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**HEALTH**

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### Clinical Chemistry Proficiency Testing – January 23, 2012

Enclosed are results from the clinical chemistry proficiency survey shipped January 23, 2012. 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 (**C66, C67, C68, C69, C70**) 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 an asterisk (\*).

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

**Troponin I, Troponin T, and Estimated Glomerular Filtration Rate:** These analytes were included in the January 2012 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: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
162.2 ± 3.62	75.0 ± 2.48	227.9 ± 5.55	274.5 ± 6.24	55.9 ± 1.95	n = 391	[---] All Methods & Instruments
163.0 ± 1.80	77.0 ± 0.90	227.0 ± 0.00	272.7 ± 2.26	59.0 ± 0.90	n = 3	<Instruments>
159.8 ± 3.48	72.9 ± 1.77	227.2 ± 4.07	276.0 ± 5.78	54.2 ± 1.48	n = 16	[AXA] Abaxis Piccolo
161.1 ± 3.50	73.7 ± 2.03	228.0 ± 5.45	273.7 ± 6.39	55.8 ± 1.70	n = 53	[ABJ] Abbott Architect c System
161.1 ± 3.46	74.8 ± 2.37	225.7 ± 11.25	271.0 ± 12.38	53.9 ± 3.37	n = 8	[OLC] Beckman Coulter AU Chemistry System
162.7 ± 3.53	74.5 ± 0.57	228.8 ± 5.96	273.2 ± 5.65	55.3 ± 0.97	n = 6	[BCS] Beckman Coulter CX
162.4 ± 3.04	75.2 ± 1.81	230.0 ± 3.76	278.0 ± 5.08	56.0 ± 1.61	n = 21	[BCX] Beckman Coulter LX-20
160.7 ± 1.88	73.9 ± 2.15	228.5 ± 4.32	273.2 ± 5.29	54.4 ± 2.52	n = 20	[BCG] Beckman Coulter UniCel DxC 600
177.7 ± 4.96	81.7 ± 1.37	244.6 ± 8.81	288.4 ± 9.11	71.5 ± 1.86	n = 3	[BCH] Beckman Coulter UniCel DxC 800
190.3 ± 2.26	94.0 ± 1.65	254.9 ± 4.67	301.8 ± 5.30	84.2 ± 1.46	n = 4	[HEB] HemoCue B-Glucose
166.0 ± 2.54	72.8 ± 0.73	234.6 ± 0.94	280.2 ± 1.93	52.5 ± 1.46	n = 6	[HEC] HemoCue Glucose 201
163.7 ± 4.05	75.9 ± 2.50	224.4 ± 5.11	275.5 ± 5.04	54.6 ± 2.11	n = 12	[IAA] i-STAT
162.2 ± 3.13	77.0 ± 2.17	222.1 ± 4.38	272.8 ± 5.18	54.8 ± 1.56	n = 22	[JJE] Ortho Vitros 250/350/950
160.3 ± 4.29	77.0 ± 3.13	220.6 ± 5.49	270.9 ± 6.49	55.0 ± 2.24	n = 14	[JJF] Ortho Vitros 5,1FS
163.3 ± 2.43	74.5 ± 1.51	229.4 ± 4.24	276.1 ± 4.24	56.2 ± 1.04	n = 18	[JHG] Ortho Vitros 5600
160.7 ± 2.26	74.0 ± 0.90	226.0 ± 0.00	270.0 ± 1.80	54.7 ± 0.51	n = 3	[ROC] Roche cobas c501
162.7 ± 2.70	74.0 ± 0.96	231.6 ± 5.53	275.4 ± 5.36	56.6 ± 1.10	n = 7	[ROH] Roche cobas c701
161.5 ± 2.25	73.5 ± 0.83	228.9 ± 2.61	272.0 ± 3.41	55.5 ± 0.83	n = 5	[ROS] Roche Cobas INTEGRA 400
162.1 ± 3.80	74.1 ± 1.67	229.5 ± 5.01	275.9 ± 5.37	56.3 ± 1.36	n = 35	[ROT] Roche Cobas INTEGRA 800
161.6 ± 2.01	74.1 ± 1.08	228.1 ± 3.05	274.4 ± 3.43	56.1 ± 0.89	n = 19	[ROD] Roche MODULAR D/P
162.7 ± 1.37	75.3 ± 1.37	228.2 ± 3.23	276.4 ± 1.02	57.0 ± 1.80	n = 3	[BYE] Siemens ADVIA 1800
163.9 ± 3.02	77.4 ± 1.11	230.2 ± 5.33	275.9 ± 4.70	57.1 ± 1.08	n = 12	[BYB] Siemens ADVIA 2400
164.9 ± 3.45	78.1 ± 1.86	229.9 ± 4.56	277.2 ± 5.14	58.0 ± 1.44	n = 27	[DUE] Siemens Dimension EXL
160.7 ± 3.54	75.2 ± 1.47	225.4 ± 6.00	269.2 ± 5.67	55.7 ± 1.53	n = 35	[DUR] Siemens Dimension RxL
163.2 ± 2.59	77.3 ± 1.78	228.3 ± 3.91	274.7 ± 3.98	56.7 ± 1.21	n = 22	[DUT] Siemens Dimension Vista
163.0 ± 1.80	77.0 ± 0.90	227.0 ± 0.00	272.7 ± 2.26	59.0 ± 0.90	n = 3	[DUX] Siemens Dimension Xpand
159.8 ± 3.48	72.9 ± 1.77	227.2 ± 4.07	276.0 ± 5.78	54.2 ± 1.48	n = 16	<Reagents>
161.9 ± 2.98	74.6 ± 1.95	229.1 ± 4.43	275.3 ± 6.46	55.4 ± 2.07	n = 52	[AB1] Abbott
161.0 ± 3.60	73.5 ± 1.88	227.9 ± 5.59	273.6 ± 6.43	55.7 ± 1.64	n = 50	[BC1] Beckman Coulter
158.8 ± 6.73	73.8 ± 4.99	223.4 ± 8.28	270.0 ± 9.18	53.8 ± 4.19	n = 5	[OL1] Beckman Coulter AU Series
185.6 ± 7.55	89.0 ± 7.16	251.8 ± 7.55	297.2 ± 9.33	79.1 ± 7.16	n = 5	[CR1] Carolina
166.0 ± 2.54	72.8 ± 0.73	234.6 ± 0.94	280.2 ± 1.93	52.5 ± 1.46	n = 7	[HE1] i-STAT
162.3 ± 4.21	76.7 ± 2.57	222.5 ± 5.34	273.2 ± 6.00	54.7 ± 1.95	n = 49	[JJ1] Ortho Clinical Diagnostics
162.9 ± 2.54	74.3 ± 1.43	228.6 ± 4.01	274.9 ± 4.66	55.9 ± 1.12	n = 22	[RO4] Roche cobas c311/c501/c502/c701
161.9 ± 4.05	74.0 ± 1.73	229.2 ± 5.29	275.6 ± 5.88	56.3 ± 1.43	n = 36	[RO2] Roche Hitachi and Modular D/P
162.2 ± 2.65	73.8 ± 0.94	230.1 ± 4.45	273.6 ± 4.73	56.1 ± 1.18	n = 12	[RO1] Roche Integra and MIRA
161.9 ± 1.90	74.2 ± 1.10	228.2 ± 3.02	275.0 ± 3.30	56.2 ± 1.02	n = 23	[BY1] Siemens ADVIA/ADVISIA Centaur
162.9 ± 3.63	76.8 ± 2.08	228.1 ± 5.45	273.7 ± 6.33	56.8 ± 1.75	n = 96	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Urea Nitrogen (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
70.7 ± 3.31	18.4 ± 1.29	23.0 ± 1.27	27.6 ± 1.59	11.0 ± 0.78	n = 374	[---] All Methods & Instruments
71.7 ± 0.51	17.7 ± 0.51	21.7 ± 0.51	26.0 ± 0.00	11.0 ± 0.00	n = 3	<Instruments>
69.8 ± 1.61	18.4 ± 0.55	22.9 ± 0.43	27.3 ± 0.63	11.0 ± 0.00	n = 15	[AXA] Abaxis Piccolo
71.2 ± 2.03	18.7 ± 0.67	23.5 ± 0.81	28.0 ± 0.82	11.1 ± 0.41	n = 51	[ABJ] Abbott Architect c System
72.5 ± 2.40	18.7 ± 0.69	23.9 ± 1.13	27.7 ± 0.87	9.7 ± 0.90	n = 8	[OLC] Beckman Coulter AU Chemistry System
70.1 ± 2.14	15.9 ± 2.14	22.4 ± 0.94	25.4 ± 1.63	7.0 ± 1.92	n = 6	[BCS] Beckman Coulter CX
71.4 ± 1.63	18.9 ± 0.47	23.7 ± 0.73	28.8 ± 0.57	12.0 ± 0.00	n = 20	[BCX] Beckman Coulter LX-20
69.6 ± 1.20	17.0 ± 1.22	21.8 ± 0.68	26.1 ± 1.23	8.3 ± 0.77	n = 21	[BCG] Beckman Coulter UniCel DxC 600
83.6 ± 0.79	21.3 ± 0.51	25.0 ± 0.55	31.5 ± 0.57	13.0 ± 0.00	n = 6	[BCH] Beckman Coulter UniCel DxC 800
63.5 ± 1.02	16.0 ± 0.00	21.0 ± 0.55	24.3 ± 0.57	10.5 ± 0.57	n = 12	[IAA] i-STAT
63.5 ± 1.22	15.5 ± 0.61	20.4 ± 0.74	23.8 ± 0.67	10.2 ± 0.45	n = 22	[JJE] Ortho Vitros 250/350/950
62.7 ± 2.39	15.2 ± 0.47	20.3 ± 0.61	23.6 ± 0.95	10.3 ± 0.53	n = 14	[JJF] Ortho Vitros 5,1FS
71.3 ± 1.29	18.7 ± 0.51	23.1 ± 0.48	27.8 ± 0.55	11.0 ± 0.00	n = 18	[JJG] Ortho Vitros 5600
68.7 ± 3.16	18.0 ± 0.90	23.0 ± 0.90	27.4 ± 1.02	10.7 ± 0.51	n = 3	[ROC] Roche cobas c501
72.4 ± 1.37	18.6 ± 0.55	23.6 ± 0.55	28.5 ± 0.83	11.0 ± 0.00	n = 5	[ROH] Roche cobas c701
71.5 ± 2.90	18.0 ± 0.00	22.5 ± 0.83	27.0 ± 0.64	11.0 ± 0.00	n = 5	[ROS] Roche Cobas INTEGRA 400
70.5 ± 1.53	18.7 ± 0.73	23.2 ± 0.69	28.0 ± 0.69	11.1 ± 0.60	n = 34	[ROT] Roche Cobas INTEGRA 800
72.6 ± 0.99	19.0 ± 0.40	23.8 ± 0.53	28.3 ± 0.60	11.0 ± 0.00	n = 19	[ROD] Roche MODULAR D/P
72.7 ± 3.16	19.7 ± 0.51	23.6 ± 1.02	29.0 ± 0.00	11.3 ± 0.51	n = 3	[BYE] Siemens ADVIA 1800
73.0 ± 2.34	18.6 ± 0.81	23.6 ± 0.81	28.0 ± 0.83	11.2 ± 0.45	n = 11	[BYB] Siemens ADVIA 2400
72.6 ± 2.17	18.8 ± 0.71	23.5 ± 0.75	28.1 ± 1.00	11.1 ± 0.74	n = 28	[DUE] Siemens Dimension EXL
70.9 ± 2.82	18.4 ± 0.89	23.2 ± 0.96	27.6 ± 0.97	11.0 ± 0.37	n = 35	[DUR] Siemens Dimension RxL
72.0 ± 2.88	18.8 ± 0.81	23.3 ± 1.01	28.4 ± 0.97	11.1 ± 1.01	n = 21	[DUT] Siemens Dimension Vista
71.7 ± 0.51	17.7 ± 0.51	21.7 ± 0.51	26.0 ± 0.00	11.0 ± 0.00	n = 3	[DUX] Siemens Dimension Xpand
69.8 ± 1.61	18.4 ± 0.55	22.9 ± 0.43	27.3 ± 0.63	11.0 ± 0.00	n = 15	<Reagents>
70.5 ± 1.93	17.9 ± 1.40	22.8 ± 1.25	27.3 ± 1.77	9.7 ± 2.25	n = 52	[AB1] Abbott
71.2 ± 1.97	18.7 ± 0.65	23.5 ± 0.82	28.0 ± 0.83	11.1 ± 0.43	n = 50	[BC1] Beckman Coulter
72.1 ± 2.63	19.0 ± 0.75	23.7 ± 0.82	27.3 ± 0.90	10.0 ± 0.75	n = 4	[OL1] Beckman Coulter AU Series
83.6 ± 0.79	21.3 ± 0.51	25.0 ± 0.55	31.5 ± 0.57	13.0 ± 0.00	n = 6	[IA1] i-STAT
63.3 ± 1.63	15.5 ± 0.64	20.5 ± 0.77	23.9 ± 0.83	10.3 ± 0.53	n = 50	[JJ1] Ortho Clinical Diagnostics
71.2 ± 1.41	18.7 ± 0.56	23.1 ± 0.54	27.8 ± 0.56	11.0 ± 0.00	n = 22	[RO4] Roche cobas c311/c501/c502/c701
70.6 ± 1.54	18.8 ± 0.75	23.2 ± 0.71	28.0 ± 0.67	11.2 ± 0.62	n = 35	[RO2] Roche Hitachi and Modular D/P
72.2 ± 2.11	18.2 ± 0.61	23.1 ± 0.92	27.7 ± 1.07	11.0 ± 0.00	n = 10	[RO1] Roche Integra and MIRA
72.6 ± 1.23	19.0 ± 0.50	23.8 ± 0.61	28.4 ± 0.61	11.0 ± 0.00	n = 23	[BY1] Siemens ADVIA/ADVISIA Centaur
71.9 ± 2.71	18.6 ± 0.81	23.3 ± 0.89	28.0 ± 1.01	11.1 ± 0.63	n = 95	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Creatinine (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
5.27 ± 0.20	2.13 ± 0.13	1.10 ± 0.10	1.35 ± 0.14	1.87 ± 0.15	n = 380	[---] All Methods & Instruments
5.33 ± 0.35	2.14 ± 0.17	1.08 ± 0.10	1.34 ± 0.14	1.82 ± 0.10	n = 203	[---] All IDMS Traceable Methods
5.30 ± 0.19	2.14 ± 0.11	1.12 ± 0.10	1.37 ± 0.14	1.95 ± 0.17	n = 172	[---] All Non-IDMS Traceable Methods
5.30 ± 0.18	2.14 ± 0.09	1.11 ± 0.10	1.36 ± 0.14	1.95 ± 0.18	n = 148	[‐G‐] Alkaline picrate/Jaffe
5.23 ± 0.16	2.10 ± 0.09	1.07 ± 0.11	1.33 ± 0.14	1.81 ± 0.09	n = 139	[‐H‐] Alkaline picrate/Jaffe-IDMS calibration
5.96 ± 0.52	2.38 ± 0.28	1.15 ± 0.14	1.41 ± 0.15	1.90 ± 0.13	n = 24	[‐I‐] Enzymatic
5.87 ± 0.56	2.36 ± 0.26	1.11 ± 0.09	1.38 ± 0.13	1.86 ± 0.10	n = 64	[‐J‐] Enzymatic-IDMS-traceable calibration
5.38 ± 0.59	2.17 ± 0.21	1.11 ± 0.10	1.36 ± 0.15	1.78 ± 0.08	n = 4	[‐Z‐] Other
<Instruments>						
5.45 ± 0.19	2.04 ± 0.10	1.00 ± 0.00	1.30 ± 0.09	1.85 ± 0.19	n = 3	[AXA] Abaxis Piccolo
5.69 ± 0.07	2.20 ± 0.02	1.19 ± 0.02	1.59 ± 0.02	1.79 ± 0.02	n = 15	[ABJ] Abbott Architect c System
5.15 ± 0.09	2.08 ± 0.05	1.07 ± 0.04	1.31 ± 0.03	1.77 ± 0.05	n = 53	[OLC] Beckman Coulter AU Chemistry System
5.29 ± 0.14	2.13 ± 0.06	1.08 ± 0.06	1.24 ± 0.08	1.95 ± 0.08	n = 8	[BCS] Beckman Coulter CX
5.34 ± 0.12	2.09 ± 0.02	1.01 ± 0.01	1.28 ± 0.04	1.84 ± 0.06	n = 6	[BCX] Beckman Coulter LX-20
5.21 ± 0.14	2.05 ± 0.09	0.91 ± 0.08	1.12 ± 0.07	1.76 ± 0.07	n = 21	[BCG] Beckman Coulter UniCel DxC 600
5.27 ± 0.12	2.07 ± 0.07	1.03 ± 0.04	1.25 ± 0.05	1.81 ± 0.06	n = 21	[BCH] Beckman Coulter UniCel DxC 800
6.34 ± 0.17	2.38 ± 0.08	1.30 ± 0.00	1.54 ± 0.06	1.80 ± 0.00	n = 5	[IAA] i-STAT
6.11 ± 0.14	2.54 ± 0.11	1.21 ± 0.03	1.50 ± 0.00	1.96 ± 0.09	n = 12	[JJE] Ortho Vitros 250/350/950
6.29 ± 0.12	2.55 ± 0.08	1.14 ± 0.05	1.43 ± 0.05	1.92 ± 0.05	n = 22	[JJF] Ortho Vitros 5,1FS
6.24 ± 0.13	2.53 ± 0.10	1.10 ± 0.00	1.40 ± 0.00	1.90 ± 0.00	n = 14	[JJG] Ortho Vitros 5600
5.30 ± 0.11	2.11 ± 0.06	1.03 ± 0.10	1.22 ± 0.16	1.81 ± 0.06	n = 20	[ROC] Roche cobas c501
5.14 ± 0.03	2.12 ± 0.09	1.13 ± 0.09	1.40 ± 0.14	1.80 ± 0.09	n = 3	[ROH] Roche cobas c701
5.20 ± 0.09	2.10 ± 0.00	1.08 ± 0.07	1.30 ± 0.06	1.83 ± 0.07	n = 6	[ROS] Roche Cobas INTEGRA 400
5.28 ± 0.18	2.05 ± 0.12	1.05 ± 0.06	1.23 ± 0.04	1.77 ± 0.06	n = 5	[ROT] Roche Cobas INTEGRA 800
5.32 ± 0.17	2.16 ± 0.11	1.15 ± 0.13	1.41 ± 0.17	1.85 ± 0.09	n = 34	[ROD] Roche MODULAR D/P
5.23 ± 0.10	2.11 ± 0.07	1.17 ± 0.06	1.47 ± 0.05	1.74 ± 0.08	n = 19	[BYE] Siemens ADVIA 1800
5.21 ± 0.09	2.04 ± 0.05	1.08 ± 0.07	1.40 ± 0.08	1.61 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
5.32 ± 0.10	2.17 ± 0.08	1.12 ± 0.08	1.40 ± 0.06	2.10 ± 0.06	n = 11	[DUE] Siemens Dimension EXL
5.36 ± 0.14	2.18 ± 0.10	1.14 ± 0.10	1.42 ± 0.12	2.11 ± 0.12	n = 28	[DUR] Siemens Dimension RxL
5.28 ± 0.17	2.13 ± 0.10	1.11 ± 0.10	1.34 ± 0.11	2.03 ± 0.12	n = 35	[DUT] Siemens Dimension Vista
5.28 ± 0.12	2.11 ± 0.09	1.10 ± 0.09	1.35 ± 0.10	2.05 ± 0.08	n = 21	[DUX] Siemens Dimension Xpand
<Reagents>						
5.45 ± 0.19	2.04 ± 0.10	1.00 ± 0.00	1.30 ± 0.09	1.85 ± 0.19	n = 3	[AX1] Abaxis
5.69 ± 0.07	2.20 ± 0.03	1.19 ± 0.02	1.59 ± 0.02	1.79 ± 0.02	n = 16	[AB1] Abbott
5.26 ± 0.14	2.07 ± 0.07	0.99 ± 0.09	1.21 ± 0.09	1.80 ± 0.08	n = 53	[BC1] Beckman Coulter
5.16 ± 0.09	2.08 ± 0.05	1.07 ± 0.04	1.31 ± 0.02	1.77 ± 0.05	n = 50	[OL1] Beckman Coulter AU Series
5.25 ± 0.11	2.17 ± 0.06	1.05 ± 0.05	1.20 ± 0.09	2.01 ± 0.02	n = 5	[CR1] Carolina
6.35 ± 0.19	2.40 ± 0.08	1.30 ± 0.00	1.52 ± 0.04	1.82 ± 0.04	n = 4	[IA1] i-STAT
6.24 ± 0.17	2.55 ± 0.09	1.16 ± 0.06	1.44 ± 0.06	1.92 ± 0.06	n = 50	[JJ1] Ortho Clinical Diagnostics
5.28 ± 0.12	2.12 ± 0.06	1.05 ± 0.11	1.25 ± 0.17	1.82 ± 0.07	n = 24	[RO4] Roche cobas c311/c501/c502/c701
5.33 ± 0.17	2.16 ± 0.11	1.15 ± 0.13	1.41 ± 0.17	1.85 ± 0.08	n = 35	[RO2] Roche Hitachi and Modular D/P
5.23 ± 0.14	2.09 ± 0.08	1.07 ± 0.07	1.27 ± 0.06	1.80 ± 0.07	n = 11	[RO1] Roche Integra and MIRA
5.23 ± 0.10	2.10 ± 0.07	1.15 ± 0.07	1.46 ± 0.06	1.73 ± 0.09	n = 23	[BY1] Siemens ADVIA/ADVISIA Centaur
5.31 ± 0.15	2.15 ± 0.10	1.12 ± 0.10	1.37 ± 0.11	2.06 ± 0.12	n = 94	[DA5] Siemens Dimension

**Summary of Participant Performance (Mean and Standard Deviation)****Estimated Glomerular Filtration Rate (mL/min/1.73 m<sup>2</sup>)**

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
12.1 ± 1.04	34.6 ± 3.23	75.0 ± 10.18	56.7 ± 6.76	40.7 ± 4.03	n = 288	[---] All Methods & Instruments
11.7 ± 1.18	33.8 ± 3.79	72.3 ± 9.82	54.9 ± 6.14	41.3 ± 3.29	n = 165	[-A-] IDMS-traceable MDRD Study Equation
12.5 ± 0.72	35.4 ± 1.92	75.2 ± 9.77	57.4 ± 5.80	39.0 ± 4.45	n = 101	[-B-] Original MDRD Study Equation (4-variable)
12.6 ± 0.58	37.0 ± 2.18	83.4 ± 5.59	64.3 ± 5.67	44.9 ± 2.37	n = 18	[-F-] CKD-EPI Equation
11.7 ± 0.51	32.5 ± 2.74	79.5 ± 3.99	59.7 ± 6.76	40.7 ± 1.37	n = 3	[-Z-] Other

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

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Method
12 (10-14)	34 (29-40)	75 (64-95)	59 (50-68)	41 (35-48)	IDMS-traceable MDRD Study Equation
13 (10-15)	36 (30-42)	77 (65-97)	61 (51-77)	41 (34-47)	Original MDRD Study Equation
12 (10-14)	36 (30-42)	83 (62-104)	64 (54-81)	44 (37-51)	CKD-EPI Equation
16 (13-18)	39 (32-45)	75 (63-94)	61 (51-77)	44 (37-51)	Cockcroft-Gault Equation

Laboratories were asked to report Estimated Glomerular Filtration Rate (eGFR) for samples C66-C70 for a 24-year-old African American woman weighing 60 kg.

