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Clinical Chemistry Proficiency Test Program

Statistical Summary – August 2016 (Event 16-3)

This statistical report summarizes participant data for the five Clinical Chemistry proficiency survey specimens shipped on 29 August 2016. Test samples (Vials C41, C42, C43, C44, C45) were prepared by the quantitative transfer of constituents to pooled human serum. The material was subsequently sterile filtered, dispensed into aliquots, stored at -80°C, and distributed to participants for analysis.

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 are calculated by a robust statistical technique that does not assume a Gaussian distribution.

Disclaimer:

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

Should you have any questions regarding this report, please contact the Clinical Chemistry Section at (518) 474-5582.

Summary of Participant Performance (Mean and Standard Deviation)

Glucose (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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319.4 ± 10.49	112.6 ± 2.82	43.7 ± 2.10	91.2 ± 3.90	135.2 ± 3.49	n = 201	[---] All Methods & Instruments
<Instruments>						
328.5 ± 4.96	111.7 ± 0.86	42.6 ± 0.85	94.1 ± 1.75	133.6 ± 1.56	n = 18	[ABJ] Abbott Architect c System
320.6 ± 7.44	111.7 ± 2.45	42.5 ± 1.18	87.7 ± 1.97	133.1 ± 2.99	n = 35	[OLC] Beckman Coulter AU Chemistry System
318.1 ± 2.67	109.8 ± 2.08	41.5 ± 1.02	87.4 ± 0.86	133.0 ± 1.68	n = 9	[BCG] Beckman Coulter UniCel DxC 600
319.4 ± 4.29	110.7 ± 1.83	41.3 ± 1.98	88.2 ± 1.45	133.8 ± 2.21	n = 6	[BCH] Beckman Coulter UniCel DxC 800
363.5 ± 2.53	136.3 ± 4.44	66.8 ± 4.39	114.3 ± 4.66	158.0 ± 4.13	n = 6	[HEC] HemoCue Glucose 201
300.5 ± 8.05	113.7 ± 3.55	44.8 ± 1.67	91.8 ± 2.90	139.1 ± 3.81	n = 6	[JJE] Ortho Vitros 250/350/950
299.9 ± 6.06	112.6 ± 2.17	44.2 ± 1.54	90.9 ± 1.99	137.6 ± 1.84	n = 10	[JJG] Ortho Vitros 5600
327.0 ± 6.42	114.2 ± 1.54	43.4 ± 1.02	90.5 ± 1.86	136.3 ± 3.07	n = 3	[ROJ] Roche cobas c311
330.5 ± 4.22	115.3 ± 2.35	44.0 ± 1.05	92.1 ± 1.95	136.9 ± 2.64	n = 11	[ROC] Roche cobas c501
327.0 ± 3.61	112.5 ± 1.86	43.7 ± 0.51	90.5 ± 1.86	134.4 ± 1.02	n = 3	[ROT] Roche Cobas INTEGRA 800
327.4 ± 5.15	115.0 ± 2.33	43.4 ± 1.09	91.1 ± 1.83	137.1 ± 1.65	n = 5	[ROD] Roche MODULAR D/P
318.1 ± 5.95	111.3 ± 1.92	42.4 ± 0.97	89.1 ± 2.20	133.9 ± 2.33	n = 10	[BYE] Siemens ADVIA 1800
320.5 ± 7.29	115.3 ± 2.67	46.9 ± 1.82	97.5 ± 3.00	138.9 ± 2.51	n = 22	[DUE] Siemens Dimension EXL
311.7 ± 6.28	111.8 ± 1.94	45.1 ± 1.18	92.8 ± 2.30	134.2 ± 2.78	n = 28	[DUT] Siemens Dimension Vista
323.7 ± 5.25	115.9 ± 1.94	46.4 ± 2.12	95.0 ± 1.58	139.5 ± 1.96	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
328.5 ± 4.96	111.7 ± 0.86	42.6 ± 0.85	94.1 ± 1.75	133.6 ± 1.56	n = 18	[AB1] Abbott
318.4 ± 3.58	110.1 ± 2.07	41.5 ± 1.34	87.6 ± 1.11	133.1 ± 1.84	n = 17	[BC1] Beckman Coulter
320.6 ± 7.60	111.8 ± 2.51	42.5 ± 1.20	87.8 ± 2.01	133.1 ± 3.04	n = 34	[OL1] Beckman Coulter AU Series
363.5 ± 2.53	136.3 ± 4.44	66.8 ± 4.39	114.3 ± 4.66	158.0 ± 4.13	n = 6	[HE1] HemoCue
299.9 ± 6.11	112.9 ± 2.37	44.5 ± 1.64	91.2 ± 2.31	138.2 ± 3.08	n = 19	[JJ1] Ortho Clinical Diagnostics
