5.12	241.1 ± 10.55	89.4 ± 4.41	n = 52	[OL1] Beckman Coulter AU Series
397.9 ± 16.06	629.3 ± 15.99	349.2 ± 14.85	677.3 ± 19.13	279.7 ± 14.70	n = 46	[JJ1] Ortho Clinical Diagnostics
143.0 ± 3.45	244.6 ± 3.54	121.9 ± 2.71	269.0 ± 5.73	101.0 ± 2.90	n = 20	[RO4] Roche cobas c311/c501/c502/c701
143.4 ± 4.95	246.9 ± 6.29	122.7 ± 3.69	270.0 ± 8.73	101.2 ± 3.02	n = 27	[RO2] Roche Hitachi and Modular D/P
147.0 ± 3.48	250.6 ± 5.27	125.0 ± 3.66	273.8 ± 7.26	103.0 ± 3.14	n = 6	[RO1] Roche Integra and MIRA
148.9 ± 3.82	248.9 ± 6.83	126.5 ± 3.37	274.8 ± 6.38	104.4 ± 2.90	n = 26	[BY1] Siemens ADVIA/ADVIA Centaur
145.0 ± 8.90	249.6 ± 12.98	124.2 ± 6.85	277.7 ± 11.75	102.9 ± 6.26	n = 16	[DA5] Siemens Dimension
149.7 ± 5.77	254.9 ± 6.85	127.1 ± 4.34	280.9 ± 8.58	104.4 ± 4.80	n = 61	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

LDH Isoenzyme 1 (%)

Specimen: C81	Specimen: C82	Specimen: C83	Specimen: C84	Specimen: C85	Number	[Code] Instrument or Reagent System
31.6 ± 3.08	42.0 ± 2.24	31.4 ± 2.96	19.8 ± 2.59	31.2 ± 2.82	n = 8	[-P-] All Methods
						<Instruments>
34.1 ± 1.13	43.3 ± 0.90	33.8 ± 1.46	21.8 ± 0.41	33.5 ± 0.57	n = 4	[HLS] Helena SPIFE
29.0 ± 0.75	40.1 ± 2.35	28.8 ± 1.27	17.5 ± 1.71	28.8 ± 1.46	n = 4	[SEE] Sebia Electrophoresis
						<Reagents>
34.1 ± 1.13	43.3 ± 0.90	33.8 ± 1.46	21.8 ± 0.41	33.5 ± 0.57	n = 4	[HL1] Helena Laboratories
29.0 ± 0.75	40.1 ± 2.35	28.8 ± 1.27	17.5 ± 1.71	28.8 ± 1.46	n = 4	[SE1] Sebia