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

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

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

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

Note: the NKDEP recommends reporting estimated GFR values greater than or equal to 60 mL/min/1.73 m<sup>2</sup> as "> 60 mL/min/1.73 m<sup>2</sup>" and not as an exact number. However, ranges exceeding 60 mL/min are provided as a relative indicator of acceptability for laboratories that report numeric results above that threshold. Note that some laboratories reported results > 60 mL/min/1.73 m<sup>2</sup> for samples C68 and C69. These data were removed from the calculations of mean and standard deviation since their inclusion would have skewed results. Participant results for specimens C68 and C69 reported as > 60 mL/min/1.73 m<sup>2</sup> were considered acceptable performance.

## Summary of Participant Performance (Mean and Standard Deviation)

## Uric Acid (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
2.75 ± 0.16	7.83 ± 0.32	4.75 ± 0.22	5.69 ± 0.24	3.68 ± 0.16	n = 337	[---] All Methods & Instruments
2.92 ± 0.14	8.13 ± 0.26	4.91 ± 0.13	5.88 ± 0.20	3.81 ± 0.13	n = 15	<Instruments>
3.00 ± 0.09	8.32 ± 0.24	5.19 ± 0.15	6.15 ± 0.17	3.97 ± 0.11	n = 49	[ABJ] Abbott Architect c System
2.83 ± 0.14	7.70 ± 0.20	4.86 ± 0.19	5.84 ± 0.20	3.68 ± 0.14	n = 8	[OLC] Beckman Coulter AU Chemistry System
2.90 ± 0.09	7.85 ± 0.14	4.84 ± 0.08	5.72 ± 0.07	3.73 ± 0.07	n = 6	[BCS] Beckman Coulter CX
2.75 ± 0.06	7.71 ± 0.14	4.76 ± 0.09	5.63 ± 0.10	3.62 ± 0.09	n = 17	[BCX] Beckman Coulter LX-20
2.78 ± 0.04	7.72 ± 0.10	4.76 ± 0.06	5.63 ± 0.07	3.62 ± 0.05	n = 20	[BCG] Beckman Coulter UniCel DxC 600
2.63 ± 0.07	7.62 ± 0.15	4.60 ± 0.09	5.57 ± 0.12	3.66 ± 0.08	n = 10	[BCH] Beckman Coulter UniCel DxC 800
2.65 ± 0.07	7.71 ± 0.16	4.60 ± 0.11	5.58 ± 0.12	3.65 ± 0.11	n = 22	[JJF] Ortho Vitros 250/350/950
2.63 ± 0.08	7.70 ± 0.21	4.65 ± 0.12	5.59 ± 0.16	3.65 ± 0.11	n = 14	[JJG] Ortho Vitros 5,1FS
2.74 ± 0.07	8.05 ± 0.14	4.82 ± 0.12	5.80 ± 0.14	3.72 ± 0.07	n = 18	[ROC] Roche cobas c501
2.60 ± 0.00	7.76 ± 0.06	4.60 ± 0.00	5.60 ± 0.06	3.60 ± 0.00	n = 5	[ROT] Roche Cobas INTEGRA 800
2.68 ± 0.05	7.89 ± 0.10	4.74 ± 0.10	5.67 ± 0.08	3.65 ± 0.07	n = 33	[ROD] Roche MODULAR D/P
2.75 ± 0.07	7.89 ± 0.17	4.77 ± 0.08	5.72 ± 0.12	3.72 ± 0.07	n = 19	[BYE] Siemens ADVIA 1800
2.77 ± 0.05	8.14 ± 0.10	4.77 ± 0.14	5.87 ± 0.05	3.70 ± 0.09	n = 3	[BYB] Siemens ADVIA 2400
2.75 ± 0.07	7.82 ± 0.18	4.71 ± 0.12	5.63 ± 0.10	3.64 ± 0.06	n = 11	[DUE] Siemens Dimension EXL
2.79 ± 0.09	7.77 ± 0.18	4.71 ± 0.15	5.68 ± 0.12	3.70 ± 0.10	n = 25	[DUR] Siemens Dimension RxL
2.56 ± 0.07	7.28 ± 0.13	4.49 ± 0.08	5.32 ± 0.09	3.46 ± 0.07	n = 34	[DUT] Siemens Dimension Vista
2.81 ± 0.12	7.75 ± 0.10	4.72 ± 0.08	5.63 ± 0.08	3.69 ± 0.09	n = 15	[DUX] Siemens Dimension Xpand
2.92 ± 0.14	8.13 ± 0.26	4.91 ± 0.13	5.88 ± 0.20	3.81 ± 0.13	n = 15	<Reagents>
2.78 ± 0.06	7.73 ± 0.13	4.77 ± 0.08	5.64 ± 0.09	3.64 ± 0.08	n = 49	[AB1] Abbott
3.00 ± 0.09	8.31 ± 0.23	5.19 ± 0.16	6.14 ± 0.17	3.97 ± 0.11	n = 48	[BC1] Beckman Coulter
2.80 ± 0.18	7.69 ± 0.11	4.86 ± 0.23	5.92 ± 0.13	3.63 ± 0.15	n = 4	[OL1] Beckman Coulter AU Series
2.64 ± 0.08	7.68 ± 0.18	4.61 ± 0.11	5.58 ± 0.13	3.65 ± 0.11	n = 46	[CR1] Carolina
2.73 ± 0.07	8.04 ± 0.14	4.81 ± 0.11	5.79 ± 0.13	3.72 ± 0.06	n = 21	[JJ1] Ortho Clinical Diagnostics
2.67 ± 0.06	7.89 ± 0.11	4.74 ± 0.10	5.67 ± 0.08	3.65 ± 0.07	n = 34	[RO4] Roche cobas c311/c501/c502/c701
2.62 ± 0.05	7.76 ± 0.06	4.62 ± 0.05	5.60 ± 0.05	3.60 ± 0.05	n = 7	[RO2] Roche Hitachi and Modular D/P
2.75 ± 0.06	7.92 ± 0.18	4.77 ± 0.09	5.74 ± 0.12	3.72 ± 0.07	n = 23	[RO1] Roche Integra and MIRA
2.70 ± 0.15	7.58 ± 0.31	4.62 ± 0.16	5.52 ± 0.21	3.59 ± 0.15	n = 85	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Bilirubin (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
1.94 ± 0.17	0.71 ± 0.15	3.28 ± 0.21	3.96 ± 0.26	1.03 ± 0.12	n = 362	[---] All Methods & Instruments
1.86 ± 0.10	0.70 ± 0.09	3.10 ± 0.09	3.83 ± 0.14	1.10 ± 0.09	n = 3	<Instruments>
2.13 ± 0.20	0.73 ± 0.15	3.51 ± 0.27	4.24 ± 0.30	1.10 ± 0.14	n = 15	[AXA] Abaxis Piccolo
1.93 ± 0.07	0.80 ± 0.00	3.27 ± 0.09	3.83 ± 0.11	1.10 ± 0.00	n = 51	[ABJ] Abbott Architect c System
2.22 ± 0.18	0.93 ± 0.19	3.28 ± 0.19	4.06 ± 0.21	1.20 ± 0.13	n = 8	[OLC] Beckman Coulter AU Chemistry System
2.18 ± 0.14	0.90 ± 0.16	3.37 ± 0.12	4.12 ± 0.20	1.12 ± 0.10	n = 6	[BCS] Beckman Coulter CX
2.17 ± 0.13	0.92 ± 0.16	3.50 ± 0.13	4.22 ± 0.21	1.14 ± 0.11	n = 20	[BCX] Beckman Coulter LX-20
2.12 ± 0.11	0.89 ± 0.12	3.38 ± 0.19	4.12 ± 0.19	1.14 ± 0.11	n = 21	[BCG] Beckman Coulter UniCel DxC 600
1.92 ± 0.06	0.87 ± 0.08	3.40 ± 0.15	4.08 ± 0.16	1.18 ± 0.09	n = 11	[BCH] Beckman Coulter UniCel DxC 800
1.88 ± 0.11	0.75 ± 0.11	3.40 ± 0.13	4.11 ± 0.15	1.04 ± 0.11	n = 22	[JJE] Ortho Vitros 250/350/950
1.86 ± 0.08	0.76 ± 0.06	3.35 ± 0.17	4.09 ± 0.20	1.08 ± 0.05	n = 14	[JJF] Ortho Vitros 5,1FS
1.67 ± 0.08	0.54 ± 0.07	2.98 ± 0.11	3.62 ± 0.11	0.82 ± 0.05	n = 17	[JJG] Ortho Vitros 5600
1.54 ± 0.10	0.43 ± 0.05	2.76 ± 0.10	3.48 ± 0.15	0.73 ± 0.05	n = 3	[ROC] Roche cobas c501
1.67 ± 0.05	0.55 ± 0.06	2.92 ± 0.14	3.62 ± 0.14	0.83 ± 0.05	n = 6	[ROH] Roche cobas c701
1.62 ± 0.08	0.50 ± 0.10	2.79 ± 0.18	3.42 ± 0.23	0.80 ± 0.06	n = 5	[ROS] Roche Cobas INTEGRA 400
1.82 ± 0.07	0.60 ± 0.00	3.12 ± 0.10	3.82 ± 0.10	0.90 ± 0.00	n = 34	[ROT] Roche Cobas INTEGRA 800
2.07 ± 0.05	0.76 ± 0.05	3.50 ± 0.09	4.24 ± 0.08	1.06 ± 0.06	n = 19	[ROD] Roche MODULAR D/P
2.20 ± 0.09	0.77 ± 0.05	3.67 ± 0.14	4.47 ± 0.14	1.07 ± 0.05	n = 3	[BYE] Siemens ADVIA 1800
1.97 ± 0.08	0.66 ± 0.08	3.28 ± 0.12	3.95 ± 0.13	1.00 ± 0.08	n = 11	[BYB] Siemens ADVIA 2400
1.95 ± 0.08	0.65 ± 0.08	3.29 ± 0.09	3.98 ± 0.11	1.00 ± 0.00	n = 28	[DUE] Siemens Dimension EXL
1.94 ± 0.07	0.67 ± 0.08	3.25 ± 0.12	3.91 ± 0.16	1.01 ± 0.04	n = 35	[DUR] Siemens Dimension RxL
1.94 ± 0.07	0.67 ± 0.08	3.25 ± 0.12	3.91 ± 0.16	1.01 ± 0.04	n = 35	[DUT] Siemens Dimension Vista
1.94 ± 0.08	0.64 ± 0.08	3.29 ± 0.14	3.95 ± 0.18	1.00 ± 0.06	n = 21	[DUX] Siemens Dimension Xpand
1.86 ± 0.10	0.70 ± 0.09	3.10 ± 0.09	3.83 ± 0.14	1.10 ± 0.09	n = 3	<Reagents>
2.13 ± 0.20	0.73 ± 0.15	3.51 ± 0.27	4.24 ± 0.30	1.10 ± 0.14	n = 15	[AX1] Abaxis
2.15 ± 0.13	0.91 ± 0.15	3.44 ± 0.18	4.15 ± 0.22	1.15 ± 0.12	n = 53	[AB1] Abbott
1.93 ± 0.07	0.80 ± 0.00	3.27 ± 0.09	3.83 ± 0.11	1.10 ± 0.00	n = 49	[BC1] Beckman Coulter
2.14 ± 0.21	0.77 ± 0.21	3.18 ± 0.16	3.95 ± 0.25	1.15 ± 0.08	n = 5	[OL1] Beckman Coulter AU Series
1.88 ± 0.09	0.78 ± 0.10	3.39 ± 0.15	4.10 ± 0.17	1.09 ± 0.11	n = 49	[CR1] Carolina
1.65 ± 0.09	0.52 ± 0.09	2.95 ± 0.15	3.60 ± 0.13	0.81 ± 0.06	n = 21	[JJ1] Ortho Clinical Diagnostics
1.82 ± 0.07	0.60 ± 0.00	3.12 ± 0.10	3.82 ± 0.10	0.90 ± 0.00	n = 34	[RO4] Roche cobas c311/c501/c502/c701
1.65 ± 0.07	0.53 ± 0.08	2.87 ± 0.17	3.55 ± 0.20	0.82 ± 0.06	n = 11	[RO2] Roche Hitachi and Modular D/P
2.08 ± 0.06	0.77 ± 0.05	3.52 ± 0.11	4.26 ± 0.10	1.06 ± 0.05	n = 23	[RO1] Roche Integra and MIRA
1.95 ± 0.08	0.66 ± 0.08	3.27 ± 0.12	3.94 ± 0.15	1.00 ± 0.04	n = 95	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Phosphorus (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
3.91 ± 0.20	2.75 ± 0.18	4.85 ± 0.22	5.83 ± 0.28	3.27 ± 0.18	n = 341	[---] All Methods & Instruments
3.79 ± 0.07	2.65 ± 0.07	4.73 ± 0.11	5.69 ± 0.11	3.17 ± 0.09	n = 15	<Instruments>
3.74 ± 0.11	2.63 ± 0.09	4.66 ± 0.11	5.58 ± 0.15	3.14 ± 0.11	n = 50	[ABJ] Abbott Architect c System
4.24 ± 0.24	3.04 ± 0.18	4.93 ± 0.25	5.88 ± 0.42	3.46 ± 0.40	n = 7	[OLC] Beckman Coulter AU Chemistry System
4.08 ± 0.09	2.97 ± 0.12	5.14 ± 0.16	6.20 ± 0.13	3.52 ± 0.09	n = 6	[BCS] Beckman Coulter CX
3.83 ± 0.14	2.71 ± 0.10	4.94 ± 0.20	5.91 ± 0.21	3.24 ± 0.13	n = 18	[BCX] Beckman Coulter LX-20
4.04 ± 0.08	2.92 ± 0.08	5.05 ± 0.09	6.11 ± 0.15	3.41 ± 0.09	n = 20	[BCG] Beckman Coulter UniCel DxC 600
4.18 ± 0.15	3.06 ± 0.12	5.13 ± 0.11	6.26 ± 0.19	3.50 ± 0.12	n = 10	[BCH] Beckman Coulter UniCel DxC 800
4.30 ± 0.09	3.15 ± 0.07	5.20 ± 0.11	6.32 ± 0.12	3.51 ± 0.08	n = 22	[JJF] Ortho Vitros 250/350/950
4.30 ± 0.17	3.15 ± 0.12	5.23 ± 0.16	6.33 ± 0.19	3.55 ± 0.15	n = 14	[JJG] Ortho Vitros 5,1FS
3.95 ± 0.10	2.75 ± 0.08	4.87 ± 0.10	5.85 ± 0.10	3.29 ± 0.08	n = 19	[ROC] Roche cobas c501
3.93 ± 0.14	2.74 ± 0.10	4.87 ± 0.14	5.74 ± 0.10	3.27 ± 0.14	n = 3	[ROH] Roche cobas c701
3.93 ± 0.09	2.77 ± 0.09	4.88 ± 0.04	5.85 ± 0.12	3.30 ± 0.08	n = 4	[ROS] Roche Cobas INTEGRA 400
3.84 ± 0.11	2.68 ± 0.08	4.76 ± 0.13	5.67 ± 0.14	3.25 ± 0.08	n = 5	[ROT] Roche Cobas INTEGRA 800
3.92 ± 0.12	2.73 ± 0.11	4.84 ± 0.14	5.80 ± 0.14	3.28 ± 0.13	n = 33	[ROD] Roche MODULAR D/P
3.89 ± 0.10	2.71 ± 0.08	4.83 ± 0.09	5.80 ± 0.10	3.27 ± 0.07	n = 19	[BYE] Siemens ADVIA 1800
3.84 ± 0.10	2.73 ± 0.05	4.63 ± 0.14	5.82 ± 0.15	3.17 ± 0.05	n = 3	[BYB] Siemens ADVIA 2400
3.94 ± 0.10	2.74 ± 0.06	4.84 ± 0.11	5.79 ± 0.12	3.28 ± 0.15	n = 10	[DUE] Siemens Dimension EXL
3.86 ± 0.07	2.69 ± 0.08	4.74 ± 0.12	5.72 ± 0.15	3.19 ± 0.10	n = 25	[DUR] Siemens Dimension RxL
3.78 ± 0.13	2.65 ± 0.09	4.74 ± 0.13	5.71 ± 0.16	3.16 ± 0.14	n = 34	[DUT] Siemens Dimension Vista
3.88 ± 0.11	2.71 ± 0.09	4.79 ± 0.10	5.74 ± 0.10	3.20 ± 0.10	n = 18	[DUX] Siemens Dimension Xpand
3.79 ± 0.07	2.65 ± 0.07	4.73 ± 0.11	5.69 ± 0.11	3.17 ± 0.09	n = 15	<Reagents>
3.98 ± 0.18	2.85 ± 0.16	5.01 ± 0.17	6.03 ± 0.22	3.35 ± 0.17	n = 48	[BC1] Beckman Coulter
3.75 ± 0.11	2.63 ± 0.09	4.66 ± 0.11	5.58 ± 0.14	3.15 ± 0.11	n = 49	[OL1] Beckman Coulter AU Series
4.31 ± 0.27	3.22 ± 0.41	5.07 ± 0.31	6.02 ± 0.44	3.73 ± 0.25	n = 4	[CR1] Carolina
4.28 ± 0.14	3.14 ± 0.10	5.19 ± 0.13	6.31 ± 0.16	3.52 ± 0.12	n = 46	[JJ1] Ortho Clinical Diagnostics
3.95 ± 0.11	2.75 ± 0.08	4.87 ± 0.10	5.84 ± 0.11	3.29 ± 0.09	n = 22	[RO4] Roche cobas c311/c501/c502/c701
3.92 ± 0.12	2.74 ± 0.11	4.85 ± 0.14	5.80 ± 0.13	3.29 ± 0.13	n = 34	[RO2] Roche Hitachi and Modular D/P
3.88 ± 0.11	2.72 ± 0.09	4.82 ± 0.12	5.76 ± 0.16	3.27 ± 0.08	n = 9	[RO1] Roche Integra and MIRA
3.88 ± 0.10	2.71 ± 0.07	4.81 ± 0.11	5.80 ± 0.11	3.25 ± 0.08	n = 23	[BY1] Siemens ADVIA/ADVISIA Centaur
3.85 ± 0.13	2.68 ± 0.09	4.76 ± 0.12	5.73 ± 0.14	3.19 ± 0.13	n = 87	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Calcium (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
9.49 ± 0.28	8.58 ± 0.24	6.96 ± 0.19	8.34 ± 0.22	10.84 ± 0.33	n = 369	[---] All Methods & Instruments
9.16 ± 0.10	8.83 ± 0.05	6.92 ± 0.32	8.45 ± 0.19	11.13 ± 0.34	n = 3	<Instruments>
9.54 ± 0.17	8.52 ± 0.16	6.88 ± 0.12	8.24 ± 0.14	10.67 ± 0.17	n = 15	[AXA] Abaxis Piccolo
9.55 ± 0.13	8.59 ± 0.12	6.95 ± 0.11	8.34 ± 0.13	10.77 ± 0.17	n = 52	[ABJ] Abbott Architect c System
9.39 ± 0.36	8.64 ± 0.48	7.05 ± 0.10	8.32 ± 0.32	10.70 ± 0.35	n = 8	[OLC] Beckman Coulter AU Chemistry System
9.46 ± 0.18	8.65 ± 0.15	7.14 ± 0.15	8.35 ± 0.15	10.82 ± 0.22	n = 6	[BCS] Beckman Coulter CX
9.34 ± 0.15	8.57 ± 0.16	7.05 ± 0.13	8.32 ± 0.14	10.72 ± 0.18	n = 21	[BCX] Beckman Coulter LX-20
9.42 ± 0.16	8.65 ± 0.11	7.09 ± 0.10	8.38 ± 0.13	10.82 ± 0.17	n = 21	[BCG] Beckman Coulter UniCel DxC 600
9.54 ± 0.17	8.70 ± 0.16	6.94 ± 0.16	8.52 ± 0.18	11.48 ± 0.24	n = 12	[BCH] Beckman Coulter UniCel DxC 800
9.47 ± 0.17	8.60 ± 0.18	6.85 ± 0.12	8.39 ± 0.19	11.20 ± 0.22	n = 22	[JJE] Ortho Vitros 250/350/950
9.37 ± 0.19	8.55 ± 0.15	6.81 ± 0.16	8.34 ± 0.16	11.20 ± 0.25	n = 14	[JJF] Ortho Vitros 5,1FS
9.80 ± 0.15	8.77 ± 0.23	7.01 ± 0.13	8.49 ± 0.11	11.15 ± 0.22	n = 19	[ROG] Roche cobas c501
9.81 ± 0.29	8.81 ± 0.20	7.08 ± 0.15	8.47 ± 0.31	11.11 ± 0.29	n = 3	[ROH] Roche cobas c701
9.80 ± 0.19	8.72 ± 0.16	6.94 ± 0.08	8.45 ± 0.14	11.18 ± 0.17	n = 6	[ROS] Roche Cobas INTEGRA 400
9.57 ± 0.16	8.64 ± 0.11	6.80 ± 0.06	8.28 ± 0.04	10.87 ± 0.22	n = 5	[ROT] Roche Cobas INTEGRA 800
9.88 ± 0.21	8.87 ± 0.23	7.15 ± 0.14	8.58 ± 0.18	11.09 ± 0.24	n = 34	[ROD] Roche MODULAR D/P
9.79 ± 0.23	8.78 ± 0.22	7.07 ± 0.22	8.53 ± 0.20	10.91 ± 0.21	n = 19	[BYE] Siemens ADVIA 1800
9.75 ± 0.19	8.73 ± 0.23	7.13 ± 0.14	8.47 ± 0.23	10.66 ± 0.10	n = 3	[BYB] Siemens ADVIA 2400
9.26 ± 0.15	8.35 ± 0.19	6.83 ± 0.19	8.14 ± 0.19	10.63 ± 0.21	n = 11	[DUE] Siemens Dimension EXL
9.35 ± 0.17	8.40 ± 0.16	6.92 ± 0.16	8.27 ± 0.13	10.68 ± 0.20	n = 28	[DUR] Siemens Dimension RxL
9.20 ± 0.15	8.30 ± 0.13	6.82 ± 0.15	8.07 ± 0.15	10.46 ± 0.21	n = 35	[DUT] Siemens Dimension Vista
9.34 ± 0.23	8.42 ± 0.20	6.95 ± 0.22	8.25 ± 0.22	10.72 ± 0.25	n = 21	[DUX] Siemens Dimension Xpand
9.16 ± 0.10	8.83 ± 0.05	6.92 ± 0.32	8.45 ± 0.19	11.13 ± 0.34	n = 3	<Reagents>
9.54 ± 0.17	8.52 ± 0.16	6.88 ± 0.12	8.24 ± 0.14	10.67 ± 0.17	n = 15	[AX1] Abaxis
9.39 ± 0.18	8.62 ± 0.15	7.07 ± 0.13	8.34 ± 0.15	10.77 ± 0.20	n = 53	[AB1] Abbott
9.55 ± 0.12	8.60 ± 0.12	6.95 ± 0.11	8.34 ± 0.13	10.77 ± 0.17	n = 51	[BC1] Beckman Coulter
9.50 ± 0.18	8.75 ± 0.38	7.26 ± 0.43	8.45 ± 0.22	10.91 ± 0.23	n = 4	[OL1] Beckman Coulter AU Series
9.47 ± 0.19	8.62 ± 0.17	6.86 ± 0.15	8.41 ± 0.19	11.26 ± 0.26	n = 49	[CR1] Carolina
9.78 ± 0.15	8.77 ± 0.18	7.02 ± 0.12	8.48 ± 0.14	11.14 ± 0.18	n = 20	[JJ1] Ortho Clinical Diagnostics
9.88 ± 0.21	8.87 ± 0.23	7.15 ± 0.14	8.58 ± 0.18	11.09 ± 0.24	n = 34	[RO4] Roche cobas c311/c501/c502/c701
9.69 ± 0.21	8.67 ± 0.14	6.87 ± 0.10	8.39 ± 0.15	11.05 ± 0.25	n = 11	[RO2] Roche Hitachi and Modular D/P
9.23 ± 0.32	8.53 ± 0.23	6.90 ± 0.09	8.17 ± 0.14	10.45 ± 0.27	n = 3	[RO1] Roche Integra and MIRA
9.79 ± 0.23	8.79 ± 0.23	7.10 ± 0.23	8.53 ± 0.22	10.89 ± 0.23	n = 23	[GZ1] Sekisui Diagnostics (Genzyme)
9.28 ± 0.19	8.35 ± 0.17	6.88 ± 0.18	8.17 ± 0.18	10.60 ± 0.24	n = 95	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