328.0 ± 6.27	114.5 ± 2.23	43.7 ± 1.08	91.4 ± 2.06	136.5 ± 2.51	n = 17	[R04] Roche cobas c311/c501/c502/c701/c702
327.4 ± 5.15	115.0 ± 2.33	43.4 ± 1.09	91.1 ± 1.83	137.1 ± 1.65	n = 5	[R02] Roche Hitachi and Modular D/P
327.7 ± 3.17	113.2 ± 1.96	43.5 ± 0.57	90.7 ± 1.51	135.0 ± 1.50	n = 4	[R01] Roche Integra and MIRA
319.4 ± 6.19	111.7 ± 1.97	42.6 ± 0.90	89.0 ± 2.11	134.4 ± 2.38	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
316.6 ± 8.25	113.6 ± 2.99	45.9 ± 1.79	94.8 ± 3.32	136.6 ± 3.78	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Urea Nitrogen (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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17.9 ± 0.77	30.3 ± 1.17	11.1 ± 0.54	74.4 ± 2.07	36.2 ± 1.27	n = 191	[---] All Methods & Instruments
<Instruments>						
18.0 ± 0.00	30.0 ± 0.58	11.0 ± 0.00	75.4 ± 1.53	36.1 ± 0.78	n = 17	[ABJ] Abbott Architect c System
17.9 ± 0.41	30.0 ± 0.87	11.0 ± 0.00	73.5 ± 1.94	35.7 ± 0.89	n = 34	[OLC] Beckman Coulter AU Chemistry System
18.6 ± 0.56	31.2 ± 0.65	12.0 ± 0.00	75.5 ± 1.33	38.0 ± 0.00	n = 9	[BCG] Beckman Coulter UniCel DxC 600
17.0 ± 0.55	29.8 ± 0.73	9.2 ± 0.73	73.0 ± 0.00	35.3 ± 0.72	n = 6	[BCH] Beckman Coulter UniCel DxC 800
17.0 ± 0.00	25.4 ± 0.56	11.2 ± 0.47	74.7 ± 0.52	29.7 ± 0.74	n = 7	[JJE] Ortho Vitros 250/350/950
16.5 ± 0.57	24.8 ± 0.80	11.0 ± 0.00	74.7 ± 1.30	29.6 ± 0.97	n = 10	[JJG] Ortho Vitros 5600
18.0 ± 0.00	30.1 ± 0.44	11.0 ± 0.00	74.2 ± 2.02	35.8 ± 0.92	n = 11	[ROC] Roche cobas c501
17.7 ± 0.51	29.7 ± 0.51	10.7 ± 0.51	75.2 ± 2.36	35.3 ± 0.51	n = 3	[ROT] Roche Cobas INTEGRA 800
18.0 ± 0.00	31.0 ± 1.00	11.0 ± 0.00	74.0 ± 0.00	36.6 ± 1.09	n = 5	[ROD] Roche MODULAR D/P
18.5 ± 0.57	31.5 ± 0.69	11.8 ± 0.48	74.7 ± 1.88	36.9 ± 0.92	n = 10	[BYE] Siemens ADVIA 1800
18.1 ± 0.68	30.5 ± 1.23	11.2 ± 0.73	74.8 ± 2.68	36.7 ± 1.29	n = 22	[DUE] Siemens Dimension EXL
18.0 ± 0.75	30.6 ± 0.80	11.0 ± 0.47	74.8 ± 2.71	36.2 ± 1.12	n = 28	[DUT] Siemens Dimension Vista
18.7 ± 0.87	30.8 ± 1.02	11.5 ± 0.57	74.6 ± 1.80	36.7 ± 0.69	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
18.0 ± 0.00	30.0 ± 0.58	11.0 ± 0.00	75.4 ± 1.53	36.1 ± 0.78	n = 17	[AB1] Abbott
18.1 ± 0.95	30.7 ± 0.94	11.0 ± 1.43	74.7 ± 1.82	37.0 ± 1.34	n = 17	[BC1] Beckman Coulter
17.9 ± 0.44	30.0 ± 0.88	11.0 ± 0.00	73.5 ± 1.95	35.7 ± 0.91	n = 33	[OL1] Beckman Coulter AU Series
16.8 ± 0.49	25.1 ± 0.80	11.0 ± 0.00	74.8 ± 1.01	29.7 ± 0.89	n = 20	[JJ1] Ortho Clinical Diagnostics
18.0 ± 0.00	30.0 ± 0.75	11.0 ± 0.00	73.8 ± 1.76	35.8 ± 0.93	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
18.0 ± 0.00	31.0 ± 1.00	11.0 ± 0.00	74.0 ± 0.00	36.6 ± 1.09	n = 5	[R02] Roche Hitachi and Modular D/P
17.5 ± 0.57	29.8 ± 0.41	10.8 ± 0.41	75.2 ± 1.96	35.7 ± 0.90	n = 4	[R01] Roche Integra and MIRA
18.6 ± 0.56	31.5 ± 0.66	11.7 ± 0.51	74.6 ± 1.77	37.1 ± 0.96	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
18.1 ± 0.79	30.6 ± 0.98	11.1 ± 0.63	74.7 ± 2.54	36.5 ± 1.17	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Creatinine (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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1.41 ± 0.06	2.24 ± 0.13	1.09 ± 0.06	5.20 ± 0.14	2.71 ± 0.19	n = 194	[---] All Methods & Instruments
<Instruments>						