**Magnesium (mg/dL)**

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
2.19 ± 0.11	1.57 ± 0.10	2.56 ± 0.10	3.08 ± 0.12	1.67 ± 0.11	n = 334	[---] All Methods & Instruments
2.20 ± 0.07	1.59 ± 0.06	2.52 ± 0.07	3.00 ± 0.06	1.61 ± 0.05	n = 14	<Instruments>
2.16 ± 0.07	1.55 ± 0.07	2.52 ± 0.07	3.04 ± 0.09	1.66 ± 0.08	n = 49	[ABJ] Abbott Architect c System
2.30 ± 0.22	1.70 ± 0.14	2.55 ± 0.15	3.22 ± 0.08	1.72 ± 0.12	n = 6	[OLC] Beckman Coulter AU Chemistry System
2.28 ± 0.07	1.65 ± 0.06	2.58 ± 0.07	3.10 ± 0.00	1.70 ± 0.00	n = 6	[BCS] Beckman Coulter CX
2.28 ± 0.05	1.64 ± 0.06	2.62 ± 0.08	3.17 ± 0.09	1.72 ± 0.07	n = 20	[BCX] Beckman Coulter LX-20
2.27 ± 0.06	1.63 ± 0.05	2.61 ± 0.09	3.18 ± 0.08	1.72 ± 0.05	n = 21	[BCG] Beckman Coulter UniCel DxC 600
2.15 ± 0.06	1.56 ± 0.08	2.52 ± 0.07	3.02 ± 0.07	1.70 ± 0.06	n = 6	[BCH] Beckman Coulter UniCel DxC 800
2.10 ± 0.07	1.57 ± 0.05	2.50 ± 0.07	3.01 ± 0.05	1.70 ± 0.00	n = 22	[JJE] Ortho Vitros 250/350/950
2.10 ± 0.00	1.59 ± 0.05	2.52 ± 0.05	3.03 ± 0.07	1.69 ± 0.10	n = 13	[JJF] Ortho Vitros 5,1FS
2.17 ± 0.07	1.60 ± 0.00	2.56 ± 0.06	3.02 ± 0.07	1.70 ± 0.00	n = 17	[JJG] Ortho Vitros 5600
2.17 ± 0.05	1.53 ± 0.05	2.53 ± 0.05	3.07 ± 0.05	1.73 ± 0.05	n = 3	[ROC] Roche cobas c501
2.17 ± 0.05	1.57 ± 0.05	2.57 ± 0.05	3.02 ± 0.10	1.68 ± 0.07	n = 6	[ROH] Roche cobas c701
2.22 ± 0.05	1.59 ± 0.04	2.60 ± 0.06	3.11 ± 0.09	1.70 ± 0.00	n = 31	[ROT] Roche Cobas INTEGRA 800
2.39 ± 0.07	1.69 ± 0.07	2.71 ± 0.07	3.25 ± 0.08	1.90 ± 0.00	n = 19	[ROD] Roche MODULAR D/P
2.37 ± 0.05	1.63 ± 0.05	2.67 ± 0.05	3.23 ± 0.05	1.83 ± 0.05	n = 3	[BYE] Siemens ADVIA 1800
2.14 ± 0.06	1.46 ± 0.07	2.55 ± 0.07	3.04 ± 0.09	1.60 ± 0.07	n = 9	[BYB] Siemens ADVIA 2400
2.18 ± 0.07	1.50 ± 0.06	2.58 ± 0.09	3.11 ± 0.09	1.63 ± 0.08	n = 27	[DUE] Siemens Dimension EXL
2.03 ± 0.12	1.35 ± 0.13	2.46 ± 0.12	3.02 ± 0.15	1.50 ± 0.12	n = 35	[DUR] Siemens Dimension RxL
2.19 ± 0.09	1.51 ± 0.07	2.61 ± 0.13	3.15 ± 0.14	1.63 ± 0.11	n = 19	[DUT] Siemens Dimension Vista
						[DUX] Siemens Dimension Xpand
2.20 ± 0.07	1.59 ± 0.06	2.52 ± 0.07	3.00 ± 0.06	1.61 ± 0.05	n = 14	<Reagents>
2.28 ± 0.06	1.64 ± 0.06	2.61 ± 0.09	3.17 ± 0.08	1.72 ± 0.06	n = 50	[AB1] Abbott
2.17 ± 0.06	1.54 ± 0.07	2.52 ± 0.07	3.04 ± 0.08	1.65 ± 0.08	n = 48	[BC1] Beckman Coulter
2.35 ± 0.27	1.75 ± 0.19	2.47 ± 0.14	3.05 ± 0.27	1.70 ± 0.18	n = 3	[OL1] Beckman Coulter AU Series
2.12 ± 0.06	1.58 ± 0.06	2.51 ± 0.06	3.02 ± 0.06	1.69 ± 0.06	n = 41	[CR1] Carolina
2.17 ± 0.06	1.58 ± 0.04	2.55 ± 0.06	3.03 ± 0.07	1.70 ± 0.00	n = 20	[JJ1] Ortho Clinical Diagnostics
2.22 ± 0.05	1.60 ± 0.00	2.60 ± 0.06	3.11 ± 0.09	1.70 ± 0.00	n = 31	[RO4] Roche cobas c311/c501/c502/c701
2.15 ± 0.06	1.57 ± 0.07	2.55 ± 0.06	3.01 ± 0.09	1.66 ± 0.07	n = 8	[RO2] Roche Hitachi and Modular D/P
2.39 ± 0.06	1.69 ± 0.07	2.70 ± 0.07	3.25 ± 0.08	1.90 ± 0.04	n = 24	[RO1] Roche Integra and MIRA
2.13 ± 0.11	1.45 ± 0.11	2.54 ± 0.12	3.08 ± 0.13	1.58 ± 0.12	n = 89	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

Iron ( $\mu\text{g/dL}$ )

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
136.9 $\pm$ 8.25	106.7 $\pm$ 8.48	94.9 $\pm$ 5.98	114.0 $\pm$ 7.94	85.4 $\pm$ 3.80	n = 270	[---] All Methods & Instruments
113.7 $\pm$ 12.19	78.1 $\pm$ 18.95	75.2 $\pm$ 15.85	86.2 $\pm$ 17.64	77.8 $\pm$ 4.21	n = 14	<Instruments>
140.4 $\pm$ 4.18	108.1 $\pm$ 2.97	95.3 $\pm$ 2.30	115.1 $\pm$ 3.10	88.0 $\pm$ 2.71	n = 47	[ABJ] Abbott Architect c System
129.5 $\pm$ 6.09	96.4 $\pm$ 5.04	90.9 $\pm$ 4.35	107.5 $\pm$ 5.45	84.3 $\pm$ 2.86	n = 6	[OLC] Beckman Coulter AU Chemistry System
130.5 $\pm$ 4.63	94.9 $\pm$ 3.82	89.4 $\pm$ 2.88	107.2 $\pm$ 2.61	82.5 $\pm$ 2.76	n = 5	[BCS] Beckman Coulter CX
133.4 $\pm$ 2.94	97.6 $\pm$ 3.59	93.8 $\pm$ 3.20	111.2 $\pm$ 3.75	84.5 $\pm$ 1.49	n = 11	[BCX] Beckman Coulter LX-20
130.2 $\pm$ 2.61	94.2 $\pm$ 3.99	89.4 $\pm$ 3.11	106.7 $\pm$ 3.36	83.1 $\pm$ 1.86	n = 15	[BCG] Beckman Coulter UniCel DxC 600
154.5 $\pm$ 5.33	124.9 $\pm$ 9.34	103.3 $\pm$ 7.94	132.2 $\pm$ 8.45	81.5 $\pm$ 5.65	n = 4	[BCH] Beckman Coulter UniCel DxC 800
155.1 $\pm$ 9.29	127.4 $\pm$ 8.35	104.6 $\pm$ 6.37	131.5 $\pm$ 7.42	90.0 $\pm$ 5.87	n = 20	[JJF] Ortho Vitros 250/350/950
155.9 $\pm$ 6.64	126.6 $\pm$ 8.31	104.1 $\pm$ 4.49	129.8 $\pm$ 8.96	88.6 $\pm$ 4.83	n = 14	[JJG] Ortho Vitros 5,1FS
139.6 $\pm$ 2.55	109.8 $\pm$ 1.71	97.8 $\pm$ 2.71	117.5 $\pm$ 1.61	87.4 $\pm$ 1.89	n = 10	[JJG] Ortho Vitros 5600
142.3 $\pm$ 4.96	110.6 $\pm$ 5.58	101.9 $\pm$ 4.38	119.4 $\pm$ 6.23	88.5 $\pm$ 5.40	n = 3	[ROC] Roche cobas c501
141.3 $\pm$ 2.26	110.7 $\pm$ 1.51	99.8 $\pm$ 1.46	120.8 $\pm$ 2.11	88.5 $\pm$ 3.77	n = 4	[ROS] Roche Cobas INTEGRA 400
137.4 $\pm$ 2.63	108.1 $\pm$ 2.77	96.3 $\pm$ 2.64	115.4 $\pm$ 2.73	85.7 $\pm$ 2.10	n = 32	[ROT] Roche Cobas INTEGRA 800
138.3 $\pm$ 2.77	109.6 $\pm$ 2.45	98.3 $\pm$ 2.28	118.1 $\pm$ 2.29	85.2 $\pm$ 1.98	n = 32	[ROD] Roche MODULAR D/P
137.2 $\pm$ 3.23	111.8 $\pm$ 2.36	98.5 $\pm$ 3.63	120.5 $\pm$ 2.74	85.5 $\pm$ 1.86	n = 18	[BYE] Siemens ADVIA 1800
130.8 $\pm$ 0.82	103.1 $\pm$ 1.33	89.6 $\pm$ 2.09	107.1 $\pm$ 1.33	83.0 $\pm$ 0.00	n = 6	[BYB] Siemens ADVIA 2400
132.0 $\pm$ 1.96	102.6 $\pm$ 2.16	88.8 $\pm$ 1.61	107.3 $\pm$ 2.07	83.3 $\pm$ 1.60	n = 16	[DUE] Siemens Dimension EXL
132.9 $\pm$ 2.51	102.9 $\pm$ 2.27	90.2 $\pm$ 2.00	108.4 $\pm$ 2.60	84.6 $\pm$ 1.63	n = 30	[DUR] Siemens Dimension RxL
130.8 $\pm$ 1.46	102.9 $\pm$ 2.27	90.2 $\pm$ 2.00	108.4 $\pm$ 2.60	84.6 $\pm$ 1.63	n = 30	[DUT] Siemens Dimension Vista
130.8 $\pm$ 1.46	103.2 $\pm$ 1.46	89.3 $\pm$ 1.58	107.5 $\pm$ 1.22	83.5 $\pm$ 1.94	n = 4	[DUX] Siemens Dimension Xpand
131.7 $\pm$ 12.28	107.0 $\pm$ 14.80	96.0 $\pm$ 4.20	115.5 $\pm$ 4.61	84.6 $\pm$ 5.94	n = 5	<Reagents>
108.8 $\pm$ 1.86	70.3 $\pm$ 0.54	66.3 $\pm$ 1.35	79.0 $\pm$ 1.71	76.4 $\pm$ 0.96	n = 9	[AB3] Abbott-Iron/6K95
131.5 $\pm$ 3.47	95.5 $\pm$ 4.19	91.0 $\pm$ 3.83	108.2 $\pm$ 4.14	83.8 $\pm$ 2.12	n = 34	[AB2] Abbott-Iron/7D68
141.3 $\pm$ 3.63	108.5 $\pm$ 3.06	95.3 $\pm$ 2.51	115.4 $\pm$ 3.17	88.6 $\pm$ 2.32	n = 38	[BC1] Beckman Coulter
126.4 $\pm$ 4.72	96.7 $\pm$ 3.37	89.0 $\pm$ 3.58	107.5 $\pm$ 4.61	82.7 $\pm$ 1.37	n = 3	[OL1] Beckman Coulter AU Series
155.4 $\pm$ 8.13	126.9 $\pm$ 8.47	104.5 $\pm$ 5.85	131.1 $\pm$ 8.17	88.6 $\pm$ 5.93	n = 38	[CR1] Carolina
138.6 $\pm$ 3.02	109.5 $\pm$ 1.85	97.1 $\pm$ 2.57	116.8 $\pm$ 2.33	86.8 $\pm$ 1.67	n = 13	[JJ1] Ortho Clinical Diagnostics
137.4 $\pm$ 2.63	108.1 $\pm$ 2.77	96.3 $\pm$ 2.64	115.4 $\pm$ 2.73	85.7 $\pm$ 2.10	n = 32	[RO4] Roche cobas c311/c501/c502/c701
141.6 $\pm$ 3.51	110.2 $\pm$ 3.29	99.7 $\pm$ 1.22	120.1 $\pm$ 4.15	88.5 $\pm$ 4.52	n = 7	[RO2] Roche Hitachi and Modular D/P
136.1 $\pm$ 4.63	107.0 $\pm$ 2.46	95.0 $\pm$ 1.86	114.1 $\pm$ 2.70	85.5 $\pm$ 2.90	n = 8	[RO1] Roche Integra and MIRA
138.2 $\pm$ 2.65	109.8 $\pm$ 2.17	98.0 $\pm$ 2.35	118.3 $\pm$ 2.20	85.1 $\pm$ 1.95	n = 21	[GZ1] Sekisui Diagnostics (Genzyme)
132.2 $\pm$ 2.47	102.9 $\pm$ 2.15	89.7 $\pm$ 2.04	108.0 $\pm$ 2.29	84.0 $\pm$ 1.90	n = 54	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Sodium (mmol/L)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
147.7 ± 2.58	159.4 ± 2.52	127.0 ± 2.07	151.9 ± 2.53	133.9 ± 1.86	n = 377	[---] All Methods & Instruments
143.8 ± 1.54	156.0 ± 0.90	122.6 ± 1.02	145.3 ± 0.51	131.6 ± 1.02	n = 3	<Instruments>
148.5 ± 1.51	159.4 ± 1.20	125.2 ± 0.83	151.2 ± 1.25	133.0 ± 0.96	n = 15	[AXA] Abaxis Piccolo
146.7 ± 1.45	157.7 ± 1.45	125.7 ± 1.36	150.4 ± 1.29	133.0 ± 1.16	n = 52	[ABJ] Abbott Architect c System
145.7 ± 2.40	157.0 ± 1.41	124.2 ± 1.36	149.1 ± 1.86	132.6 ± 0.57	n = 8	[OLC] Beckman Coulter AU Chemistry System
147.0 ± 1.60	158.9 ± 1.40	126.5 ± 1.52	150.9 ± 1.80	133.3 ± 1.63	n = 6	[BCS] Beckman Coulter CX
147.0 ± 0.94	158.9 ± 1.74	126.8 ± 1.38	150.8 ± 1.16	134.0 ± 1.13	n = 21	[BCX] Beckman Coulter LX-20
146.5 ± 1.26	158.9 ± 1.30	126.4 ± 1.44	150.6 ± 1.72	133.6 ± 1.53	n = 21	[BCG] Beckman Coulter UniCel DxC 600
146.6 ± 0.56	156.2 ± 0.92	127.6 ± 0.56	152.3 ± 0.74	131.8 ± 0.47	n = 7	[BCH] Beckman Coulter UniCel DxC 800
155.2 ± 1.48	165.2 ± 1.46	130.1 ± 1.46	158.8 ± 1.55	136.7 ± 1.08	n = 12	[IAA] i-STAT
154.6 ± 1.84	164.2 ± 2.12	128.7 ± 1.52	157.0 ± 1.81	134.5 ± 1.69	n = 22	[JJE] Ortho Vitros 250/350/950
154.6 ± 1.78	164.4 ± 2.57	128.8 ± 1.83	157.3 ± 2.88	134.8 ± 1.86	n = 14	[JJF] Ortho Vitros 5,1FS
147.2 ± 1.60	158.9 ± 0.75	125.2 ± 1.59	151.2 ± 0.99	132.7 ± 1.23	n = 18	[JJG] Ortho Vitros 5600
148.7 ± 1.37	161.2 ± 2.36	126.3 ± 1.37	152.5 ± 1.86	133.3 ± 0.51	n = 3	[ROC] Roche cobas c501
147.2 ± 1.07	159.5 ± 0.83	124.8 ± 1.07	150.6 ± 1.37	132.4 ± 1.09	n = 5	[ROH] Roche cobas c701
147.0 ± 1.00	159.0 ± 0.64	125.4 ± 1.09	150.4 ± 1.09	132.0 ± 0.93	n = 5	[ROS] Roche Cobas INTEGRA 400
148.6 ± 1.74	160.5 ± 1.67	126.1 ± 1.37	152.2 ± 1.56	133.1 ± 1.06	n = 33	[ROT] Roche Cobas INTEGRA 800
149.1 ± 0.83	159.9 ± 0.98	128.1 ± 0.82	152.8 ± 1.02	135.2 ± 0.84	n = 19	[ROD] Roche MODULAR D/P
148.3 ± 1.37	159.3 ± 0.51	127.0 ± 0.90	152.3 ± 0.51	134.3 ± 1.37	n = 3	[BYE] Siemens ADVIA 1800
147.3 ± 2.10	158.6 ± 2.00	127.2 ± 1.55	151.4 ± 2.10	134.5 ± 2.21	n = 12	[BYB] Siemens ADVIA 2400
146.8 ± 1.76	158.1 ± 1.71	127.2 ± 1.37	151.0 ± 1.66	134.0 ± 1.60	n = 27	[DUE] Siemens Dimension EXL
146.4 ± 1.58	159.1 ± 1.81	129.5 ± 1.74	153.1 ± 1.82	136.7 ± 1.57	n = 35	[DUR] Siemens Dimension RxL
148.1 ± 1.29	159.7 ± 1.85	127.9 ± 1.22	152.4 ± 1.45	135.1 ± 1.31	n = 21	[DUT] Siemens Dimension Vista
143.8 ± 1.54	156.0 ± 0.90	122.6 ± 1.02	145.3 ± 0.51	131.6 ± 1.02	n = 3	[DUX] Siemens Dimension Xpand
148.4 ± 1.52	159.3 ± 1.38	125.2 ± 0.93	151.3 ± 1.30	132.9 ± 0.97	n = 16	<Reagents>
146.8 ± 1.23	158.7 ± 1.55	126.4 ± 1.61	150.6 ± 1.64	133.6 ± 1.42	n = 53	[AB1] Abbott
146.7 ± 1.47	157.7 ± 1.40	125.7 ± 1.33	150.4 ± 1.27	133.0 ± 1.18	n = 51	[BC1] Beckman Coulter
146.9 ± 1.88	158.1 ± 2.72	125.3 ± 2.47	150.0 ± 2.25	133.5 ± 1.23	n = 4	[OL1] Beckman Coulter AU Series
146.5 ± 0.57	156.0 ± 0.90	127.7 ± 0.51	152.2 ± 0.73	131.7 ± 0.51	n = 6	[CR1] Carolina
150.0 ± 0.90	159.7 ± 1.37	128.5 ± 1.86	155.7 ± 1.37	133.6 ± 1.02	n = 3	[IA1] i-STAT
154.8 ± 1.74	164.6 ± 2.08	129.1 ± 1.74	157.7 ± 2.29	135.3 ± 1.98	n = 49	[IL1] Instrumentation Lab
147.5 ± 1.66	159.1 ± 1.23	125.5 ± 1.58	151.5 ± 1.26	132.9 ± 1.18	n = 22	[JJ1] Ortho Clinical Diagnostics
148.6 ± 1.74	160.5 ± 1.67	126.1 ± 1.37	152.2 ± 1.56	133.1 ± 1.06	n = 33	[RO4] Roche cobas c311/c501/c502/c701
147.1 ± 1.04	159.2 ± 0.81	125.1 ± 1.13	150.5 ± 1.23	132.2 ± 1.04	n = 10	[RO2] Roche Hitachi and Modular D/P
149.1 ± 1.02	159.9 ± 1.05	127.9 ± 0.90	152.8 ± 1.00	135.1 ± 0.98	n = 23	[R01] Roche Integra and MIRA
147.0 ± 1.84	158.9 ± 1.92	128.1 ± 1.77	152.1 ± 1.90	135.3 ± 1.98	n = 95	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Potassium (mmol/L)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
4.36 ± 0.12	6.13 ± 0.14	3.41 ± 0.09	4.11 ± 0.10	4.57 ± 0.10	n = 377	[---] All Methods & Instruments
4.57 ± 0.05	6.34 ± 0.10	3.50 ± 0.09	4.60 ± 0.18	4.86 ± 0.10	n = 3	<Instruments>
4.38 ± 0.08	6.10 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.53 ± 0.08	n = 15	[AXA] Abaxis Piccolo
4.35 ± 0.06	6.05 ± 0.08	3.40 ± 0.00	4.10 ± 0.00	4.54 ± 0.06	n = 52	[ABJ] Abbott Architect c System
4.29 ± 0.17	6.10 ± 0.00	3.34 ± 0.06	4.00 ± 0.15	4.56 ± 0.06	n = 8	[OLC] Beckman Coulter AU Chemistry System
4.38 ± 0.07	6.17 ± 0.10	3.36 ± 0.08	4.10 ± 0.06	4.56 ± 0.08	n = 6	[BCS] Beckman Coulter CX
4.36 ± 0.07	6.17 ± 0.07	3.39 ± 0.08	4.12 ± 0.07	4.59 ± 0.05	n = 21	[BCX] Beckman Coulter LX-20
4.35 ± 0.07	6.15 ± 0.09	3.39 ± 0.06	4.11 ± 0.07	4.58 ± 0.08	n = 21	[BCG] Beckman Coulter UniCel DxC 600
4.30 ± 0.00	6.00 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.46 ± 0.06	n = 7	[BCH] Beckman Coulter UniCel DxC 800
4.68 ± 0.04	6.44 ± 0.08	3.60 ± 0.00	4.37 ± 0.05	4.79 ± 0.05	n = 12	[IAA] i-STAT
4.64 ± 0.09	6.37 ± 0.10	3.57 ± 0.08	4.32 ± 0.09	4.72 ± 0.07	n = 22	[JJE] Ortho Vitros 250/350/950
4.61 ± 0.09	6.37 ± 0.10	3.58 ± 0.05	4.29 ± 0.07	4.69 ± 0.06	n = 14	[JJF] Ortho Vitros 5,1FS
4.26 ± 0.08	6.04 ± 0.12	3.30 ± 0.09	4.03 ± 0.11	4.49 ± 0.10	n = 17	[JJG] Ortho Vitros 5600
4.34 ± 0.10	6.13 ± 0.14	3.37 ± 0.05	4.07 ± 0.05	4.57 ± 0.05	n = 3	[ROC] Roche cobas c501
4.40 ± 0.00	6.20 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.60 ± 0.00	n = 5	[ROH] Roche cobas c701
4.40 ± 0.00	6.20 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.68 ± 0.08	n = 5	[ROS] Roche Cobas INTEGRA 400
4.30 ± 0.10	6.09 ± 0.10	3.35 ± 0.10	4.04 ± 0.08	4.51 ± 0.08	n = 33	[ROT] Roche Cobas INTEGRA 800
4.46 ± 0.06	6.23 ± 0.10	3.50 ± 0.04	4.20 ± 0.04	4.64 ± 0.06	n = 19	[ROD] Roche MODULAR D/P
4.40 ± 0.00	6.13 ± 0.05	3.40 ± 0.09	4.20 ± 0.00	4.63 ± 0.14	n = 3	[BYE] Siemens ADVIA 1800
4.33 ± 0.08	6.12 ± 0.08	3.40 ± 0.00	4.05 ± 0.07	4.54 ± 0.07	n = 11	[BYB] Siemens ADVIA 2400
4.32 ± 0.04	6.10 ± 0.07	3.39 ± 0.04	4.07 ± 0.05	4.54 ± 0.07	n = 28	[DUR] Siemens Dimension RxL
4.30 ± 0.05	6.06 ± 0.07	3.40 ± 0.00	4.11 ± 0.05	4.52 ± 0.05	n = 35	[DUT] Siemens Dimension Vista
4.33 ± 0.06	6.15 ± 0.08	3.40 ± 0.00	4.10 ± 0.00	4.57 ± 0.05	n = 21	[DUX] Siemens Dimension Xpand
4.57 ± 0.05	6.34 ± 0.10	3.50 ± 0.09	4.60 ± 0.18	4.86 ± 0.10	n = 3	<Reagents>
4.38 ± 0.08	6.10 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.52 ± 0.08	n = 16	[AX1] Abaxis
4.36 ± 0.07	6.16 ± 0.08	3.38 ± 0.07	4.11 ± 0.07	4.58 ± 0.07	n = 53	[AB1] Abbott
4.35 ± 0.06	6.05 ± 0.08	3.40 ± 0.00	4.10 ± 0.00	4.54 ± 0.06	n = 51	[BC1] Beckman Coulter
4.32 ± 0.13	6.09 ± 0.11	3.35 ± 0.06	4.05 ± 0.12	4.58 ± 0.04	n = 4	[OL1] Beckman Coulter AU Series
4.30 ± 0.00	6.00 ± 0.00	3.40 ± 0.00	4.10 ± 0.00	4.45 ± 0.06	n = 6	[CR1] Carolina
4.43 ± 0.14	6.15 ± 0.19	3.43 ± 0.14	4.10 ± 0.09	4.47 ± 0.05	n = 3	[IA1] i-STAT
4.64 ± 0.08	6.39 ± 0.10	3.59 ± 0.07	4.33 ± 0.08	4.73 ± 0.07	n = 49	[IL1] Instrumentation Lab
4.28 ± 0.10	6.06 ± 0.13	3.32 ± 0.10	4.05 ± 0.10	4.51 ± 0.11	n = 21	[JJ1] Ortho Clinical Diagnostics
4.30 ± 0.10	6.09 ± 0.10	3.35 ± 0.10	4.04 ± 0.08	4.51 ± 0.08	n = 33	[RO4] Roche cobas c311/c501/c502/c701
4.38 ± 0.04	6.20 ± 0.00	3.41 ± 0.04	4.10 ± 0.00	4.62 ± 0.07	n = 11	[RO2] Roche Hitachi and Modular D/P
4.45 ± 0.06	6.22 ± 0.10	3.49 ± 0.05	4.20 ± 0.00	4.63 ± 0.07	n = 23	[R01] Roche Integra and MIRA
4.32 ± 0.06	6.10 ± 0.08	3.40 ± 0.00	4.09 ± 0.05	4.54 ± 0.06	n = 95	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Chloride (mmol/L)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
108.4 ± 2.89	120.1 ± 2.75	101.1 ± 3.40	122.2 ± 3.36	105.3 ± 2.21	n = 372	[---] All Methods & Instruments
109.3 ± 1.37	118.5 ± 1.86	101.6 ± 1.02	120.0 ± 0.90	104.3 ± 0.51	n = 3	<Instruments>
110.2 ± 1.37	120.7 ± 1.79	103.3 ± 1.21	124.1 ± 1.62	106.5 ± 0.95	n = 14	[AXA] Abaxis Piccolo
106.7 ± 0.94	117.6 ± 1.09	100.5 ± 1.06	120.9 ± 1.09	104.9 ± 1.02	n = 51	[ABJ] Abbott Architect c System
109.2 ± 3.96	121.6 ± 3.46	103.3 ± 3.15	125.0 ± 1.54	105.6 ± 2.76	n = 8	[OLC] Beckman Coulter AU Chemistry System
110.0 ± 2.15	121.3 ± 1.98	103.4 ± 1.82	124.7 ± 2.31	106.8 ± 2.07	n = 6	[BCS] Beckman Coulter CX
110.3 ± 1.41	121.6 ± 1.97	104.1 ± 1.78	125.2 ± 1.92	107.0 ± 1.30	n = 21	[BCX] Beckman Coulter LX-20
109.5 ± 1.56	120.8 ± 1.56	103.7 ± 1.70	124.3 ± 1.87	106.4 ± 1.60	n = 21	[BCG] Beckman Coulter UniCel DxC 600
118.2 ± 1.45	127.3 ± 0.97	105.2 ± 0.73	128.6 ± 1.02	109.0 ± 0.00	n = 6	[BCH] Beckman Coulter UniCel DxC 800
111.4 ± 0.90	123.8 ± 1.38	104.7 ± 0.83	126.5 ± 1.08	108.7 ± 1.28	n = 12	[IAA] i-STAT
111.2 ± 1.28	122.9 ± 1.63	103.8 ± 1.10	125.0 ± 1.83	107.3 ± 1.29	n = 22	[JJF] Ortho Vitros 250/350/950
111.3 ± 1.02	122.9 ± 1.28	103.7 ± 0.91	125.1 ± 1.46	107.3 ± 1.02	n = 14	[JJG] Ortho Vitros 5,1FS
103.7 ± 1.79	116.0 ± 1.41	96.1 ± 1.85	119.0 ± 1.56	102.4 ± 1.15	n = 18	[ROC] Roche cobas c501
104.7 ± 0.51	116.4 ± 1.02	96.3 ± 0.51	118.9 ± 2.05	102.3 ± 1.37	n = 3	[ROH] Roche cobas c701
109.4 ± 1.33	120.7 ± 1.38	101.0 ± 1.54	122.5 ± 0.83	105.0 ± 0.00	n = 5	[ROS] Roche Cobas INTEGRA 400
109.0 ± 0.93	119.8 ± 0.80	101.3 ± 1.38	122.6 ± 1.09	105.7 ± 1.38	n = 5	[ROT] Roche Cobas INTEGRA 800
105.9 ± 1.54	118.2 ± 1.13	98.7 ± 1.37	120.5 ± 1.17	103.6 ± 1.16	n = 33	[ROD] Roche MODULAR D/P
109.0 ± 0.84	119.6 ± 0.84	101.6 ± 0.77	122.7 ± 0.81	105.3 ± 0.58	n = 19	[BYE] Siemens ADVIA 1800
107.7 ± 1.37	118.7 ± 1.37	100.0 ± 0.90	121.3 ± 1.37	103.0 ± 0.90	n = 3	[BYB] Siemens ADVIA 2400
106.4 ± 1.40	119.3 ± 1.19	96.9 ± 1.38	117.8 ± 1.24	103.4 ± 1.43	n = 11	[DUE] Siemens Dimension EXL
106.6 ± 1.33	120.0 ± 1.74	96.2 ± 1.21	118.3 ± 1.50	103.4 ± 1.36	n = 28	[DUR] Siemens Dimension RxL
110.5 ± 1.41	121.9 ± 1.68	102.4 ± 1.32	124.1 ± 1.52	106.3 ± 1.24	n = 36	[DUT] Siemens Dimension Vista
106.3 ± 1.39	119.3 ± 1.62	96.5 ± 1.27	117.4 ± 1.61	103.1 ± 1.27	n = 20	[DUX] Siemens Dimension Xpand
109.3 ± 1.37	118.5 ± 1.86	101.6 ± 1.02	120.0 ± 0.90	104.3 ± 0.51	n = 3	<Reagents>
110.2 ± 1.30	120.7 ± 1.71	103.3 ± 1.16	124.2 ± 1.56	106.6 ± 0.93	n = 15	[AX1] Abaxis
109.8 ± 1.74	121.2 ± 2.02	103.9 ± 1.93	124.8 ± 2.05	106.6 ± 1.77	n = 53	[AB1] Abbott
106.7 ± 0.95	117.5 ± 1.08	100.4 ± 1.07	120.9 ± 1.09	104.9 ± 1.03	n = 50	[BC1] Beckman Coulter
110.6 ± 3.55	122.0 ± 0.75	103.5 ± 1.22	124.8 ± 0.41	106.0 ± 1.76	n = 4	[OL1] Beckman Coulter AU Series
118.2 ± 1.45	127.3 ± 0.97	105.2 ± 0.73	128.6 ± 1.02	109.0 ± 0.00	n = 6	[CR1] Carolina
111.3 ± 1.11	123.1 ± 1.53	104.0 ± 1.11	125.5 ± 1.74	107.6 ± 1.36	n = 49	[IA1] i-STAT
103.7 ± 1.73	115.9 ± 1.44	96.0 ± 1.75	118.8 ± 1.73	102.4 ± 1.20	n = 21	[JJ1] Ortho Clinical Diagnostics
105.9 ± 1.54	118.2 ± 1.13	98.7 ± 1.37	120.5 ± 1.17	103.6 ± 1.16	n = 33	[RO4] Roche cobas c311/c501/c502/c701
108.9 ± 1.49	120.0 ± 1.41	100.9 ± 1.84	122.4 ± 1.17	105.4 ± 1.35	n = 11	[RO2] Roche Hitachi and Modular D/P
108.9 ± 0.91	119.5 ± 0.88	101.5 ± 0.88	122.6 ± 0.97	105.2 ± 0.71	n = 23	[RO1] Roche Integra and MIRA
107.9 ± 2.55	120.4 ± 1.98	98.5 ± 3.44	120.0 ± 3.65	104.4 ± 2.04	n = 95	[BY1] Siemens ADVIA/ADVIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Albumin (g/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
5.46 ± 0.23	4.22 ± 0.15	3.68 ± 0.19	4.39 ± 0.19	3.61 ± 0.20	n = 362	[---] All Methods & Instruments
5.27 ± 0.05	4.20 ± 0.00	3.77 ± 0.05	4.47 ± 0.05	3.97 ± 0.05	n = 3	<Instruments>
5.30 ± 0.07	4.16 ± 0.14	3.66 ± 0.12	4.31 ± 0.12	3.54 ± 0.07	n = 15	[AXA] Abaxis Piccolo
5.44 ± 0.13	4.23 ± 0.09	3.73 ± 0.09	4.43 ± 0.09	3.67 ± 0.09	n = 53	[ABJ] Abbott Architect c System
5.25 ± 0.20	3.95 ± 0.13	3.45 ± 0.10	4.18 ± 0.15	3.44 ± 0.14	n = 8	[OLC] Beckman Coulter AU Chemistry System
5.30 ± 0.06	4.00 ± 0.06	3.47 ± 0.05	4.20 ± 0.00	3.40 ± 0.00	n = 6	[BCS] Beckman Coulter CX
5.30 ± 0.05	3.98 ± 0.10	3.51 ± 0.07	4.20 ± 0.09	3.39 ± 0.09	n = 20	[BCX] Beckman Coulter LX-20