1.41 ± 0.05	2.41 ± 0.05	1.09 ± 0.04	5.31 ± 0.08	2.97 ± 0.04	n = 17	[ABJ] Abbott Architect c System
1.42 ± 0.06	2.18 ± 0.06	1.05 ± 0.05	5.11 ± 0.10	2.61 ± 0.06	n = 34	[OLC] Beckman Coulter AU Chemistry System
1.31 ± 0.02	2.13 ± 0.05	1.01 ± 0.01	5.20 ± 0.07	2.58 ± 0.05	n = 9	[BCG] Beckman Coulter UniCel DxC 600
1.42 ± 0.04	2.21 ± 0.02	1.10 ± 0.01	5.31 ± 0.04	2.64 ± 0.05	n = 6	[BCH] Beckman Coulter UniCel DxC 800
1.33 ± 0.09	2.20 ± 0.08	1.00 ± 0.00	5.76 ± 0.19	2.70 ± 0.08	n = 4	[IAA] i-STAT
1.42 ± 0.03	2.53 ± 0.07	1.10 ± 0.01	5.21 ± 0.03	3.18 ± 0.09	n = 7	[JJE] Ortho Vitros 250/350/950
1.40 ± 0.03	2.50 ± 0.06	1.10 ± 0.00	5.16 ± 0.14	3.10 ± 0.00	n = 10	[JJG] Ortho Vitros 5600
1.31 ± 0.09	2.20 ± 0.09	1.04 ± 0.07	5.33 ± 0.28	2.60 ± 0.11	n = 11	[ROC] Roche cobas c501
1.41 ± 0.02	2.11 ± 0.02	1.09 ± 0.02	5.22 ± 0.06	2.53 ± 0.05	n = 3	[ROT] Roche Cobas INTEGRA 800
1.41 ± 0.02	2.26 ± 0.06	1.14 ± 0.04	5.28 ± 0.11	2.72 ± 0.10	n = 5	[ROD] Roche MODULAR D/P
1.41 ± 0.05	2.27 ± 0.06	1.10 ± 0.00	4.92 ± 0.17	2.76 ± 0.10	n = 10	[BYE] Siemens ADVIA 1800
1.40 ± 0.06	2.18 ± 0.09	1.10 ± 0.00	5.21 ± 0.10	2.64 ± 0.10	n = 22	[DUE] Siemens Dimension EXL
1.45 ± 0.05	2.27 ± 0.07	1.14 ± 0.05	5.24 ± 0.07	2.80 ± 0.08	n = 28	[DUT] Siemens Dimension Vista
1.42 ± 0.04	2.22 ± 0.03	1.10 ± 0.01	5.21 ± 0.07	2.70 ± 0.04	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
1.41 ± 0.06	2.40 ± 0.06	1.09 ± 0.04	5.31 ± 0.08	2.97 ± 0.04	n = 18	[AB1] Abbott
1.35 ± 0.07	2.16 ± 0.06	1.03 ± 0.05	5.23 ± 0.09	2.60 ± 0.05	n = 17	[BC1] Beckman Coulter
1.42 ± 0.06	2.18 ± 0.06	1.05 ± 0.05	5.11 ± 0.10	2.61 ± 0.06	n = 34	[OL1] Beckman Coulter AU Series
1.34 ± 0.10	2.17 ± 0.05	1.00 ± 0.00	5.69 ± 0.20	2.70 ± 0.09	n = 3	[IA1] i-STAT
1.41 ± 0.03	2.51 ± 0.06	1.10 ± 0.00	5.19 ± 0.11	3.13 ± 0.08	n = 20	[JJ1] Ortho Clinical Diagnostics
1.35 ± 0.11	2.22 ± 0.07	1.06 ± 0.08	5.32 ± 0.20	2.63 ± 0.10	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
1.41 ± 0.02	2.26 ± 0.06	1.14 ± 0.04	5.28 ± 0.11	2.72 ± 0.10	n = 5	[R02] Roche Hitachi and Modular D/P
1.43 ± 0.04	2.14 ± 0.08	1.11 ± 0.05	5.19 ± 0.08	2.57 ± 0.09	n = 4	[R01] Roche Integra and MIRA
1.41 ± 0.04	2.28 ± 0.06	1.10 ± 0.00	4.89 ± 0.13	2.78 ± 0.10	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
1.43 ± 0.05	2.23 ± 0.09	1.11 ± 0.05	5.22 ± 0.09	2.72 ± 0.12	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Uric Acid (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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4.09 ± 0.18	5.47 ± 0.23	2.77 ± 0.10	9.17 ± 0.34	6.53 ± 0.27	n = 174	[---] All Methods & Instruments
						<Instruments>
4.20 ± 0.00	5.59 ± 0.06	2.85 ± 0.07	9.45 ± 0.08	6.68 ± 0.06	n = 17	[ABJ] Abbott Architect c System
4.26 ± 0.11	5.72 ± 0.12	2.80 ± 0.07	9.28 ± 0.21	6.75 ± 0.14	n = 34	[OLC] Beckman Coulter AU Chemistry System
4.10 ± 0.00	5.38 ± 0.07	2.80 ± 0.06	8.85 ± 0.06	6.33 ± 0.07	n = 6	[BCG] Beckman Coulter UniCel DxC 600
4.16 ± 0.11	5.40 ± 0.10	2.80 ± 0.00	9.02 ± 0.19	6.40 ± 0.10	n = 5	[BCH] Beckman Coulter UniCel DxC 800
3.90 ± 0.00	5.45 ± 0.18	2.70 ± 0.00	9.06 ± 0.23	6.54 ± 0.17	n = 5	[JJE] Ortho Vitros 250/350/950
3.93 ± 0.12	5.41 ± 0.15	2.77 ± 0.14	8.92 ± 0.25	6.49 ± 0.16	n = 10	[JJG] Ortho Vitros 5600