5.38 ± 0.11	4.06 ± 0.07	3.55 ± 0.07	4.22 ± 0.09	3.46 ± 0.06	n = 21	[BCG] Beckman Coulter UniCel DxC 600
5.27 ± 0.14	4.23 ± 0.13	3.22 ± 0.09	4.10 ± 0.12	3.26 ± 0.12	n = 11	[BCH] Beckman Coulter UniCel DxC 800
5.22 ± 0.17	4.20 ± 0.15	3.21 ± 0.13	4.09 ± 0.14	3.22 ± 0.13	n = 21	[JJE] Ortho Vitros 250/350/950
5.24 ± 0.14	4.23 ± 0.12	3.24 ± 0.11	4.11 ± 0.13	3.27 ± 0.09	n = 14	[JJF] Ortho Vitros 5,1FS
5.52 ± 0.10	4.38 ± 0.09	3.84 ± 0.09	4.56 ± 0.08	3.83 ± 0.07	n = 17	[ROC] Roche cobas c501
5.43 ± 0.14	4.37 ± 0.14	3.70 ± 0.09	4.43 ± 0.05	3.67 ± 0.05	n = 3	[ROH] Roche cobas c701
5.41 ± 0.13	4.27 ± 0.11	3.80 ± 0.15	4.45 ± 0.18	3.72 ± 0.08	n = 5	[ROS] Roche Cobas INTEGRA 400
5.30 ± 0.00	4.24 ± 0.06	3.72 ± 0.08	4.40 ± 0.10	3.70 ± 0.00	n = 5	[ROT] Roche Cobas INTEGRA 800
5.50 ± 0.10	4.37 ± 0.09	3.79 ± 0.09	4.49 ± 0.09	3.78 ± 0.09	n = 34	[ROD] Roche MODULAR D/P
5.37 ± 0.07	4.28 ± 0.06	3.75 ± 0.06	4.47 ± 0.06	3.70 ± 0.00	n = 19	[BYE] Siemens ADVIA 1800
5.44 ± 0.10	4.33 ± 0.05	3.77 ± 0.05	4.50 ± 0.00	3.74 ± 0.10	n = 3	[BYB] Siemens ADVIA 2400
5.71 ± 0.09	4.20 ± 0.07	3.71 ± 0.05	4.47 ± 0.07	3.67 ± 0.07	n = 11	[DUE] Siemens Dimension EXL
5.73 ± 0.15	4.22 ± 0.10	3.72 ± 0.08	4.50 ± 0.10	3.66 ± 0.09	n = 28	[DUR] Siemens Dimension RxL
5.79 ± 0.10	4.26 ± 0.10	3.79 ± 0.09	4.54 ± 0.10	3.72 ± 0.08	n = 35	[DUT] Siemens Dimension Vista
5.70 ± 0.11	4.20 ± 0.09	3.70 ± 0.00	4.46 ± 0.08	3.63 ± 0.07	n = 21	[DUX] Siemens Dimension Xpand
5.27 ± 0.05	4.20 ± 0.00	3.77 ± 0.05	4.47 ± 0.05	3.97 ± 0.05	n = 3	<Reagents>
5.30 ± 0.07	4.16 ± 0.14	3.66 ± 0.12	4.31 ± 0.12	3.54 ± 0.07	n = 15	[AX1] Abaxis
5.32 ± 0.11	4.01 ± 0.09	3.52 ± 0.08	4.21 ± 0.09	3.42 ± 0.08	n = 51	[AB1] Abbott
5.44 ± 0.12	4.23 ± 0.09	3.74 ± 0.08	4.43 ± 0.09	3.67 ± 0.09	n = 52	[BC1] Beckman Coulter
5.27 ± 0.09	3.93 ± 0.09	3.42 ± 0.04	4.13 ± 0.08	3.43 ± 0.09	n = 4	[OL1] Beckman Coulter AU Series
5.24 ± 0.15	4.22 ± 0.13	3.22 ± 0.11	4.10 ± 0.13	3.25 ± 0.12	n = 47	[CR1] Carolina
5.51 ± 0.11	4.38 ± 0.09	3.82 ± 0.10	4.54 ± 0.09	3.80 ± 0.09	n = 21	[JJ1] Ortho Clinical Diagnostics
5.49 ± 0.10	4.37 ± 0.09	3.79 ± 0.09	4.48 ± 0.10	3.78 ± 0.09	n = 34	[RO4] Roche cobas c311/c501/c502/c701
5.36 ± 0.11	4.25 ± 0.08	3.75 ± 0.12	4.42 ± 0.14	3.72 ± 0.06	n = 10	[RO2] Roche Hitachi and Modular D/P
5.38 ± 0.08	4.29 ± 0.06	3.75 ± 0.06	4.48 ± 0.05	3.71 ± 0.07	n = 23	[RO1] Roche Integra and MIRA
5.75 ± 0.12	4.23 ± 0.10	3.74 ± 0.09	4.50 ± 0.10	3.68 ± 0.09	n = 95	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Total Protein (g/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
8.22 ± 0.25	7.08 ± 0.22	6.04 ± 0.18	7.24 ± 0.21	5.99 ± 0.18	n = 363	[---] All Methods & Instruments
8.16 ± 0.10	7.07 ± 0.05	5.97 ± 0.05	7.17 ± 0.05	6.00 ± 0.00	n = 3	<Instruments>
8.18 ± 0.08	7.08 ± 0.06	5.95 ± 0.06	7.20 ± 0.00	5.89 ± 0.05	n = 15	[AXA] Abaxis Piccolo
8.03 ± 0.12	6.94 ± 0.13	5.92 ± 0.12	7.08 ± 0.14	5.87 ± 0.11	n = 52	[ABJ] Abbott Architect c System
8.22 ± 0.09	6.97 ± 0.09	6.06 ± 0.17	7.24 ± 0.09	6.08 ± 0.16	n = 8	[OLC] Beckman Coulter AU Chemistry System
7.94 ± 0.13	6.79 ± 0.10	5.86 ± 0.13	7.02 ± 0.13	5.81 ± 0.10	n = 7	[BCS] Beckman Coulter CX
8.08 ± 0.25	6.95 ± 0.25	5.99 ± 0.21	7.20 ± 0.23	5.90 ± 0.20	n = 19	[BCX] Beckman Coulter LX-20
7.95 ± 0.15	6.76 ± 0.13	5.86 ± 0.07	7.04 ± 0.11	5.81 ± 0.12	n = 21	[BCG] Beckman Coulter UniCel DxC 600
8.26 ± 0.26	7.11 ± 0.17	6.03 ± 0.19	7.27 ± 0.20	5.95 ± 0.21	n = 12	[BCH] Beckman Coulter UniCel DxC 800
8.45 ± 0.22	7.10 ± 0.21	6.05 ± 0.19	7.25 ± 0.23	5.91 ± 0.22	n = 22	[JJE] Ortho Vitros 250/350/950
8.42 ± 0.18	7.16 ± 0.13	6.09 ± 0.11	7.30 ± 0.15	5.98 ± 0.13	n = 14	[JJF] Ortho Vitros 5,1FS
8.16 ± 0.14	7.07 ± 0.14	6.03 ± 0.10	7.20 ± 0.14	5.98 ± 0.10	n = 17	[JJG] Ortho Vitros 5600
7.93 ± 0.14	6.85 ± 0.19	5.83 ± 0.14	7.03 ± 0.14	5.86 ± 0.10	n = 3	[ROC] Roche cobas c501
8.04 ± 0.13	7.04 ± 0.15	5.99 ± 0.13	7.10 ± 0.10	5.99 ± 0.13	n = 5	[ROH] Roche cobas c701
7.90 ± 0.00	6.90 ± 0.00	5.86 ± 0.06	7.00 ± 0.06	5.92 ± 0.04	n = 5	[ROS] Roche Cobas INTEGRA 400
8.13 ± 0.12	7.01 ± 0.10	5.98 ± 0.09	7.16 ± 0.10	5.97 ± 0.07	n = 34	[ROT] Roche Cobas INTEGRA 800
8.29 ± 0.12	7.13 ± 0.11	6.13 ± 0.09	7.35 ± 0.09	6.06 ± 0.10	n = 19	[ROD] Roche MODULAR D/P
8.33 ± 0.05	7.20 ± 0.00	6.17 ± 0.05	7.43 ± 0.05	6.10 ± 0.09	n = 3	[BYE] Siemens ADVIA 1800
8.41 ± 0.08	7.29 ± 0.07	6.18 ± 0.06	7.44 ± 0.08	6.17 ± 0.06	n = 11	[BYB] Siemens ADVIA 2400
8.45 ± 0.14	7.32 ± 0.15	6.21 ± 0.12	7.47 ± 0.14	6.18 ± 0.10	n = 28	[DUE] Siemens Dimension EXL
8.40 ± 0.09	7.28 ± 0.12	6.18 ± 0.09	7.42 ± 0.08	6.17 ± 0.08	n = 35	[DUR] Siemens Dimension RxL
8.43 ± 0.16	7.27 ± 0.10	6.21 ± 0.11	7.42 ± 0.13	6.15 ± 0.10	n = 21	[DUT] Siemens Dimension Vista
8.16 ± 0.10	7.07 ± 0.05	5.97 ± 0.05	7.17 ± 0.05	6.00 ± 0.00	n = 3	[DUX] Siemens Dimension Xpand
8.18 ± 0.08	7.08 ± 0.06	5.95 ± 0.06	7.20 ± 0.00	5.89 ± 0.05	n = 15	<Reagents>
8.02 ± 0.20	6.84 ± 0.19	5.91 ± 0.14	7.10 ± 0.17	5.85 ± 0.16	n = 52	[BC1] Beckman Coulter
8.04 ± 0.11	6.95 ± 0.12	5.92 ± 0.11	7.08 ± 0.13	5.87 ± 0.10	n = 51	[OL1] Beckman Coulter AU Series
8.35 ± 0.22	7.13 ± 0.25	6.20 ± 0.24	7.39 ± 0.31	6.20 ± 0.18	n = 4	[CR1] Carolina
8.39 ± 0.24	7.12 ± 0.19	6.06 ± 0.17	7.27 ± 0.20	5.94 ± 0.20	n = 48	[JJ1] Ortho Clinical Diagnostics
8.14 ± 0.16	7.05 ± 0.16	6.01 ± 0.12	7.17 ± 0.16	5.97 ± 0.11	n = 20	[RO4] Roche cobas c311/c501/c502/c701
8.13 ± 0.12	7.01 ± 0.10	5.98 ± 0.09	7.15 ± 0.10	5.97 ± 0.07	n = 35	[RO2] Roche Hitachi and Modular D/P
7.94 ± 0.12	6.93 ± 0.12	5.91 ± 0.11	7.04 ± 0.10	5.94 ± 0.13	n = 10	[RO1] Roche Integra and MIRA
8.30 ± 0.12	7.15 ± 0.11	6.15 ± 0.09	7.37 ± 0.10	6.07 ± 0.11	n = 23	[BY1] Siemens ADVIA/ADVISIA Centaur
8.42 ± 0.12	7.29 ± 0.12	6.20 ± 0.10	7.44 ± 0.11	6.17 ± 0.09	n = 94	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Cholesterol (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
153.2 ± 6.19	284.8 ± 8.79	147.9 ± 5.87	178.4 ± 7.66	166.4 ± 4.71	n = 332	[---] All Methods & Instruments
158.0 ± 1.80	284.5 ± 5.43	154.2 ± 2.36	184.4 ± 1.02	170.4 ± 3.87	n = 3	<Instruments>
155.9 ± 2.05	289.9 ± 2.98	148.7 ± 1.87	179.3 ± 2.20	168.8 ± 2.01	n = 14	[AXA] Abaxis Piccolo
149.6 ± 3.70	280.6 ± 6.54	142.6 ± 3.71	171.7 ± 4.08	163.1 ± 4.06	n = 57	[ABJ] Abbott Architect c System
149.8 ± 5.71	284.1 ± 7.11	146.3 ± 6.47	174.8 ± 7.49	165.0 ± 5.98	n = 9	[OLC] Beckman Coulter AU Chemistry System
150.2 ± 2.37	279.8 ± 1.27	146.2 ± 3.55	177.2 ± 3.34	163.9 ± 1.87	n = 5	[BCS] Beckman Coulter CX
153.5 ± 1.86	283.3 ± 4.11	150.0 ± 3.47	181.0 ± 3.03	166.9 ± 3.29	n = 17	[BCX] Beckman Coulter LX-20
151.7 ± 2.31	279.0 ± 6.30	147.1 ± 3.95	178.1 ± 3.24	163.9 ± 4.00	n = 18	[BCG] Beckman Coulter UniCel DxC 600
171.0 ± 0.00	294.9 ± 7.28	158.5 ± 1.61	196.7 ± 4.58	169.4 ± 3.97	n = 5	[BCH] Beckman Coulter UniCel DxC 800
171.5 ± 4.97	295.0 ± 4.34	157.4 ± 5.25	194.5 ± 5.65	166.7 ± 4.47	n = 21	[JJE] Ortho Vitros 250/350/950
172.0 ± 5.79	297.2 ± 5.41	157.4 ± 3.12	192.9 ± 5.18	168.1 ± 2.88	n = 14	[JJF] Ortho Vitros 5,1FS
157.1 ± 3.12	287.9 ± 4.37	150.0 ± 2.71	180.7 ± 3.45	168.7 ± 2.45	n = 16	[ROC] Roche cobas c501
151.8 ± 7.69	283.4 ± 8.81	147.0 ± 6.37	176.9 ± 5.22	167.0 ± 6.37	n = 3	[ROH] Roche cobas c701
154.9 ± 4.05	292.5 ± 7.50	148.2 ± 3.40	179.9 ± 3.65	169.9 ± 3.65	n = 5	[ROS] Roche Cobas INTEGRA 400
152.8 ± 0.80	286.1 ± 3.37	146.4 ± 1.37	177.8 ± 3.31	168.8 ± 4.37	n = 5	[ROT] Roche Cobas INTEGRA 800
154.4 ± 3.49	286.6 ± 7.54	148.9 ± 3.55	178.9 ± 4.30	168.0 ± 3.78	n = 35	[ROD] Roche MODULAR D/P
155.3 ± 2.71	280.2 ± 2.76	151.3 ± 3.43	182.2 ± 3.54	165.4 ± 2.83	n = 19	[BYE] Siemens ADVIA 1800
156.3 ± 2.26	284.4 ± 4.72	150.8 ± 2.36	185.5 ± 3.63	166.0 ± 1.80	n = 3	[BYB] Siemens ADVIA 2400
150.6 ± 4.15	284.1 ± 7.78	145.3 ± 4.27	175.5 ± 4.28	167.3 ± 5.12	n = 11	[DUE] Siemens Dimension EXL
151.9 ± 5.42	286.9 ± 8.53	146.8 ± 4.95	178.3 ± 4.83	169.1 ± 5.37	n = 20	[DUR] Siemens Dimension RxL
149.6 ± 5.21	277.3 ± 8.66	144.1 ± 4.66	171.9 ± 5.86	164.6 ± 5.96	n = 30	[DUT] Siemens Dimension Vista
150.7 ± 3.48	285.0 ± 6.48	146.0 ± 4.06	176.7 ± 3.54	167.0 ± 4.37	n = 14	[DUX] Siemens Dimension Xpand
158.0 ± 1.80	284.5 ± 5.43	154.2 ± 2.36	184.4 ± 1.02	170.4 ± 3.87	n = 3	<Reagents>
155.9 ± 2.05	289.9 ± 2.98	148.7 ± 1.87	179.3 ± 2.20	168.8 ± 2.01	n = 14	[AX1] Abaxis
152.4 ± 2.78	281.8 ± 5.45	148.3 ± 4.28	179.1 ± 4.16	165.3 ± 3.91	n = 46	[AB1] Abbott
149.5 ± 3.52	280.5 ± 6.38	142.4 ± 3.51	171.5 ± 3.87	163.0 ± 3.68	n = 54	[BC1] Beckman Coulter
148.8 ± 7.60	286.3 ± 13.72	145.0 ± 6.79	173.3 ± 9.18	164.9 ± 7.44	n = 4	[OL1] Beckman Coulter AU Series
171.7 ± 4.68	295.8 ± 5.43	157.5 ± 3.92	194.2 ± 5.47	167.5 ± 4.07	n = 40	[CR1] Carolina
156.8 ± 3.84	287.5 ± 5.33	149.9 ± 3.47	180.3 ± 4.04	168.6 ± 3.31	n = 19	[JJ1] Ortho Clinical Diagnostics
154.4 ± 3.33	286.8 ± 7.40	148.9 ± 3.54	179.0 ± 4.14	168.1 ± 3.56	n = 36	[RO4] Roche cobas c311/c501/c502/c701
153.6 ± 2.84	288.8 ± 6.57	147.2 ± 2.64	178.8 ± 3.74	169.3 ± 4.17	n = 10	[RO2] Roche Hitachi and Modular D/P
155.6 ± 2.54	280.7 ± 3.96	151.4 ± 3.20	182.7 ± 3.64	165.7 ± 2.70	n = 23	[RO1] Roche Integra and MIRA
150.5 ± 4.91	282.3 ± 9.17	145.3 ± 4.75	175.1 ± 5.87	166.7 ± 5.75	n = 75	[BY1] Siemens ADVIA/ADVIS Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## HDL-Cholesterol (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
40.9 ± 5.09	81.4 ± 9.01	35.2 ± 4.14	42.6 ± 5.73	71.0 ± 15.62	n = 316	[---] All Methods & Instruments
42.8 ± 6.19	85.0 ± 9.37	35.1 ± 4.91	43.3 ± 6.54	71.3 ± 8.80	n = 19	[---] All Precipitation Methods
40.8 ± 5.00	81.1 ± 8.92	35.2 ± 4.10	42.5 ± 5.67	70.9 ± 16.04	n = 297	[---] All Homogeneous (Direct) Methods
30.3 ± 1.37	69.5 ± 4.61	25.3 ± 0.51	31.4 ± 2.56	60.0 ± 1.80	n = 3	[AX1] Abaxis
43.3 ± 1.37	82.9 ± 2.94	38.6 ± 1.39	46.0 ± 1.90	51.9 ± 1.93	n = 13	[AB1] Abbott
45.6 ± 2.02	94.1 ± 4.18	39.9 ± 1.65	49.1 ± 1.95	73.4 ± 3.32	n = 38	[BC1] Beckman Coulter
44.0 ± 1.74	84.8 ± 3.55	38.5 ± 1.72	46.8 ± 1.94	53.2 ± 3.61	n = 38	[OL1] Beckman Coulter AU Series
49.3 ± 4.22	96.0 ± 7.21	44.5 ± 3.63	53.5 ± 4.53	67.7 ± 8.57	n = 3	[CR1] Carolina
44.9 ± 1.27	86.7 ± 4.43	40.9 ± 1.83	49.2 ± 1.89	55.2 ± 2.32	n = 5	[EQ1/GZ1] Equal/Sekisui(Genzyme)
47.9 ± 1.42	93.6 ± 2.91	38.4 ± 1.53	48.4 ± 1.43	67.2 ± 2.43	n = 32	[JJ1] Ortho Clinical Diagnostics
37.8 ± 1.82	74.9 ± 3.38	32.6 ± 1.50	38.3 ± 2.00	83.0 ± 4.71	n = 16	[RO4] Roche cobas c311/c501/c502/c701
38.8 ± 1.71	77.6 ± 3.28	33.6 ± 1.64	39.9 ± 1.96	85.2 ± 4.20	n = 31	[RO2] Roche Hitachi and Modular D/P
38.2 ± 1.28	76.1 ± 0.83	33.1 ± 1.12	39.0 ± 1.49	84.3 ± 4.59	n = 9	[RO1] Roche Integra and MIRA
34.5 ± 1.35	73.2 ± 3.27	30.5 ± 1.23	37.4 ± 1.40	31.4 ± 1.67	n = 22	[BY1] Siemens ADVIA/ADVISIA Centaur
37.3 ± 1.61	75.2 ± 2.65	32.2 ± 1.19	38.4 ± 1.51	80.2 ± 2.99	n = 69	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## LDL-Cholesterol (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
92.0 ± 13.33	164.0 ± 18.31	91.0 ± 12.67	109.8 ± 14.18	80.4 ± 14.53	n = 303	[---] All Methods & Instruments
99.1 ± 7.63	172.8 ± 11.30	97.5 ± 7.06	116.7 ± 9.17	83.1 ± 14.36	n = 159	[-A-] All Calculated Results Friedewald formula [LDL=TC-HDL-(Trigs÷5)]
81.9 ± 12.38	151.3 ± 18.93	82.1 ± 11.99	100.7 ± 13.94	77.1 ± 13.98	n = 141	[---] All Homogeneous (Direct) Methods
78.3 ± 1.51	142.6 ± 2.31	79.0 ± 0.75	95.6 ± 1.64	74.5 ± 1.23	n = 4	[AB1] Abbott
71.6 ± 1.87	135.8 ± 4.03	72.8 ± 2.38	89.8 ± 2.72	69.4 ± 1.94	n = 17	[BC1] Beckman Coulter
67.3 ± 3.92	125.9 ± 6.06	68.5 ± 3.77	82.8 ± 2.87	65.1 ± 3.57	n = 19	[OL1] Beckman Coulter AU Series
74.8 ± 8.97	136.1 ± 15.46	75.1 ± 9.05	91.8 ± 9.59	71.5 ± 9.14	n = 13	[EQ1/GZ1] Equal/Sekisui(Genzyme)
82.4 ± 2.42	165.3 ± 4.61	81.7 ± 2.01	103.4 ± 3.00	67.7 ± 2.43	n = 15	[JJ1] Ortho Clinical Diagnostics
107.0 ± 4.18	181.6 ± 6.59	106.5 ± 3.77	128.4 ± 4.85	109.4 ± 3.79	n = 6	[RO4] Roche cobas c311/c501/c502/c701
103.5 ± 2.22	177.1 ± 4.67	103.3 ± 3.10	125.2 ± 2.66	105.5 ± 2.42	n = 16	[RO2] Roche Hitachi and Modular D/P
79.9 ± 8.09	146.2 ± 9.60	81.2 ± 3.61	98.3 ± 8.65	92.8 ± 1.46	n = 4	[RO1] Roche Integra and MIRA
81.1 ± 5.30	156.9 ± 9.05	81.6 ± 5.43	101.2 ± 6.80	71.6 ± 4.53	n = 12	[BY1] Siemens ADVIA/ADVISIA Centaur
87.5 ± 4.81	155.3 ± 7.74	87.3 ± 4.90	106.1 ± 5.36	83.9 ± 6.38	n = 33	[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Triglycerides (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
79.4 ± 4.91	156.0 ± 6.92	80.7 ± 4.94	106.2 ± 5.80	67.8 ± 4.35	n = 324	[---] All Methods & Instruments
90.3 ± 1.37	177.8 ± 4.10	91.7 ± 1.37	119.0 ± 2.70	78.5 ± 1.86	n = 3	<Instruments>
78.8 ± 2.38	150.1 ± 3.09	84.0 ± 2.41	107.5 ± 3.02	65.8 ± 2.06	n = 15	[AXA] Abaxis Piccolo
76.5 ± 1.88	152.9 ± 3.71	76.9 ± 2.15	101.2 ± 2.46	65.5 ± 1.95	n = 55	[ABJ] Abbott Architect c System
89.0 ± 12.96	179.8 ± 22.23	84.8 ± 6.97	112.8 ± 7.16	69.7 ± 6.43	n = 8	[OLC] Beckman Coulter AU Chemistry System
82.1 ± 1.83	159.9 ± 1.13	80.5 ± 1.62	107.3 ± 2.77	70.3 ± 2.18	n = 5	[BCS] Beckman Coulter CX
81.0 ± 3.57	161.7 ± 5.26	81.8 ± 3.26	109.1 ± 3.24	71.5 ± 2.47	n = 14	[BCX] Beckman Coulter LX-20
80.8 ± 2.17	161.1 ± 4.83	80.1 ± 2.60	106.6 ± 2.85	70.2 ± 3.03	n = 15	[BCG] Beckman Coulter UniCel DxC 600
85.8 ± 0.80	161.0 ± 1.54	83.0 ± 0.00	112.6 ± 1.09	73.6 ± 0.55	n = 5	[BCH] Beckman Coulter UniCel DxC 800
82.4 ± 2.32	154.5 ± 3.94	78.8 ± 1.96	106.9 ± 3.13	69.6 ± 1.64	n = 21	[JJE] Ortho Vitros 250/350/950
81.9 ± 2.93	154.1 ± 5.14	79.3 ± 2.91	106.7 ± 3.77	70.0 ± 2.04	n = 14	[JJF] Ortho Vitros 5,1FS
80.8 ± 1.79	159.1 ± 3.51	85.0 ± 2.18	108.2 ± 2.53	70.7 ± 2.17	n = 16	[ROC] Roche cobas c501
79.3 ± 0.51	157.0 ± 4.60	85.7 ± 1.37	107.3 ± 2.26	70.5 ± 1.86	n = 3	[ROH] Roche cobas c701
76.1 ± 1.14	151.2 ± 6.53	78.5 ± 3.40	100.1 ± 4.35	67.2 ± 0.41	n = 5	[ROS] Roche Cobas INTEGRA 400
75.5 ± 1.22	153.0 ± 2.28	78.7 ± 0.90	100.8 ± 0.41	67.5 ± 1.22	n = 4	[ROT] Roche Cobas INTEGRA 800
78.4 ± 2.97	155.0 ± 4.49	82.8 ± 3.43	106.7 ± 4.14	67.4 ± 2.95	n = 35	[ROD] Roche MODULAR D/P
80.4 ± 2.58	155.2 ± 2.72	82.0 ± 2.48	107.8 ± 2.37	67.4 ± 2.56	n = 19	[BYE] Siemens ADVIA 1800
79.7 ± 1.37	156.7 ± 3.07	82.5 ± 2.74	107.3 ± 4.06	65.2 ± 1.54	n = 3	[BYB] Siemens ADVIA 2400
75.0 ± 2.23	151.8 ± 2.64	77.6 ± 2.65	103.1 ± 2.69	61.7 ± 2.08	n = 11	[DUE] Siemens Dimension EXL
74.0 ± 2.88	151.6 ± 5.96	76.9 ± 2.57	101.7 ± 3.95	61.1 ± 3.09	n = 20	[DUR] Siemens Dimension RxL
86.6 ± 3.03	166.8 ± 4.43	89.0 ± 2.39	115.6 ± 3.03	72.2 ± 2.16	n = 32	[DUT] Siemens Dimension Vista
73.0 ± 5.41	151.0 ± 6.90	76.6 ± 3.88	101.9 ± 4.37	61.2 ± 2.04	n = 12	[DUX] Siemens Dimension Xpand
90.3 ± 1.37	177.8 ± 4.10	91.7 ± 1.37	119.0 ± 2.70	78.5 ± 1.86	n = 3	<Reagents>
78.8 ± 2.38	150.1 ± 3.09	84.0 ± 2.41	107.5 ± 3.02	65.8 ± 2.06	n = 15	[AX1] Abaxis
81.1 ± 3.34	161.3 ± 5.48	80.6 ± 2.87	107.6 ± 3.39	70.2 ± 3.22	n = 40	[AB1] Abbott
76.4 ± 1.75	152.7 ± 3.57	76.9 ± 2.02	101.2 ± 2.30	65.6 ± 1.79	n = 51	[BC1] Beckman Coulter
93.5 ± 15.09	191.4 ± 21.77	89.7 ± 9.36	120.8 ± 20.15	74.4 ± 3.24	n = 5	[OL1] Beckman Coulter AU Series
82.7 ± 2.83	155.2 ± 4.86	79.5 ± 2.81	107.5 ± 3.85	70.2 ± 2.23	n = 40	[CR1] Carolina
80.5 ± 1.72	158.8 ± 3.83	85.1 ± 2.06	108.1 ± 2.51	70.7 ± 2.09	n = 19	[JJ1] Ortho Clinical Diagnostics
78.1 ± 2.93	154.7 ± 4.73	82.5 ± 3.45	106.5 ± 4.32	67.3 ± 2.90	n = 35	[RO4] Roche cobas c311/c501/c502/c701
75.8 ± 1.25	153.4 ± 3.23	79.1 ± 2.60	101.2 ± 3.05	67.5 ± 1.17	n = 10	[RO2] Roche Hitachi and Modular D/P
80.2 ± 2.27	155.5 ± 2.70	82.1 ± 2.46	107.9 ± 2.73	67.0 ± 2.45	n = 23	[RO1] Roche Integra and MIRA
79.4 ± 7.75	158.3 ± 10.14	82.1 ± 7.46	108.1 ± 8.56	65.7 ± 6.56	n = 74	[BY1] Siemens ADVIA/ADVIS Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

Homocysteine ( $\mu\text{mol/L}$ )

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
27.32 ± 2.41	10.55 ± 1.43	14.49 ± 1.54	17.76 ± 1.66	7.90 ± 3.29	n = 124	[---] All Methods & Instruments
27.93 ± 0.68	10.86 ± 0.33	14.97 ± 0.65	17.94 ± 0.53	3.31 ± 0.31	n = 10	<Instruments>
26.36 ± 2.25	10.98 ± 1.06	13.77 ± 0.94	16.50 ± 1.37	3.80 ± 0.44	n = 4	[ABH] Abbott Architect i System
28.88 ± 1.09	11.51 ± 0.53	15.72 ± 0.79	19.08 ± 0.91	11.02 ± 0.55	n = 23	[ABB] Abbott AxSym
30.62 ± 0.45	11.99 ± 0.51	16.27 ± 0.49	19.47 ± 0.40	11.61 ± 0.56	n = 4	[OLC] Beckman Coulter AU Chemistry System
27.57 ± 1.40	11.23 ± 0.77	14.26 ± 0.93	17.51 ± 0.80	10.40 ± 0.43	n = 4	[BCH] Beckman Coulter UniCel DxC 800
28.89 ± 1.08	11.82 ± 0.33	16.12 ± 1.02	19.63 ± 1.04	10.93 ± 1.14	n = 6	[JJG] Ortho Vitros 5600
24.78 ± 1.30	8.97 ± 0.69	13.05 ± 0.73	16.46 ± 0.82	7.39 ± 0.54	n = 24	[ROD] Roche MODULAR D/P
25.68 ± 1.92	9.42 ± 0.70	12.85 ± 0.94	15.60 ± 1.81	7.87 ± 0.72	n = 7	[COB] Siemens ADVIA Centaur
27.75 ± 2.07	10.07 ± 1.24	14.37 ± 1.09	17.58 ± 1.28	3.98 ± 0.64	n = 20	[DUT] Siemens Dimension Vista
26.19 ± 1.89	9.75 ± 0.19	13.80 ± 1.09	17.00 ± 1.27	4.64 ± 0.26	n = 3	[DPD] Siemens Immulite 2000
27.83 ± 1.08	10.89 ± 0.59	14.71 ± 0.85	17.76 ± 0.78	3.42 ± 0.35	n = 14	[DPE] Siemens Immulite 2500
29.47 ± 1.56	12.68 ± 0.81	15.87 ± 0.54	19.34 ± 0.29	11.47 ± 0.16	n = 9	<Reagents>
28.90 ± 1.28	11.42 ± 0.49	15.71 ± 0.86	18.99 ± 1.01	10.81 ± 0.71	n = 26	[CR1] Carolina
26.73 ± 1.73	10.79 ± 0.88	13.66 ± 1.14	16.86 ± 1.13	9.92 ± 0.78	n = 6	[DZ1] Diazyme
24.78 ± 1.30	8.97 ± 0.69	13.05 ± 0.73	16.46 ± 0.82	7.39 ± 0.54	n = 24	[JJ1] Ortho Clinical Diagnostics
26.21 ± 1.53	9.59 ± 0.56	13.05 ± 0.86	15.91 ± 1.80	8.02 ± 0.68	n = 6	[BY1] Siemens ADVIA/ADVIA Centaur
27.55 ± 2.13	9.99 ± 1.14	14.29 ± 1.11	17.50 ± 1.28	4.09 ± 0.66	n = 23	[DA5] Siemens Dimension
						[DP5] Siemens Immulite

## Summary of Participant Performance (Mean and Standard Deviation)

Troponin I ( $\mu\text{g/L}$ )

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
0.018 $\pm$ 0.018	4.899 $\pm$ 1.220	0.391 $\pm$ 0.119	0.435 $\pm$ 0.107	0.018 $\pm$ 0.018	n = 226	[---] All Methods & Instruments
0.010 $\pm$ 0.006	33.514 $\pm$ 2.048	2.737 $\pm$ 0.194	3.154 $\pm$ 0.239	0.009 $\pm$ 0.007	n = 17	<Instruments>
0.010 $\pm$ 0.000	4.266 $\pm$ 0.419	0.334 $\pm$ 0.036	0.374 $\pm$ 0.041	0.010 $\pm$ 0.000	n = 31	[ABH] Abbott Architect i System
0.050 $\pm$ 0.000	3.746 $\pm$ 0.890	0.050 $\pm$ 0.000	0.062 $\pm$ 0.011	0.050 $\pm$ 0.000	n = 10	[SAA] Beckman Coulter ACCESS
0.037 $\pm$ 0.043	28.447 $\pm$ 4.311	1.805 $\pm$ 0.276	2.070 $\pm$ 0.214	0.037 $\pm$ 0.043	n = 4	[BSA] BioSite Triage
0.010 $\pm$ 0.000	19.076 $\pm$ 0.858	1.573 $\pm$ 0.053	1.730 $\pm$ 0.079	0.010 $\pm$ 0.000	n = 12	[IAA] i-STAT
0.010 $\pm$ 0.000	18.665 $\pm$ 1.021	1.586 $\pm$ 0.084	1.758 $\pm$ 0.073	0.010 $\pm$ 0.000	n = 13	[JJG] Ortho Vitros 5600
0.010 $\pm$ 0.006	6.665 $\pm$ 0.523	0.366 $\pm$ 0.033	0.408 $\pm$ 0.034	0.010 $\pm$ 0.006	n = 41	[JJC] Ortho Vitros ECi/ECiQ
0.055 $\pm$ 0.034	6.953 $\pm$ 0.722	0.407 $\pm$ 0.052	0.422 $\pm$ 0.076	0.055 $\pm$ 0.034	n = 4	[COB] Siemens ADVIA Centaur
0.076 $\pm$ 0.038	4.554 $\pm$ 0.286	0.545 $\pm$ 0.030	0.566 $\pm$ 0.044	0.066 $\pm$ 0.045	n = 9	[BYP] Siemens ADVIA Centaur CP
0.040 $\pm$ 0.000	4.624 $\pm$ 0.380	0.354 $\pm$ 0.062	0.417 $\pm$ 0.062	0.040 $\pm$ 0.000	n = 20	[DUE] Siemens Dimension EXL
0.020 $\pm$ 0.000	4.495 $\pm$ 0.289	0.537 $\pm$ 0.035	0.570 $\pm$ 0.036	0.020 $\pm$ 0.000	n = 33	[DUR] Siemens Dimension RxL
0.023 $\pm$ 0.028	4.563 $\pm$ 0.347	0.353 $\pm$ 0.053	0.428 $\pm$ 0.036	0.023 $\pm$ 0.028	n = 11	[DUT] Siemens Dimension Vista
0.200 $\pm$ 0.000	11.374 $\pm$ 0.991	1.043 $\pm$ 0.058	1.184 $\pm$ 0.048	0.200 $\pm$ 0.000	n = 4	[DUX] Siemens Dimension Xpand
0.060 $\pm$ 0.000	34.252 $\pm$ 1.796	3.071 $\pm$ 0.241	3.541 $\pm$ 0.263	0.060 $\pm$ 0.000	n = 6	[DPD] Siemens Immulite 2000
						[TOM] Tosoh Bioscience
0.009 $\pm$ 0.007	33.069 $\pm$ 2.347	2.705 $\pm$ 0.254	3.086 $\pm$ 0.386	0.009 $\pm$ 0.007	n = 22	<Reagents>
0.010 $\pm$ 0.000	4.253 $\pm$ 0.405	0.334 $\pm$ 0.034	0.373 $\pm$ 0.040	0.010 $\pm$ 0.006	n = 33	[AB1] Abbott
0.050 $\pm$ 0.000	3.746 $\pm$ 0.890	0.050 $\pm$ 0.000	0.062 $\pm$ 0.011	0.050 $\pm$ 0.000	n = 10	[BC1] Beckman Coulter
0.010 $\pm$ 0.000	18.870 $\pm$ 0.973	1.579 $\pm$ 0.069	1.744 $\pm$ 0.079	0.010 $\pm$ 0.000	n = 25	[BS1] Biosite Diagnostics
0.305 $\pm$ 0.006	2.506 $\pm$ 0.115	0.321 $\pm$ 0.039	0.336 $\pm$ 0.039	0.305 $\pm$ 0.006	n = 4	[JJ1] Ortho Clinical Diagnostics
0.010 $\pm$ 0.006	6.684 $\pm$ 0.544	0.369 $\pm$ 0.038	0.410 $\pm$ 0.037	0.010 $\pm$ 0.006	n = 45	[RO3] Roche Elecsys/Modular E/e601/e411
0.036 $\pm$ 0.023	4.596 $\pm$ 0.366	0.357 $\pm$ 0.067	0.425 $\pm$ 0.055	0.034 $\pm$ 0.023	n = 32	[BY1] Siemens ADVIA/ADVIa Centaur
0.032 $\pm$ 0.032	4.510 $\pm$ 0.295	0.539 $\pm$ 0.034	0.571 $\pm$ 0.038	0.020 $\pm$ 0.000	n = 41	[DA5] Siemens Dimension
0.200 $\pm$ 0.000	10.839 $\pm$ 1.756	1.012 $\pm$ 0.109	1.184 $\pm$ 0.049	0.200 $\pm$ 0.000	n = 5	[DA6] Siemens Dimension LOCI
0.060 $\pm$ 0.000	33.864 $\pm$ 1.557	3.033 $\pm$ 0.257	3.491 $\pm$ 0.281	0.060 $\pm$ 0.000	n = 5	[DP5] Siemens Immulite
						[TO2] Tosoh ST AIA

## Summary of Participant Performance (Mean and Standard Deviation)

Troponin T ( $\mu\text{g/L}$ )

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
0.010 $\pm$ 0.000	2.190 $\pm$ 0.175	0.362 $\pm$ 0.024	0.422 $\pm$ 0.030	0.010 $\pm$ 0.000	n = 34	[---] All Methods & Instruments
0.847 $\pm$ 1.531	1.535 $\pm$ 1.112	0.254 $\pm$ 0.184	0.305 $\pm$ 0.219	2.493 $\pm$ 4.541	n = 3	<Instruments>
0.010 $\pm$ 0.000	2.263 $\pm$ 0.142	0.367 $\pm$ 0.022	0.439 $\pm$ 0.023	0.010 $\pm$ 0.000	n = 8	[ROF] Roche cobas e411
0.010 $\pm$ 0.000	2.278 $\pm$ 0.162	0.369 $\pm$ 0.030	0.421 $\pm$ 0.032	0.010 $\pm$ 0.000	n = 11	[ROA] Roche cobas e601
0.010 $\pm$ 0.000	2.065 $\pm$ 0.111	0.355 $\pm$ 0.020	0.410 $\pm$ 0.023	0.010 $\pm$ 0.000	n = 10	[BME] Roche Elecsys
0.010 $\pm$ 0.000	2.181 $\pm$ 0.182	0.360 $\pm$ 0.024	0.418 $\pm$ 0.030	0.010 $\pm$ 0.000	n = 30	[ROE] Roche MODULAR E
						<Reagents>
						[RO3] Roche Elecsys/Modular E/e601/e411

## Summary of Participant Performance (Mean and Standard Deviation)

## Alanine Aminotransferase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
173.8 ± 10.65	44.7 ± 6.81	75.5 ± 9.01	90.0 ± 8.97	146.9 ± 12.45	n = 363	[---] All Methods & Instruments
155.0 ± 0.90	42.6 ± 2.56	71.6 ± 3.87	81.5 ± 1.86	132.1 ± 3.72	n = 3	<Instruments>
174.3 ± 4.98	41.0 ± 1.82	72.0 ± 2.30	87.3 ± 2.81	144.2 ± 3.69	n = 15	[AXA] Abaxis Piccolo
152.7 ± 3.91	37.7 ± 1.68	64.0 ± 1.87	77.5 ± 1.96	128.0 ± 3.56	n = 52	[ABJ] Abbott Architect c System
166.2 ± 7.00	41.5 ± 1.93	70.9 ± 4.61	85.1 ± 4.91	141.3 ± 8.83	n = 8	[OLC] Beckman Coulter AU Chemistry System
168.3 ± 4.29	42.6 ± 1.34	72.0 ± 1.94	86.4 ± 1.95	139.7 ± 3.07	n = 7	[BCS] Beckman Coulter CX
170.7 ± 3.38	42.9 ± 1.06	72.5 ± 1.84	87.4 ± 1.91	142.0 ± 2.68	n = 19	[BCX] Beckman Coulter LX-20
170.9 ± 3.76	43.2 ± 1.28	73.0 ± 1.95	87.5 ± 2.35	142.8 ± 3.76	n = 20	[BCG] Beckman Coulter UniCel DxC 600
180.2 ± 4.45	52.3 ± 3.41	89.4 ± 4.01	102.5 ± 4.19	169.5 ± 4.12	n = 12	[BCH] Beckman Coulter UniCel DxC 800
179.5 ± 3.93	54.7 ± 3.33	90.8 ± 3.69	102.5 ± 3.52	168.0 ± 4.97	n = 22	[JJE] Ortho Vitros 250/350/950
178.8 ± 4.16	53.6 ± 1.97	88.2 ± 4.23	101.0 ± 5.16	168.6 ± 3.97	n = 14	[JJF] Ortho Vitros 5,1FS
173.6 ± 5.31	41.4 ± 1.32	73.1 ± 2.82	87.7 ± 2.87	146.3 ± 4.67	n = 17	[JGJ] Ortho Vitros 5600
171.7 ± 3.16	40.7 ± 0.51	71.7 ± 2.26	86.1 ± 2.86	143.0 ± 0.90	n = 3	[ROC] Roche cobas c501
172.5 ± 5.73	39.2 ± 1.41	71.6 ± 2.61	85.9 ± 3.10	145.8 ± 4.78	n = 6	[ROH] Roche cobas c701
166.6 ± 8.43	39.3 ± 1.81	69.4 ± 3.23	84.0 ± 3.74	139.6 ± 7.89	n = 5	[ROS] Roche Cobas INTEGRA 400
171.0 ± 5.19	41.5 ± 1.79	71.8 ± 2.44	86.1 ± 2.96	142.5 ± 4.51	n = 34	[ROT] Roche Cobas INTEGRA 800
182.4 ± 3.09	45.6 ± 2.33	77.2 ± 1.54	92.8 ± 2.20	151.3 ± 3.17	n = 19	[ROD] Roche MODULAR D/P
181.1 ± 9.28	44.7 ± 1.37	76.2 ± 5.00	93.3 ± 5.09	149.5 ± 7.22	n = 3	[BYE] Siemens ADVIA 1800
182.3 ± 4.02	55.0 ± 1.20	85.6 ± 1.49	99.4 ± 2.07	156.4 ± 2.17	n = 12	[BYB] Siemens ADVIA 2400
183.0 ± 6.67	54.6 ± 2.84	84.9 ± 2.75	99.7 ± 3.41	155.4 ± 4.45	n = 27	[DUE] Siemens Dimension EXL
177.6 ± 3.11	44.5 ± 1.59	75.6 ± 1.91	90.8 ± 2.00	148.0 ± 2.30	n = 35	[DUR] Siemens Dimension RxL
183.0 ± 4.89	55.3 ± 1.97	85.6 ± 2.68	100.2 ± 3.08	156.8 ± 3.53	n = 20	[DUT] Siemens Dimension Vista
155.0 ± 0.90	42.6 ± 2.56	71.6 ± 3.87	81.5 ± 1.86	132.1 ± 3.72	n = 3	[DUX] Siemens Dimension Xpand
174.3 ± 4.98	41.0 ± 1.82	72.0 ± 2.30	87.3 ± 2.81	144.2 ± 3.69	n = 15	<Reagents>
170.1 ± 4.20	42.9 ± 1.30	72.4 ± 2.29	87.1 ± 2.40	141.6 ± 3.77	n = 53	[AB1] Abbott
152.8 ± 3.82	37.7 ± 1.56	64.0 ± 1.70	77.5 ± 1.84	128.1 ± 3.49	n = 50	[BC1] Beckman Coulter
166.6 ± 10.24	41.0 ± 4.04	73.1 ± 7.16	87.4 ± 6.89	145.4 ± 11.23	n = 4	[OL1] Beckman Coulter AU Series
179.5 ± 4.12	53.8 ± 3.52	89.7 ± 4.20	102.0 ± 4.36	168.5 ± 4.51	n = 49	[CR1] Carolina
172.9 ± 5.24	41.1 ± 1.29	72.6 ± 2.91	87.2 ± 3.16	145.3 ± 4.57	n = 21	[JJ1] Ortho Clinical Diagnostics
170.9 ± 5.18	41.4 ± 1.78	71.7 ± 2.48	85.9 ± 2.99	142.4 ± 4.45	n = 35	[RO4] Roche cobas c311/c501/c502/c701
169.9 ± 7.90	39.2 ± 1.58	70.6 ± 3.25	85.0 ± 3.65	143.0 ± 7.30	n = 11	[RO2] Roche Hitachi and Modular D/P
182.0 ± 4.47	45.3 ± 2.43	77.4 ± 2.34	92.7 ± 3.00	151.1 ± 4.01	n = 23	[RO1] Roche Integra and MIRA
180.7 ± 5.41	51.2 ± 6.03	81.8 ± 5.82	96.5 ± 5.70	153.0 ± 5.59	n = 83	[BY1] Siemens ADVIA/ADVIS Centaur
178.8 ± 2.34	49.5 ± 6.52	78.3 ± 5.66	94.0 ± 4.65	149.9 ± 3.52	n = 9	[DA5] Siemens Dimension
						[DA8] Siemens Dimension IFCC Standardized