4.23 ± 0.10	5.60 ± 0.11	2.81 ± 0.04	9.49 ± 0.25	6.69 ± 0.15	n = 11	[ROC] Roche cobas c501
4.16 ± 0.11	5.45 ± 0.11	2.70 ± 0.00	9.38 ± 0.19	6.54 ± 0.14	n = 5	[ROD] Roche MODULAR D/P
4.09 ± 0.07	5.52 ± 0.07	2.79 ± 0.05	9.32 ± 0.13	6.60 ± 0.10	n = 10	[BYE] Siemens ADVIA 1800
4.02 ± 0.12	5.40 ± 0.11	2.78 ± 0.13	9.16 ± 0.18	6.46 ± 0.12	n = 22	[DUE] Siemens Dimension EXL
3.84 ± 0.06	5.10 ± 0.08	2.63 ± 0.06	8.66 ± 0.15	6.02 ± 0.09	n = 27	[DUT] Siemens Dimension Vista
4.00 ± 0.10	5.40 ± 0.10	2.80 ± 0.10	9.14 ± 0.13	6.48 ± 0.08	n = 5	[DUX] Siemens Dimension Xpand
						<Reagents>
4.20 ± 0.00	5.59 ± 0.06	2.85 ± 0.07	9.45 ± 0.08	6.68 ± 0.06	n = 17	[AB1] Abbott
4.12 ± 0.08	5.39 ± 0.09	2.80 ± 0.00	8.90 ± 0.14	6.37 ± 0.11	n = 13	[BC1] Beckman Coulter
4.26 ± 0.11	5.72 ± 0.12	2.80 ± 0.08	9.29 ± 0.20	6.76 ± 0.14	n = 33	[OL1] Beckman Coulter AU Series
3.95 ± 0.12	5.44 ± 0.14	2.76 ± 0.11	9.03 ± 0.27	6.53 ± 0.16	n = 18	[JJ1] Ortho Clinical Diagnostics
4.20 ± 0.09	5.58 ± 0.12	2.79 ± 0.05	9.48 ± 0.24	6.68 ± 0.15	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
4.16 ± 0.11	5.45 ± 0.11	2.70 ± 0.00	9.38 ± 0.19	6.54 ± 0.14	n = 5	[R02] Roche Hitachi and Modular D/P
4.10 ± 0.08	5.53 ± 0.07	2.80 ± 0.00	9.36 ± 0.16	6.61 ± 0.09	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
3.92 ± 0.13	5.25 ± 0.19	2.70 ± 0.12	8.90 ± 0.31	6.24 ± 0.27	n = 55	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Bilirubin (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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4.87 ± 0.25	1.21 ± 0.13	3.29 ± 0.19	0.68 ± 0.09	1.42 ± 0.16	n = 187	[---] All Methods & Instruments
<Instruments>						
5.02 ± 0.15	1.28 ± 0.15	3.43 ± 0.13	0.72 ± 0.07	1.52 ± 0.17	n = 17	[ABJ] Abbott Architect c System
4.76 ± 0.16	1.26 ± 0.09	3.21 ± 0.12	0.70 ± 0.00	1.47 ± 0.10	n = 35	[OLC] Beckman Coulter AU Chemistry System
4.97 ± 0.19	1.43 ± 0.05	3.36 ± 0.13	0.83 ± 0.14	1.47 ± 0.19	n = 8	[BCG] Beckman Coulter UniCel DxC 600
4.93 ± 0.27	1.27 ± 0.05	3.37 ± 0.24	0.80 ± 0.16	1.43 ± 0.21	n = 6	[BCH] Beckman Coulter UniCel DxC 800
5.12 ± 0.17	1.31 ± 0.16	3.45 ± 0.15	0.74 ± 0.06	1.53 ± 0.15	n = 7	[JJE] Ortho Vitros 250/350/950
5.28 ± 0.09	1.33 ± 0.11	3.62 ± 0.04	0.74 ± 0.08	1.56 ± 0.12	n = 10	[JJG] Ortho Vitros 5600
4.68 ± 0.12	1.13 ± 0.06	3.15 ± 0.09	0.59 ± 0.04	1.35 ± 0.06	n = 11	[ROC] Roche cobas c501
4.50 ± 0.18	0.99 ± 0.20	3.00 ± 0.09	0.57 ± 0.05	1.09 ± 0.20	n = 3	[ROT] Roche Cobas INTEGRA 800
4.60 ± 0.00	1.10 ± 0.00	3.05 ± 0.08	0.60 ± 0.00	1.30 ± 0.00	n = 5	[ROD] Roche MODULAR D/P
5.25 ± 0.17	1.23 ± 0.14	3.56 ± 0.11	0.74 ± 0.07	1.44 ± 0.23	n = 10	[BYE] Siemens ADVIA 1800
4.84 ± 0.12	1.15 ± 0.06	3.25 ± 0.07	0.60 ± 0.00	1.38 ± 0.05	n = 22	[DUE] Siemens Dimension EXL
4.80 ± 0.08	1.16 ± 0.07	3.23 ± 0.07	0.67 ± 0.05	1.38 ± 0.08	n = 28	[DUT] Siemens Dimension Vista
4.82 ± 0.11	1.14 ± 0.17	3.21 ± 0.10	0.60 ± 0.00	1.31 ± 0.15	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
5.02 ± 0.15	1.28 ± 0.15	3.43 ± 0.13	0.72 ± 0.07	1.52 ± 0.17	n = 17	[AB1] Abbott
4.94 ± 0.23	1.32 ± 0.12	3.35 ± 0.18	0.79 ± 0.15	1.44 ± 0.19	n = 16	[BC1] Beckman Coulter
4.76 ± 0.16	1.26 ± 0.09	3.22 ± 0.12	0.70 ± 0.00	1.47 ± 0.10	n = 34	[OL1] Beckman Coulter AU Series