## Summary of Participant Performance (Mean and Standard Deviation)

## Aspartate Aminotransferase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
380.6 ± 20.39	74.3 ± 4.10	65.4 ± 3.92	78.8 ± 4.62	133.2 ± 7.65	n = 363	[---] All Methods & Instruments
376.2 ± 4.11	76.3 ± 0.51	66.7 ± 1.37	80.7 ± 1.37	131.5 ± 1.86	n = 3	<Instruments>
380.5 ± 8.90	73.7 ± 2.21	64.4 ± 1.38	77.5 ± 1.98	130.9 ± 3.13	n = 15	[AXA] Abaxis Piccolo
342.1 ± 11.83	67.3 ± 2.18	58.5 ± 2.17	70.3 ± 2.54	117.3 ± 3.77	n = 52	[ABJ] Abbott Architect c System
373.5 ± 22.76	75.2 ± 6.30	65.2 ± 6.38	78.1 ± 7.83	132.5 ± 11.02	n = 8	[OLC] Beckman Coulter AU Chemistry System
375.0 ± 7.55	75.7 ± 2.38	64.9 ± 1.35	77.3 ± 1.68	129.1 ± 1.91	n = 6	[BCS] Beckman Coulter CX
370.2 ± 10.35	75.4 ± 2.76	64.9 ± 2.07	78.0 ± 1.83	131.6 ± 2.27	n = 20	[BCX] Beckman Coulter LX-20
372.1 ± 8.28	75.5 ± 2.13	64.9 ± 1.43	78.0 ± 1.93	130.9 ± 2.71	n = 20	[BCG] Beckman Coulter UniCel DxC 600
402.8 ± 8.02	74.2 ± 1.68	68.2 ± 1.84	83.2 ± 1.88	141.1 ± 3.87	n = 12	[BCH] Beckman Coulter UniCel DxC 800
391.6 ± 15.51	73.5 ± 2.53	67.0 ± 1.95	81.6 ± 3.49	139.8 ± 4.77	n = 22	[JJE] Ortho Vitros 250/350/950
393.0 ± 11.31	74.4 ± 2.33	67.6 ± 3.02	81.8 ± 3.46	141.4 ± 5.41	n = 14	[JJF] Ortho Vitros 5,1FS
389.8 ± 13.63	75.3 ± 1.84	66.0 ± 1.76	79.0 ± 2.14	134.8 ± 3.96	n = 17	[JGJ] Ortho Vitros 5600
393.6 ± 11.12	73.7 ± 0.51	64.3 ± 1.37	77.7 ± 3.07	131.8 ± 3.23	n = 3	[ROC] Roche cobas c501
401.1 ± 9.66	75.7 ± 1.66	66.0 ± 1.60	79.6 ± 2.09	137.1 ± 2.88	n = 6	[ROH] Roche cobas c701
389.4 ± 10.42	74.4 ± 1.89	65.6 ± 1.09	78.5 ± 1.80	134.4 ± 3.40	n = 5	[ROS] Roche Cobas INTEGRA 400
384.2 ± 10.92	76.8 ± 1.96	66.3 ± 2.27	80.0 ± 2.45	131.8 ± 3.38	n = 34	[ROT] Roche Cobas INTEGRA 800
412.4 ± 7.87	81.8 ± 1.64	71.6 ± 1.48	85.3 ± 1.80	141.0 ± 3.51	n = 19	[ROD] Roche MODULAR D/P
408.2 ± 26.77	79.6 ± 4.72	71.3 ± 4.22	84.7 ± 5.91	140.6 ± 7.44	n = 3	[BYE] Siemens ADVIA 1800
377.7 ± 9.41	73.2 ± 1.55	66.1 ± 2.44	80.8 ± 1.66	135.9 ± 3.22	n = 11	[BYB] Siemens ADVIA 2400
380.1 ± 12.56	74.8 ± 3.43	66.7 ± 3.09	80.0 ± 3.60	134.8 ± 4.38	n = 28	[DUE] Siemens Dimension EXL
383.3 ± 6.45	73.3 ± 2.96	64.2 ± 2.56	77.9 ± 2.26	133.2 ± 3.83	n = 35	[DUR] Siemens Dimension RxL
382.7 ± 8.14	75.4 ± 2.21	67.6 ± 2.47	80.8 ± 2.18	135.5 ± 3.53	n = 20	[DUT] Siemens Dimension Vista
376.2 ± 4.11	76.3 ± 0.51	66.7 ± 1.37	80.7 ± 1.37	131.5 ± 1.86	n = 3	[DUX] Siemens Dimension Xpand
380.5 ± 8.90	73.7 ± 2.21	64.4 ± 1.38	77.5 ± 1.98	130.9 ± 3.13	n = 15	<Reagents>
371.6 ± 10.37	75.3 ± 2.72	64.8 ± 2.12	77.9 ± 2.27	130.7 ± 3.17	n = 53	[BC1] Beckman Coulter
342.0 ± 11.27	67.3 ± 2.10	58.5 ± 2.06	70.3 ± 2.40	117.4 ± 3.64	n = 50	[OL1] Beckman Coulter AU Series
383.6 ± 34.20	78.4 ± 6.95	69.2 ± 7.29	82.6 ± 8.95	138.0 ± 13.29	n = 4	[CR1] Carolina
395.5 ± 13.19	74.0 ± 2.26	67.6 ± 2.38	82.2 ± 3.13	140.7 ± 4.71	n = 49	[JJ1] Ortho Clinical Diagnostics
390.5 ± 12.82	75.0 ± 1.73	65.8 ± 1.77	78.9 ± 2.36	134.4 ± 3.93	n = 21	[RO4] Roche cobas c311/c501/c502/c701
383.9 ± 10.74	76.8 ± 1.96	66.3 ± 2.25	80.0 ± 2.42	131.8 ± 3.32	n = 35	[RO2] Roche Hitachi and Modular D/P
395.7 ± 11.51	75.1 ± 1.86	65.8 ± 1.34	79.0 ± 1.98	135.9 ± 3.36	n = 11	[RO1] Roche Integra and MIRA
410.6 ± 11.48	81.5 ± 2.66	71.3 ± 2.18	84.9 ± 2.64	140.4 ± 4.39	n = 23	[BY1] Siemens ADVIA/ADVIS Centaur
381.8 ± 9.53	74.2 ± 3.02	66.0 ± 2.93	79.4 ± 3.04	134.7 ± 3.94	n = 87	[DA5] Siemens Dimension
381.2 ± 6.73	73.6 ± 3.50	63.0 ± 2.78	79.4 ± 2.21	131.7 ± 4.62	n = 6	[DA8] Siemens Dimension IFCC Standardized

## Summary of Participant Performance (Mean and Standard Deviation)

 $\alpha$ -Amylase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
162.3 ± 21.32	420.0 ± 77.05	72.2 ± 7.99	86.8 ± 8.91	47.8 ± 6.14	n = 323	[---] All Methods & Instruments
173.1 ± 5.34	459.0 ± 14.06	78.2 ± 3.05	93.7 ± 3.17	48.5 ± 1.27	n = 13	<Instruments>
139.0 ± 8.40	368.1 ± 21.41	61.6 ± 4.10	73.8 ± 4.66	38.0 ± 2.28	n = 44	[ABJ] Abbott Architect c System
174.5 ± 3.11	443.5 ± 6.39	79.2 ± 1.59	94.2 ± 2.11	54.5 ± 1.02	n = 6	[OLC] Beckman Coulter AU Chemistry System
173.3 ± 2.79	442.1 ± 8.63	79.4 ± 2.20	95.5 ± 1.93	54.0 ± 1.39	n = 16	[BCX] Beckman Coulter LX-20
174.0 ± 3.00	443.7 ± 8.86	79.4 ± 1.67	95.0 ± 1.54	54.4 ± 1.32	n = 20	[BCG] Beckman Coulter UniCel DxC 600
111.6 ± 7.93	227.8 ± 16.36	57.9 ± 2.63	71.3 ± 6.21	48.1 ± 3.38	n = 9	[BCH] Beckman Coulter UniCel DxC 800
113.1 ± 7.90	231.6 ± 11.55	58.0 ± 3.47	70.2 ± 4.31	47.3 ± 3.09	n = 21	[JJF] Ortho Vitros 250/350/950
122.5 ± 7.10	234.7 ± 16.38	58.7 ± 4.60	76.9 ± 6.76	50.1 ± 4.54	n = 14	[JJG] Ortho Vitros 5,1FS
163.0 ± 2.67	406.7 ± 5.94	75.1 ± 1.37	90.3 ± 1.45	52.1 ± 0.78	n = 17	[JJG] Ortho Vitros 5600
157.8 ± 4.11	394.2 ± 8.71	73.5 ± 1.86	89.7 ± 1.37	52.0 ± 0.90	n = 3	[ROC] Roche cobas c501
159.5 ± 1.62	402.3 ± 3.25	74.1 ± 1.27	88.7 ± 1.38	51.2 ± 0.80	n = 5	[ROS] Roche Cobas INTEGRA 400
162.2 ± 3.47	403.3 ± 6.37	74.7 ± 1.44	90.0 ± 1.92	51.6 ± 1.12	n = 31	[ROT] Roche Cobas INTEGRA 800
163.1 ± 3.16	413.0 ± 8.45	74.4 ± 1.46	89.6 ± 1.92	51.1 ± 0.96	n = 19	[ROD] Roche MODULAR D/P
154.3 ± 3.07	388.9 ± 2.05	69.5 ± 1.86	85.0 ± 0.90	47.4 ± 1.02	n = 3	[BYE] Siemens ADVIA 1800
182.2 ± 2.82	502.1 ± 6.89	75.3 ± 0.80	90.1 ± 1.61	44.4 ± 1.86	n = 9	[BYB] Siemens ADVIA 2400
181.8 ± 4.35	501.2 ± 12.02	75.5 ± 1.62	90.4 ± 2.13	45.0 ± 0.77	n = 26	[DUE] Siemens Dimension EXL
171.5 ± 3.11	471.8 ± 7.16	70.7 ± 1.33	84.7 ± 1.35	41.6 ± 0.92	n = 34	[DUR] Siemens Dimension RxL
183.9 ± 3.82	507.6 ± 9.87	76.4 ± 1.91	91.1 ± 2.35	44.9 ± 1.17	n = 17	[DUT] Siemens Dimension Vista
173.1 ± 5.34	459.0 ± 14.06	78.2 ± 3.05	93.7 ± 3.17	48.5 ± 1.27	n = 13	[DUX] Siemens Dimension Xpand
174.4 ± 3.05	447.4 ± 6.48	79.4 ± 1.54	95.6 ± 1.78	54.8 ± 1.26	n = 14	<Reagents>
138.7 ± 8.17	367.3 ± 20.97	61.5 ± 3.97	73.7 ± 4.47	38.0 ± 2.24	n = 43	[AB1] Abbott
174.0 ± 3.36	442.0 ± 9.30	79.5 ± 2.02	95.2 ± 2.19	54.2 ± 1.44	n = 32	[BC1] Beckman Coulter
116.4 ± 9.76	232.4 ± 14.96	58.2 ± 3.71	72.5 ± 6.52	48.7 ± 4.36	n = 46	[OL1] Beckman Coulter AU Series
163.1 ± 2.50	406.8 ± 5.44	75.3 ± 1.24	90.5 ± 1.38	52.2 ± 0.78	n = 20	[BC2] Beckman Coulter IFCC Standardized
162.0 ± 3.43	403.2 ± 6.37	74.6 ± 1.43	89.9 ± 1.86	51.5 ± 1.13	n = 33	[JJ1] Ortho Clinical Diagnostics
158.9 ± 2.88	401.1 ± 4.15	74.0 ± 1.46	89.1 ± 1.48	51.5 ± 0.90	n = 8	[RO4] Roche cobas c311/c501/c502/c701
162.0 ± 4.61	409.6 ± 12.46	73.9 ± 2.19	88.9 ± 2.56	50.7 ± 1.52	n = 23	[RO2] Roche Hitachi and Modular D/P
178.1 ± 7.00	491.0 ± 19.91	73.8 ± 3.06	88.2 ± 3.65	43.5 ± 2.12	n = 86	[BY1] Siemens ADVIA/ADVIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

## Alkaline Phosphatase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
101.2 ± 13.98	204.6 ± 23.96	209.2 ± 20.25	253.2 ± 26.61	51.8 ± 8.96	n = 362	[---] All Methods & Instruments
86.3 ± 3.16	177.6 ± 3.87	182.8 ± 4.10	222.2 ± 2.36	42.0 ± 1.80	n = 3	<Instruments>
103.0 ± 3.82	212.1 ± 6.54	220.8 ± 7.90	264.0 ± 9.60	51.4 ± 2.10	n = 15	[AXA] Abaxis Piccolo
91.5 ± 5.33	189.5 ± 10.36	196.6 ± 10.96	234.9 ± 12.06	46.0 ± 2.80	n = 51	[ABJ] Abbott Architect c System
82.6 ± 8.98	171.4 ± 15.08	176.4 ± 16.88	209.6 ± 22.88	41.7 ± 4.86	n = 8	[OLC] Beckman Coulter AU Chemistry System
88.5 ± 2.53	180.5 ± 6.30	191.2 ± 5.03	224.8 ± 5.72	44.4 ± 1.61	n = 6	[BCS] Beckman Coulter CX
89.1 ± 4.08	183.3 ± 10.16	190.6 ± 8.65	228.8 ± 12.66	43.9 ± 2.08	n = 20	[BCX] Beckman Coulter LX-20
92.1 ± 3.06	187.4 ± 5.81	193.9 ± 5.82	233.7 ± 8.00	45.7 ± 2.26	n = 21	[BCG] Beckman Coulter UniCel DxC 600
127.0 ± 3.64	245.5 ± 3.12	230.7 ± 6.67	294.7 ± 7.85	67.5 ± 1.96	n = 11	[BCH] Beckman Coulter UniCel DxC 800
122.8 ± 5.21	238.0 ± 11.40	221.5 ± 8.63	283.6 ± 11.04	64.5 ± 3.35	n = 22	[JJE] Ortho Vitros 250/350/950
123.9 ± 3.40	239.0 ± 8.55	218.0 ± 6.63	286.7 ± 10.86	65.7 ± 2.35	n = 14	[JJF] Ortho Vitros 5,1FS
101.5 ± 2.84	204.8 ± 5.10	211.4 ± 5.00	252.4 ± 7.00	51.2 ± 1.47	n = 17	[JJG] Ortho Vitros 5600
99.3 ± 2.26	201.5 ± 3.63	209.9 ± 2.86	247.2 ± 2.36	49.6 ± 1.02	n = 3	[ROC] Roche cobas c501
101.0 ± 2.33	206.9 ± 5.82	212.9 ± 4.41	256.4 ± 6.13	50.6 ± 1.33	n = 5	[ROH] Roche cobas c701
97.6 ± 0.55	201.4 ± 4.37	209.4 ± 3.64	250.6 ± 4.93	48.8 ± 0.80	n = 5	[ROS] Roche Cobas INTEGRA 400
98.2 ± 2.81	197.5 ± 6.12	205.0 ± 5.98	245.2 ± 7.24	49.4 ± 1.43	n = 33	[ROT] Roche Cobas INTEGRA 800
104.5 ± 5.12	215.1 ± 8.95	222.3 ± 8.13	267.1 ± 10.20	52.1 ± 2.35	n = 19	[ROD] Roche MODULAR D/P
100.5 ± 1.86	208.0 ± 3.61	212.7 ± 0.51	257.8 ± 8.71	49.7 ± 0.51	n = 3	[BYE] Siemens ADVIA 1800
129.3 ± 9.46	242.3 ± 10.20	249.9 ± 10.48	301.2 ± 10.85	69.5 ± 4.84	n = 11	[BYB] Siemens ADVIA 2400
118.3 ± 9.63	230.4 ± 13.30	239.4 ± 10.64	283.7 ± 11.81	64.0 ± 5.33	n = 28	[DUE] Siemens Dimension EXL
91.6 ± 4.63	183.2 ± 7.23	191.4 ± 8.77	234.5 ± 8.01	46.8 ± 3.28	n = 35	[DUR] Siemens Dimension RxL
111.3 ± 5.05	225.1 ± 9.18	233.7 ± 10.62	277.4 ± 10.27	63.5 ± 3.36	n = 20	[DUT] Siemens Dimension Vista
86.3 ± 3.16	177.6 ± 3.87	182.8 ± 4.10	222.2 ± 2.36	42.0 ± 1.80	n = 3	[DUX] Siemens Dimension Xpand
103.0 ± 3.82	212.1 ± 6.54	220.8 ± 7.90	264.0 ± 9.60	51.4 ± 2.10	n = 15	<Reagents>
89.8 ± 4.40	183.9 ± 9.16	191.4 ± 8.33	229.3 ± 11.33	44.5 ± 2.44	n = 52	[AB1] Abbott
91.4 ± 5.11	189.2 ± 10.04	196.3 ± 10.58	234.6 ± 11.59	46.0 ± 2.69	n = 50	[BC1] Beckman Coulter
84.6 ± 13.47	172.8 ± 25.93	179.6 ± 24.58	216.6 ± 29.87	42.6 ± 7.08	n = 3	[OL1] Beckman Coulter AU Series
124.1 ± 4.93	239.9 ± 10.08	221.7 ± 9.66	286.5 ± 11.63	65.5 ± 3.21	n = 48	[CR1] Carolina
101.2 ± 2.83	204.2 ± 4.88	211.1 ± 4.54	251.4 ± 6.48	51.0 ± 1.52	n = 21	[JJ1] Ortho Clinical Diagnostics
98.2 ± 2.70	197.6 ± 6.01	205.1 ± 5.77	245.3 ± 6.98	49.4 ± 1.37	n = 35	[RO4] Roche cobas c311/c501/c502/c701
98.7 ± 1.92	203.6 ± 5.22	210.7 ± 4.12	252.8 ± 5.94	49.5 ± 1.30	n = 11	[RO2] Roche Hitachi and Modular D/P
103.6 ± 4.86	213.5 ± 8.54	220.2 ± 8.34	265.2 ± 10.62	51.6 ± 2.34	n = 23	[RO1] Roche Integra and MIRA
107.8 ± 16.19	213.9 ± 27.94	222.7 ± 28.07	266.9 ± 30.78	58.3 ± 10.69	n = 94	[BY1] Siemens ADVIA/ADVISIA Centaur
						[DA5] Siemens Dimension

## Summary of Participant Performance (Mean and Standard Deviation)

 $\gamma$ -Glutamyltransferase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
50.2 ± 10.90	126.9 ± 29.91	70.4 ± 17.02	84.2 ± 20.30	34.9 ± 7.00	n = 306	[---] All Methods & Instruments
50.9 ± 3.05	128.7 ± 8.15	69.7 ± 4.56	84.0 ± 5.48	35.1 ± 2.39	n = 14	<Instruments>
40.2 ± 2.12	98.1 ± 5.08	54.8 ± 3.09	65.7 ± 3.52	28.1 ± 1.71	n = 48	[ABJ] Abbott Architect c System
39.7 ± 3.98	100.9 ± 16.14	56.6 ± 8.08	66.8 ± 9.41	28.5 ± 3.27	n = 7	[OLC] Beckman Coulter AU Chemistry System
47.9 ± 1.83	124.4 ± 5.00	67.8 ± 2.69	80.8 ± 3.65	33.4 ± 1.89	n = 5	[BCS] Beckman Coulter CX
47.1 ± 0.99	125.9 ± 3.52	68.8 ± 2.32	82.2 ± 2.65	33.2 ± 2.00	n = 15	[BCX] Beckman Coulter LX-20
47.2 ± 1.97	126.1 ± 3.59	68.4 ± 2.32	81.5 ± 1.96	33.1 ± 0.89	n = 17	[BCG] Beckman Coulter UniCel DxC 600
71.4 ± 2.15	199.0 ± 6.05	107.9 ± 3.42	128.6 ± 3.51	45.3 ± 1.52	n = 8	[BCH] Beckman Coulter UniCel DxC 800
69.8 ± 2.06	192.8 ± 4.12	105.3 ± 2.89	125.0 ± 2.96	44.2 ± 1.27	n = 21	[JJF] Ortho Vitros 250/350/950
69.8 ± 2.78	193.6 ± 6.79	105.4 ± 4.23	125.9 ± 4.44	43.7 ± 1.67	n = 13	[JJG] Ortho Vitros 5,1FS
43.4 ± 0.71	108.3 ± 1.93	59.4 ± 0.90	70.7 ± 1.13	30.2 ± 0.76	n = 15	[JJG] Ortho Vitros 5600
41.3 ± 0.51	106.4 ± 1.02	58.0 ± 0.90	69.7 ± 0.51	29.3 ± 0.51	n = 3	[ROC] Roche cobas c501
40.5 ± 0.57	104.7 ± 0.82	57.5 ± 1.22	68.7 ± 0.82	28.1 ± 1.13	n = 4	[ROS] Roche Cobas INTEGRA 400
43.4 ± 1.30	109.5 ± 2.98	59.4 ± 1.81	71.0 ± 1.70	30.1 ± 1.16	n = 33	[ROT] Roche Cobas INTEGRA 800
46.4 ± 2.06	117.7 ± 3.39	64.5 ± 2.20	77.4 ± 2.62	32.4 ± 1.72	n = 19	[ROD] Roche MODULAR D/P
45.2 ± 3.23	111.9 ± 6.08	61.4 ± 1.02	76.0 ± 3.61	32.0 ± 0.90	n = 3	[BYE] Siemens ADVIA 1800
60.7 ± 1.60	146.5 ± 3.12	83.9 ± 2.61	99.4 ± 1.60	44.2 ± 1.47	n = 10	[BYB] Siemens ADVIA 2400
59.9 ± 2.53	144.3 ± 3.83	82.1 ± 2.53	98.2 ± 2.65	43.1 ± 1.45	n = 21	[DUE] Siemens Dimension EXL
58.3 ± 2.35	149.2 ± 2.33	83.6 ± 2.01	99.9 ± 2.45	40.1 ± 2.29	n = 32	[DUR] Siemens Dimension RxL
59.6 ± 2.95	145.3 ± 2.57	82.8 ± 1.67	99.1 ± 2.79	44.4 ± 1.97	n = 9	[DUT] Siemens Dimension Vista
						[DUX] Siemens Dimension Xpand
50.6 ± 2.87	127.8 ± 7.76	69.2 ± 4.42	83.4 ± 5.35	34.8 ± 2.16	n = 13	<Reagents>
47.2 ± 1.95	125.4 ± 4.27	68.2 ± 2.56	81.4 ± 2.81	32.9 ± 1.58	n = 41	[AB1] Abbott
40.2 ± 1.98	98.1 ± 4.76	54.8 ± 2.87	65.7 ± 3.32	28.1 ± 1.61	n = 46	[BC1] Beckman Coulter
37.0 ± 1.76	89.3 ± 0.90	50.5 ± 2.83	60.0 ± 1.50	26.3 ± 1.58	n = 4	[OL1] Beckman Coulter AU Series
70.1 ± 2.38	194.1 ± 5.54	105.8 ± 3.62	126.0 ± 3.72	44.2 ± 1.59	n = 42	[CR1] Carolina
43.2 ± 0.79	107.7 ± 2.31	59.0 ± 1.21	70.3 ± 1.42	30.0 ± 0.95	n = 18	[JJ1] Ortho Clinical Diagnostics
43.4 ± 1.38	109.5 ± 3.01	59.4 ± 1.85	71.0 ± 1.71	30.2 ± 1.23	n = 34	[RO4] Roche cobas c311/c501/c502/c701
40.8 ± 0.66	105.3 ± 1.32	57.7 ± 1.11	69.2 ± 0.76	28.7 ± 1.11	n = 7	[RO2] Roche Hitachi and Modular D/P
46.2 ± 2.22	117.1 ± 4.12	63.9 ± 2.44	77.1 ± 2.83	32.3 ± 1.58	n = 23	[RO1] Roche Integra and MIRA
59.3 ± 2.60	147.0 ± 3.71	83.1 ± 2.45	99.1 ± 2.58	42.2 ± 2.69	n = 67	[BY1] Siemens ADVIA/ADVISIA Centaur
58.1 ± 2.33	149.5 ± 2.45	83.2 ± 0.80	100.6 ± 1.37	41.4 ± 2.30	n = 5	[DA5] Siemens Dimension
						[DA8] Siemens Dimension IFCC Standardized

## Summary of Participant Performance (Mean and Standard Deviation)

## Creatine Kinase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
96.1 ± 6.59	265.7 ± 21.65	185.3 ± 15.21	222.0 ± 16.22	57.9 ± 7.37	n = 331	[---] All Methods & Instruments
100.9 ± 2.39	284.3 ± 14.95	193.2 ± 7.21	232.8 ± 8.63	47.9 ± 2.05	n = 15	<Instruments>
84.3 ± 3.41	236.2 ± 10.47	163.7 ± 6.74	196.4 ± 7.36	49.3 ± 1.87	n = 46	[ABJ] Abbott Architect c System
86.9 ± 9.87	230.7 ± 19.61	161.7 ± 13.11	195.6 ± 16.90	57.1 ± 13.01	n = 7	[OLC] Beckman Coulter AU Chemistry System
98.5 ± 2.53	264.0 ± 9.38	186.6 ± 1.37	221.0 ± 11.83	72.6 ± 2.42	n = 6	[BCS] Beckman Coulter CX
98.9 ± 2.32	263.9 ± 7.72	187.3 ± 5.27	223.5 ± 3.85	72.5 ± 2.54	n = 17	[BCX] Beckman Coulter LX-20
98.5 ± 3.30	259.3 ± 10.23	186.2 ± 4.44	221.5 ± 6.93	71.6 ± 3.43	n = 21	[BCG] Beckman Coulter UniCel DxC 600
101.9 ± 4.59	299.3 ± 13.31	218.7 ± 11.45	247.9 ± 13.47	57.0 ± 2.18	n = 9	[BCH] Beckman Coulter UniCel DxC 800
105.4 ± 4.17	299.3 ± 14.63	222.5 ± 11.91	248.8 ± 12.80	58.4 ± 3.50	n = 20	[JJF] Ortho Vitros 250/350/950
103.8 ± 4.51	289.9 ± 13.44	216.5 ± 9.92	245.7 ± 12.26	58.6 ± 2.25	n = 13	[JJG] Ortho Vitros 5,1FS
96.7 ± 3.49	269.7 ± 15.42	188.0 ± 8.84	225.5 ± 10.24	54.6 ± 2.76	n = 17	[ROC] Roche cobas c501
98.0 ± 0.90	271.0 ± 0.90	185.0 ± 0.90	223.3 ± 1.37	59.3 ± 0.51	n = 3	[ROH] Roche cobas c701
87.8 ± 6.85	253.1 ± 19.37	175.5 ± 11.96	212.4 ± 13.01	46.3 ± 3.66	n = 5	[ROT] Roche Cobas INTEGRA 800
97.7 ± 2.57	270.8 ± 8.92	188.0 ± 4.99	225.4 ± 6.47	58.4 ± 2.06	n = 33	[ROD] Roche MODULAR D/P
92.0 ± 2.83	261.9 ± 9.92	180.9 ± 4.90	217.0 ± 5.92	59.9 ± 1.53	n = 19	[BYE] Siemens ADVIA 1800
89.0 ± 1.80	257.4 ± 13.58	174.0 ± 9.01	210.7 ± 8.57	57.0 ± 1.80	n = 3	[BYB] Siemens ADVIA 2400
96.8 ± 3.40	274.4 ± 7.31	188.8 ± 5.57	226.2 ± 6.65	59.6 ± 2.57	n = 10	[DUE] Siemens Dimension EXL
95.8 ± 3.11	272.6 ± 13.10	187.1 ± 6.88	224.9 ± 8.03	58.7 ± 2.30	n = 28	[DUR] Siemens Dimension RxL
96.9 ± 2.11	271.4 ± 7.29	187.0 ± 5.67	223.9 ± 7.46	60.4 ± 2.02	n = 34	[DUT] Siemens Dimension Vista
94.8 ± 3.75	271.7 ± 11.14	187.8 ± 5.13	224.3 ± 7.42	59.1 ± 2.87	n = 16	[DUX] Siemens Dimension Xpand
100.9 ± 2.39	284.3 ± 14.95	193.2 ± 7.21	232.8 ± 8.63	47.9 ± 2.05	n = 15	<Reagents>
98.5 ± 2.97	260.8 ± 10.14	186.3 ± 5.02	222.6 ± 6.43	72.0 ± 3.16	n = 49	[AB1] Abbott
84.1 ± 3.28	236.5 ± 9.87	163.8 ± 6.34	196.6 ± 7.06	49.3 ± 1.59	n = 44	[BC1] Beckman Coulter
78.8 ± 3.68	214.2 ± 8.24	151.8 ± 3.73	182.9 ± 3.00	45.2 ± 1.46	n = 4	[OL1] Beckman Coulter AU Series
104.2 ± 4.46	295.9 ± 15.20	219.6 ± 11.49	247.7 ± 12.76	58.1 ± 3.05	n = 42	[CR1] Carolina
96.9 ± 3.13	269.9 ± 14.36	186.6 ± 8.61	224.3 ± 10.11	55.1 ± 3.24	n = 21	[JJ1] Ortho Clinical Diagnostics
97.7 ± 2.57	270.9 ± 8.61	188.3 ± 4.83	225.7 ± 6.19	58.5 ± 2.09	n = 33	[RO4] Roche cobas c311/c501/c502/c701
88.8 ± 7.70	256.6 ± 20.79	177.3 ± 13.46	214.6 ± 14.73	48.9 ± 5.72	n = 7	[RO2] Roche Hitachi and Modular D/P
91.3 ± 3.05	260.6 ± 10.95	179.4 ± 6.76	215.7 ± 7.14	59.4 ± 1.86	n = 23	[RO1] Roche Integra and MIRA
96.6 ± 3.31	273.3 ± 7.02	187.3 ± 5.99	225.0 ± 7.02	59.7 ± 2.78	n = 29	[BY1] Siemens ADVIA/ADVISIA Centaur
96.0 ± 2.96	271.6 ± 10.52	187.2 ± 6.03	224.2 ± 7.69	59.5 ± 2.34	n = 56	[DA5] Siemens Dimension
97.0 ± 1.80	270.1 ± 14.19	188.0 ± 6.37	226.1 ± 7.95	60.5 ± 1.86	n = 3	[DA8] Siemens Dimension IFCC Standardized
						[DA6] Siemens Dimension LOCI

## Summary of Participant Performance (Mean and Standard Deviation)

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

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
1.09 ± 0.36	47.60 ± 7.52	23.93 ± 3.63	28.25 ± 4.17	0.59 ± 0.26	n = 200	[-A-] All Methods - Results reported in ng/mL
1.11 ± 0.13	46.50 ± 3.71	22.92 ± 1.70	27.07 ± 2.05	0.47 ± 0.09	n = 17	[AB1] Abbott
2.17 ± 1.79	56.95 ± 2.51	28.00 ± 1.17	33.43 ± 1.50	1.64 ± 2.11	n = 20	[SAA] Beckman Coulter ACCESS
1.40 ± 0.11	59.95 ± 3.19	29.23 ± 1.06	34.62 ± 1.38	0.60 ± 0.00	n = 13	[BC-] Beckman Coulter DxC 600/DxI 800
0.91 ± 0.16	46.52 ± 1.88	24.62 ± 1.04	28.82 ± 1.29	0.48 ± 0.21	n = 31	[BY1] Siemens ADVIA/ADVISIA Centaur
1.00 ± 0.00	32.10 ± 2.97	13.05 ± 0.29	19.83 ± 2.80	1.00 ± 0.00	n = 6	[BSA] BioSite Triage
0.69 ± 0.26	50.23 ± 3.46	22.60 ± 1.40	27.55 ± 1.73	0.46 ± 0.26	n = 27	[DA5] Siemens Dimension
0.92 ± 0.19	42.66 ± 1.08	21.47 ± 0.58	25.47 ± 0.73	0.57 ± 0.11	n = 24	[DA6] Siemens Dimension LOCI
2.47 ± 0.71	52.37 ± 1.23	26.80 ± 0.87	29.43 ± 1.50	1.37 ± 0.47	n = 5	[DP5] Siemens Immulite
0.92 ± 0.10	36.96 ± 1.64	19.03 ± 0.97	22.07 ± 1.10	0.34 ± 0.07	n = 23	[JJ1] Ortho Clinical Diagnostics
1.60 ± 0.09	48.67 ± 2.50	25.51 ± 1.39	29.83 ± 1.52	0.90 ± 0.07	n = 28	[RO3] Roche Elecsys/Modular E/e601/e411
1.54 ± 0.10	66.55 ± 4.30	34.37 ± 3.53	40.65 ± 4.66	0.70 ± 0.00	n = 3	[TO2] Tosoh ST AIA
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1.93 ± 2.12	49.47 ± 9.08	25.74 ± 5.43	30.46 ± 6.53	0.53 ± 0.33	n = 13	[-B-] All Methods - Results reported in U/L
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0.00 ± 0.00	14.50 ± 1.22	11.15 ± 0.41	11.51 ± 2.57	0.00 ± 0.00	n = 5	[-P-] All Methods - Results reported as %
0.00 ± 0.00	16.53 ± 5.71	12.06 ± 2.86	11.96 ± 3.17	0.00 ± 0.00	n = 4	[HL1] Helena Laboratories

## Summary of Participant Performance (Mean and Standard Deviation)

## Lactate Dehydrogenase (U/L 37°C)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
112.0 ± 11.79	245.7 ± 26.66	165.2 ± 16.36	200.1 ± 19.52	87.0 ± 8.84	n = 318	[---] All Methods & Instruments
112.3 ± 11.66	246.4 ± 26.21	165.6 ± 16.10	200.6 ± 19.30	87.2 ± 8.74	n = 269	[-A-] Lactate to Pyruvate
337.2 ± 23.95	676.7 ± 18.68	447.1 ± 15.34	551.4 ± 15.30	268.1 ± 15.76	n = 45	[-B-] Pyruvate to Lactate
<Instruments>						
120.9 ± 7.84	245.9 ± 14.58	166.8 ± 9.64	204.8 ± 11.88	93.2 ± 6.66	n = 15	[ABJ] Abbott Architect c System
102.9 ± 4.99	224.9 ± 10.23	154.1 ± 7.33	185.7 ± 8.84	79.7 ± 4.00	n = 46	[OLC] Beckman Coulter AU Chemistry System
93.3 ± 1.77	198.0 ± 4.94	139.0 ± 4.61	166.6 ± 2.65	72.6 ± 2.19	n = 7	[BCS] Beckman Coulter CX
94.9 ± 2.91	208.0 ± 6.11	139.7 ± 3.98	171.8 ± 5.72	75.0 ± 3.05	n = 6	[BCX] Beckman Coulter LX-20
96.1 ± 2.56	209.7 ± 4.59	144.1 ± 3.88	174.8 ± 6.01	77.6 ± 2.28	n = 18	[BCG] Beckman Coulter UniCel DxC 600
97.8 ± 2.73	210.9 ± 5.43	143.6 ± 4.26	176.0 ± 3.92	77.4 ± 2.49	n = 20	[BCH] Beckman Coulter UniCel DxC 800
339.2 ± 20.24	678.5 ± 11.71	448.0 ± 10.49	555.0 ± 11.03	267.2 ± 12.72	n = 9	[JJE] Ortho Vitros 250/350/950
337.5 ± 27.85	676.6 ± 20.94	445.1 ± 18.21	548.1 ± 15.10	265.5 ± 17.91	n = 22	[JJF] Ortho Vitros 5,1FS
332.7 ± 18.79	673.3 ± 20.57	449.1 ± 14.44	548.9 ± 17.85	267.6 ± 13.80	n = 14	[JJG] Ortho Vitros 5600
118.7 ± 2.93	262.3 ± 5.26	175.3 ± 5.38	211.5 ± 5.17	91.3 ± 3.09	n = 17	[ROC] Roche cobas c501
118.0 ± 0.75	258.1 ± 4.71	174.0 ± 1.66	205.7 ± 5.32	89.8 ± 3.60	n = 5	[ROT] Roche Cobas INTEGRA 800
115.5 ± 3.25	256.5 ± 4.65	169.7 ± 4.34	205.0 ± 4.78	88.7 ± 2.57	n = 31	[ROD] Roche MODULAR D/P
117.8 ± 2.93	257.9 ± 5.92	174.8 ± 4.09	211.7 ± 4.72	92.8 ± 2.16	n = 19	[BYE] Siemens ADVIA 1800
115.3 ± 4.06	252.0 ± 8.11	169.5 ± 6.32	205.2 ± 7.69	90.8 ± 4.11	n = 3	[BYB] Siemens ADVIA 2400
120.0 ± 7.24	266.9 ± 8.40	176.5 ± 7.54	215.4 ± 8.19	92.7 ± 4.82	n = 9	[DUE] Siemens Dimension EXL
121.1 ± 7.05	271.2 ± 8.76	180.1 ± 6.42	219.8 ± 6.18	94.9 ± 5.67	n = 19	[DUR] Siemens Dimension RxL
120.6 ± 5.53	267.6 ± 9.90	179.5 ± 5.84	216.0 ± 5.78	94.4 ± 4.41	n = 35	[DUT] Siemens Dimension Vista
120.7 ± 4.18	268.0 ± 7.52	174.7 ± 8.05	217.1 ± 5.73	90.9 ± 6.75	n = 12	[DUX] Siemens Dimension Xpand
<Reagents>						
120.9 ± 7.84	245.9 ± 14.58	166.8 ± 9.64	204.8 ± 11.88	93.2 ± 6.66	n = 15	[AB1] Abbott
96.5 ± 3.12	209.4 ± 5.84	142.9 ± 4.43	174.5 ± 5.63	77.0 ± 2.74	n = 47	[BC1] Beckman Coulter
102.7 ± 4.89	224.6 ± 10.04	153.9 ± 7.17	185.5 ± 8.76	79.6 ± 3.92	n = 45	[OL1] Beckman Coulter AU Series
93.9 ± 1.88	198.0 ± 4.60	140.3 ± 5.08	167.6 ± 3.39	72.3 ± 1.51	n = 4	[CR1] Carolina
336.5 ± 23.16	676.3 ± 18.91	447.1 ± 15.31	549.9 ± 15.35	266.9 ± 15.20	n = 45	[JJ1] Ortho Clinical Diagnostics
118.5 ± 3.13	262.3 ± 6.47	175.2 ± 6.32	211.2 ± 5.99	91.1 ± 3.40	n = 20	[RO4] Roche cobas c311/c501/c701
115.4 ± 3.15	256.5 ± 4.46	169.5 ± 4.35	204.9 ± 4.65	88.6 ± 2.57	n = 32	[RO2] Roche Hitachi and Modular D/P
117.6 ± 2.72	258.6 ± 5.82	173.5 ± 5.55	206.4 ± 6.17	90.1 ± 3.30	n = 7	[RO1] Roche Integra and MIRA
117.3 ± 3.37	256.9 ± 7.02	174.0 ± 4.88	210.8 ± 5.64	92.3 ± 2.75	n = 23	[BY1] Siemens ADVIA/ADVIS Centaur
116.8 ± 8.80	262.3 ± 18.72	175.5 ± 13.12	211.2 ± 14.94	92.2 ± 7.02	n = 24	[DA5] Siemens Dimension
121.4 ± 5.98	269.1 ± 9.73	178.6 ± 6.79	218.0 ± 6.83	94.5 ± 5.11	n = 48	[DA8] Siemens Dimension IFCC Standardized
120.7 ± 2.26	268.3 ± 1.37	177.0 ± 1.80	215.8 ± 6.79	90.7 ± 1.37	n = 3	[DA6] Siemens Dimension LOCI

## Summary of Participant Performance (Mean and Standard Deviation)

## LDH Isoenzyme 1 (%)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
32.9 ± 3.01	47.4 ± 1.15	22.2 ± 3.23	22.2 ± 3.09	31.5 ± 4.55	n = 9	[-P-] All Methods - Results reported as %±
34.9 ± 1.87	47.5 ± 0.83	24.0 ± 2.97	24.2 ± 3.31	34.2 ± 3.27	n = 5	<Instruments> [HLS] Helena SPIFE
30.3 ± 1.58	47.2 ± 1.46	20.2 ± 2.11	20.5 ± 1.22	27.9 ± 3.47	n = 4	[SEE] Sebia Electrophoresis
34.9 ± 1.87	47.5 ± 0.83	24.0 ± 2.97	24.2 ± 3.31	34.2 ± 3.27	n = 5	<Reagents>
30.3 ± 1.58	47.2 ± 1.46	20.2 ± 2.11	20.5 ± 1.22	27.9 ± 3.47	n = 4	[HL1] Helena Laboratories [SE1] Sebia