5.24 ± 0.11	1.33 ± 0.12	3.58 ± 0.11	0.75 ± 0.07	1.57 ± 0.14	n = 20	[JJ1] Ortho Clinical Diagnostics
4.66 ± 0.13	1.12 ± 0.05	3.14 ± 0.08	0.60 ± 0.00	1.33 ± 0.05	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
4.60 ± 0.00	1.10 ± 0.00	3.05 ± 0.08	0.60 ± 0.00	1.30 ± 0.00	n = 5	[R02] Roche Hitachi and Modular D/P
4.56 ± 0.14	1.08 ± 0.04	3.00 ± 0.06	0.60 ± 0.00	1.22 ± 0.04	n = 5	[R01] Roche Integra and MIRA
5.24 ± 0.15	1.23 ± 0.10	3.54 ± 0.10	0.73 ± 0.06	1.44 ± 0.18	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
4.81 ± 0.10	1.16 ± 0.07	3.24 ± 0.08	0.63 ± 0.06	1.38 ± 0.07	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Phosphorus (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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2.60 ± 0.20	4.64 ± 0.25	7.29 ± 0.29	3.43 ± 0.23	5.54 ± 0.29	n = 165	[---] All Methods & Instruments
<Instruments>						
2.66 ± 0.07	4.70 ± 0.08	7.32 ± 0.13	3.47 ± 0.07	5.59 ± 0.07	n = 16	[ABJ] Abbott Architect c System
2.50 ± 0.08	4.47 ± 0.12	7.07 ± 0.16	3.30 ± 0.09	5.34 ± 0.13	n = 33	[OLC] Beckman Coulter AU Chemistry System
2.64 ± 0.08	4.64 ± 0.16	7.38 ± 0.17	3.43 ± 0.10	5.60 ± 0.14	n = 6	[BCG] Beckman Coulter UniCel DxC 600
2.70 ± 0.06	4.80 ± 0.09	7.80 ± 0.09	3.59 ± 0.14	5.78 ± 0.10	n = 6	[BCH] Beckman Coulter UniCel DxC 800
3.00 ± 0.15	5.14 ± 0.11	7.86 ± 0.19	3.87 ± 0.14	6.23 ± 0.14	n = 5	[JJE] Ortho Vitros 250/350/950
2.84 ± 0.07	5.06 ± 0.08	7.54 ± 0.12	3.69 ± 0.08	6.16 ± 0.11	n = 10	[JJG] Ortho Vitros 5600
2.65 ± 0.07	4.68 ± 0.06	7.39 ± 0.09	3.49 ± 0.05	5.60 ± 0.09	n = 11	[ROC] Roche cobas c501
2.56 ± 0.06	4.60 ± 0.09	7.30 ± 0.10	3.38 ± 0.08	5.52 ± 0.08	n = 5	[ROD] Roche MODULAR D/P
2.61 ± 0.12	4.63 ± 0.12	7.33 ± 0.19	3.46 ± 0.15	5.52 ± 0.14	n = 10	[BYE] Siemens ADVIA 1800
2.80 ± 0.05	4.87 ± 0.10	7.49 ± 0.14	3.67 ± 0.06	5.78 ± 0.10	n = 16	[DUE] Siemens Dimension EXL
2.31 ± 0.07	4.37 ± 0.09	6.97 ± 0.18	3.13 ± 0.10	5.25 ± 0.15	n = 27	[DUT] Siemens Dimension Vista
2.76 ± 0.13	4.80 ± 0.13	7.41 ± 0.13	3.59 ± 0.13	5.70 ± 0.15	n = 5	[DUX] Siemens Dimension Xpand
<Reagents>						
2.66 ± 0.07	4.70 ± 0.08	7.32 ± 0.13	3.47 ± 0.07	5.59 ± 0.07	n = 16	[AB1] Abbott
2.66 ± 0.08	4.71 ± 0.15	7.56 ± 0.27	3.48 ± 0.15	5.66 ± 0.16	n = 14	[BC1] Beckman Coulter
2.50 ± 0.08	4.46 ± 0.12	7.06 ± 0.16	3.30 ± 0.09	5.33 ± 0.13	n = 32	[OL1] Beckman Coulter AU Series
2.87 ± 0.10	5.10 ± 0.10	7.65 ± 0.21	3.74 ± 0.11	6.22 ± 0.13	n = 18	[JJ1] Ortho Clinical Diagnostics
2.65 ± 0.07	4.67 ± 0.07	7.38 ± 0.09	3.48 ± 0.07	5.58 ± 0.10	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
2.56 ± 0.06	4.60 ± 0.09	7.30 ± 0.10	3.38 ± 0.08	5.52 ± 0.08	n = 5	[R02] Roche Hitachi and Modular D/P
2.58 ± 0.15	4.53 ± 0.05	7.23 ± 0.14	3.35 ± 0.19	5.43 ± 0.14	n = 3	[R01] Roche Integra and MIRA
2.58 ± 0.12	4.63 ± 0.11	7.34 ± 0.17	3.45 ± 0.13	5.55 ± 0.14	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
2.52 ± 0.27	4.57 ± 0.29	7.20 ± 0.32	3.35 ± 0.29	5.47 ± 0.32	n = 49	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Calcium (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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7.74 ± 0.19	11.85 ± 0.28	10.33 ± 0.31	9.38 ± 0.23	14.06 ± 0.32	n = 186	[---] All Methods & Instruments
						<Instruments>
7.70 ± 0.11	11.97 ± 0.19	10.49 ± 0.16	9.45 ± 0.10	14.16 ± 0.23	n = 17	[ABJ] Abbott Architect c System
7.73 ± 0.14	11.86 ± 0.17	10.41 ± 0.16	9.52 ± 0.16	14.07 ± 0.25	n = 35	[OLC] Beckman Coulter AU Chemistry System
7.79 ± 0.10	11.77 ± 0.09	10.28 ± 0.05	9.37 ± 0.07	13.86 ± 0.07	n = 8	[BCG] Beckman Coulter UniCel DxC 600
7.84 ± 0.08	11.92 ± 0.14	10.38 ± 0.07	9.42 ± 0.12	14.06 ± 0.09	n = 6	[BCH] Beckman Coulter UniCel DxC 800
7.96 ± 0.17	12.12 ± 0.22	10.82 ± 0.18	9.47 ± 0.17	14.15 ± 0.29	n = 6	[JJE] Ortho Vitros 250/350/950
7.89 ± 0.15	11.83 ± 0.28	10.57 ± 0.19	9.25 ± 0.20	13.95 ± 0.35	n = 10	[JJG] Ortho Vitros 5600
7.98 ± 0.08	12.32 ± 0.21	10.69 ± 0.22	9.66 ± 0.18	14.63 ± 0.24	n = 11	[ROC] Roche cobas c501
7.87 ± 0.14	12.12 ± 0.24	10.40 ± 0.09	9.37 ± 0.05	14.46 ± 0.10	n = 3	[ROT] Roche Cobas INTEGRA 800
7.86 ± 0.29	12.21 ± 0.41	10.51 ± 0.39	9.58 ± 0.36	14.40 ± 0.49	n = 5	[ROD] Roche MODULAR D/P
7.82 ± 0.11	11.99 ± 0.15	10.55 ± 0.16	9.56 ± 0.08	14.14 ± 0.26	n = 10	[BYE] Siemens ADVIA 1800
7.66 ± 0.15	11.72 ± 0.21	10.08 ± 0.18	9.27 ± 0.13	14.00 ± 0.25	n = 22	[DUE] Siemens Dimension EXL
7.61 ± 0.18	11.60 ± 0.24	9.97 ± 0.23	9.10 ± 0.23	13.92 ± 0.30	n = 28	[DUT] Siemens Dimension Vista
7.64 ± 0.13	11.62 ± 0.19	10.00 ± 0.18	9.17 ± 0.19	13.80 ± 0.19	n = 8	[DUX] Siemens Dimension Xpand
						<Reagents>
7.70 ± 0.11	11.97 ± 0.19	10.49 ± 0.16	9.45 ± 0.10	14.16 ± 0.23	n = 17	[AB1] Abbott
7.81 ± 0.09	11.83 ± 0.13	10.33 ± 0.11	9.39 ± 0.11	13.94 ± 0.15	n = 16	[BC1] Beckman Coulter
7.73 ± 0.15	11.86 ± 0.17	10.41 ± 0.16	9.52 ± 0.16	14.07 ± 0.25	n = 34	[OL1] Beckman Coulter AU Series
7.92 ± 0.15	11.96 ± 0.25	10.64 ± 0.21	9.34 ± 0.19	14.02 ± 0.32	n = 19	[JJ1] Ortho Clinical Diagnostics
7.94 ± 0.10	12.24 ± 0.24	10.63 ± 0.25	9.60 ± 0.18	14.55 ± 0.28	n = 13	[R04] Roche cobas c311/c501/c502/c701/c702
7.86 ± 0.29	12.21 ± 0.41	10.51 ± 0.39	9.58 ± 0.36	14.40 ± 0.49	n = 5	[R02] Roche Hitachi and Modular D/P
7.78 ± 0.21	12.08 ± 0.21	10.37 ± 0.09	9.32 ± 0.13	14.39 ± 0.19	n = 4	[R01] Roche Integra and MIRA
7.80 ± 0.12	11.97 ± 0.14	10.52 ± 0.18	9.55 ± 0.09	14.16 ± 0.25	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
7.63 ± 0.16	11.64 ± 0.24	10.01 ± 0.21	9.17 ± 0.21	13.94 ± 0.29	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Magnesium (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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3.51 ± 0.16	2.07 ± 0.09	1.12 ± 0.09	4.49 ± 0.19	2.49 ± 0.10	n = 170	[---] All Methods & Instruments
<Instruments>						
3.31 ± 0.10	2.06 ± 0.08	1.23 ± 0.06	4.30 ± 0.13	2.49 ± 0.08	n = 17	[ABJ] Abbott Architect c System
3.47 ± 0.09	2.03 ± 0.07	1.12 ± 0.05	4.45 ± 0.12	2.44 ± 0.08	n = 33	[OLC] Beckman Coulter AU Chemistry System
3.39 ± 0.05	2.03 ± 0.05	1.16 ± 0.05	4.38 ± 0.05	2.45 ± 0.05	n = 7	[BCG] Beckman Coulter UniCel DxC 600
3.38 ± 0.14	2.04 ± 0.05	1.15 ± 0.06	4.34 ± 0.08	2.42 ± 0.07	n = 6	[BCH] Beckman Coulter UniCel DxC 800
3.68 ± 0.04	2.05 ± 0.06	1.00 ± 0.00	4.47 ± 0.09	2.52 ± 0.04	n = 4	[JJE] Ortho Vitros 250/350/950
3.56 ± 0.07	2.05 ± 0.07	1.00 ± 0.00	4.43 ± 0.06	2.44 ± 0.06	n = 9	[JJG] Ortho Vitros 5600
3.50 ± 0.06	2.12 ± 0.04	1.10 ± 0.00	4.54 ± 0.11	2.53 ± 0.05	n = 11	[ROC] Roche cobas c501
3.50 ± 0.00	2.12 ± 0.08	1.16 ± 0.06	4.50 ± 0.06	2.52 ± 0.08	n = 5	[ROD] Roche MODULAR D/P
3.41 ± 0.07	2.18 ± 0.09	1.24 ± 0.07	4.38 ± 0.20	2.60 ± 0.11	n = 10	[BYE] Siemens ADVIA 1800
3.54 ± 0.06	2.02 ± 0.07	1.04 ± 0.06	4.56 ± 0.13	2.44 ± 0.10	n = 20	[DUE] Siemens Dimension EXL
3.73 ± 0.10	2.14 ± 0.11	1.14 ± 0.09	4.77 ± 0.13	2.59 ± 0.10	n = 28	[DUT] Siemens Dimension Vista
3.52 ± 0.09	1.97 ± 0.07	1.02 ± 0.05	4.60 ± 0.12	2.40 ± 0.05	n = 7	[DUX] Siemens Dimension Xpand
<Reagents>						
3.31 ± 0.10	2.06 ± 0.08	1.23 ± 0.06	4.30 ± 0.13	2.49 ± 0.08	n = 17	[AB1] Abbott
3.39 ± 0.10	2.03 ± 0.05	1.15 ± 0.05	4.36 ± 0.07	2.44 ± 0.06	n = 15	[BC1] Beckman Coulter
3.47 ± 0.09	2.03 ± 0.07	1.12 ± 0.05	4.45 ± 0.12	2.43 ± 0.08	n = 32	[OL1] Beckman Coulter AU Series
3.62 ± 0.09	2.07 ± 0.07	1.00 ± 0.00	4.47 ± 0.09	2.48 ± 0.06	n = 16	[JJ1] Ortho Clinical Diagnostics
3.49 ± 0.06	2.12 ± 0.05	1.10 ± 0.00	4.54 ± 0.10	2.53 ± 0.05	n = 13	[R04] Roche cobas c311/c501/c502/c701/c702
3.50 ± 0.00	2.12 ± 0.08	1.16 ± 0.06	4.50 ± 0.06	2.52 ± 0.08	n = 5	[R02] Roche Hitachi and Modular D/P
3.41 ± 0.08	2.18 ± 0.09	1.24 ± 0.08	4.35 ± 0.21	2.60 ± 0.09	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
3.63 ± 0.14	2.07 ± 0.11	1.08 ± 0.09	4.67 ± 0.17	2.51 ± 0.13	n = 56	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Iron (µg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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55.4 ± 2.58	95.2 ± 3.88	177.1 ± 7.31	109.7 ± 4.78	113.9 ± 4.76	n = 130	[---] All Methods & Instruments
<Instruments>						
57.5 ± 2.15	96.7 ± 3.17	174.6 ± 6.78	100.2 ± 4.41	114.4 ± 4.17	n = 11	[ABJ] Abbott Architect c System
56.1 ± 2.16	97.1 ± 3.04	182.9 ± 3.54	112.7 ± 3.06	116.6 ± 2.72	n = 30	[OLC] Beckman Coulter AU Chemistry System
56.3 ± 4.63	94.6 ± 2.61	173.4 ± 3.07	107.6 ± 3.78	112.7 ± 1.59	n = 5	[BCG] Beckman Coulter UniCel DxC 600
53.5 ± 0.83	92.2 ± 1.07	172.9 ± 1.83	106.5 ± 0.83	110.0 ± 0.93	n = 5	[BCH] Beckman Coulter UniCel DxC 800
51.7 ± 3.45	102.9 ± 5.63	193.9 ± 5.59	118.6 ± 5.12	129.8 ± 4.92	n = 10	[JJG] Ortho Vitros 5600
60.2 ± 1.31	99.0 ± 2.11	180.2 ± 2.81	112.0 ± 2.27	116.9 ± 2.21	n = 7	[ROC] Roche cobas c501
56.0 ± 0.75	94.5 ± 0.57	173.0 ± 0.00	107.4 ± 1.80	112.8 ± 0.41	n = 4	[ROD] Roche MODULAR D/P
56.0 ± 1.99	96.0 ± 2.77	177.7 ± 4.61	110.5 ± 3.77	114.4 ± 3.29	n = 10	[BYE] Siemens ADVIA 1800
53.8 ± 1.16	91.7 ± 1.77	169.3 ± 2.46	106.9 ± 1.32	108.9 ± 1.81	n = 11	[DUE] Siemens Dimension EXL
54.8 ± 1.59	92.6 ± 1.35	172.6 ± 2.36	108.7 ± 1.56	110.7 ± 2.31	n = 23	[DUT] Siemens Dimension Vista
<Reagents>						
57.9 ± 1.36	97.3 ± 2.56	175.8 ± 6.07	100.8 ± 4.20	115.2 ± 3.64	n = 10	[AB3] Abbott-Iron/6K95
54.1 ± 1.69	93.2 ± 2.58	172.8 ± 2.66	106.4 ± 1.21	111.0 ± 2.48	n = 12	[BC1] Beckman Coulter
56.0 ± 2.15	97.1 ± 3.12	182.8 ± 3.54	112.6 ± 2.81	116.5 ± 2.72	n = 29	[OL1] Beckman Coulter AU Series
51.3 ± 3.76	101.6 ± 6.09	192.7 ± 5.50	118.2 ± 6.25	128.2 ± 5.69	n = 13	[JJ1] Ortho Clinical Diagnostics
59.0 ± 2.37	97.6 ± 2.82	178.7 ± 3.58	110.9 ± 2.44	115.7 ± 2.87	n = 10	[R04] Roche cobas c311/c501/c502/c701/c702
56.0 ± 0.75	94.5 ± 0.57	173.0 ± 0.00	107.4 ± 1.80	112.8 ± 0.41	n = 4	[R02] Roche Hitachi and Modular D/P
56.1 ± 1.76	96.0 ± 2.45	178.3 ± 4.00	110.7 ± 3.44	114.9 ± 2.95	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
54.5 ± 1.49	92.4 ± 1.54	171.7 ± 2.83	108.1 ± 1.65	110.2 ± 2.34	n = 36	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Sodium (mmol/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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142.2 ± 2.18	135.6 ± 2.16	161.3 ± 2.10	124.3 ± 1.68	151.2 ± 1.70	n = 190	[---] All Methods & Instruments
<Instruments>						
141.6 ± 0.75	134.9 ± 0.75	161.4 ± 0.96	123.7 ± 0.66	151.4 ± 0.87	n = 17	[ABJ] Abbott Architect c System
141.2 ± 1.24	133.5 ± 1.21	160.0 ± 1.29	122.4 ± 1.21	149.9 ± 1.33	n = 35	[OLC] Beckman Coulter AU Chemistry System
140.3 ± 0.69	133.9 ± 0.85	161.1 ± 1.48	123.4 ± 0.72	151.1 ± 1.01	n = 8	[BCG] Beckman Coulter UniCel DxC 600
140.1 ± 1.40	134.7 ± 1.68	160.8 ± 0.91	123.3 ± 1.63	151.2 ± 0.91	n = 6	[BCH] Beckman Coulter UniCel DxC 800
140.7 ± 0.51	133.0 ± 0.00	157.3 ± 0.51	123.0 ± 0.90	149.0 ± 0.00	n = 3	[IAA] i-STAT
139.3 ± 1.55	140.7 ± 1.98	164.7 ± 1.55	125.7 ± 0.97	162.3 ± 1.63	n = 6	[JJE] Ortho Vitros 250/350/950
140.2 ± 1.54	140.0 ± 0.90	164.2 ± 1.54	124.5 ± 1.86	160.7 ± 1.37	n = 3	[JJF] Ortho Vitros 5,1FS
139.7 ± 1.09	140.2 ± 1.47	163.6 ± 1.97	125.1 ± 1.47	160.6 ± 1.37	n = 10	[JJG] Ortho Vitros 5600
143.4 ± 1.22	136.8 ± 0.62	163.7 ± 1.39	125.7 ± 1.01	152.9 ± 1.68	n = 11	[ROC] Roche cobas c501
141.0 ± 0.90	134.7 ± 0.51	159.9 ± 2.05	122.7 ± 0.51	150.7 ± 1.37	n = 3	[ROT] Roche Cobas INTEGRA 800
145.0 ± 0.00	137.2 ± 0.80	164.4 ± 0.55	125.7 ± 1.10	153.4 ± 1.09	n = 5	[ROD] Roche MODULAR D/P
143.2 ± 1.05	136.2 ± 0.61	162.4 ± 0.97	125.6 ± 0.56	152.8 ± 0.50	n = 10	[BYE] Siemens ADVIA 1800
143.7 ± 0.92	136.0 ± 1.46	161.4 ± 1.18	124.5 ± 1.14	151.7 ± 0.81	n = 22	[DUE] Siemens Dimension EXL
144.5 ± 1.21	136.3 ± 1.20	159.9 ± 1.69	125.4 ± 1.42	150.5 ± 1.28	n = 28	[DUT] Siemens Dimension Vista
143.9 ± 1.40	136.0 ± 0.75	161.5 ± 1.74	125.3 ± 0.90	152.0 ± 1.31	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
141.6 ± 0.75	134.9 ± 0.75	161.4 ± 0.96	123.7 ± 0.66	151.4 ± 0.87	n = 17	[AB1] Abbott
140.5 ± 1.38	134.5 ± 1.41	161.0 ± 1.17	123.7 ± 1.16	151.2 ± 0.86	n = 17	[BC1] Beckman Coulter
141.1 ± 1.17	133.4 ± 1.14	160.0 ± 1.30	122.4 ± 1.14	149.8 ± 1.28	n = 34	[OL1] Beckman Coulter AU Series
140.7 ± 0.51	133.0 ± 0.00	157.3 ± 0.51	123.0 ± 0.90	149.0 ± 0.00	n = 3	[IA1] i-STAT
139.7 ± 1.36	140.3 ± 1.59	164.1 ± 1.82	125.3 ± 1.40	161.1 ± 1.64	n = 19	[JJ1] Ortho Clinical Diagnostics
143.2 ± 1.28	136.6 ± 0.78	163.6 ± 1.23	125.4 ± 1.07	152.8 ± 1.43	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
145.0 ± 0.00	137.2 ± 0.80	164.4 ± 0.55	125.7 ± 1.10	153.4 ± 1.09	n = 5	[R02] Roche Hitachi and Modular D/P
140.7 ± 0.90	134.3 ± 0.90	160.0 ± 1.65	122.3 ± 0.90	150.9 ± 1.13	n = 4	[R01] Roche Integra and MIRA
143.2 ± 0.98	136.4 ± 0.65	162.4 ± 0.89	125.6 ± 0.60	152.7 ± 0.57	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
144.0 ± 1.27	136.1 ± 1.25	160.7 ± 1.68	125.0 ± 1.28	151.2 ± 1.30	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Potassium (mmol/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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3.75 ± 0.06	3.73 ± 0.08	6.23 ± 0.14	2.87 ± 0.08	4.45 ± 0.10	n = 190	[---] All Methods & Instruments
<Instruments>						
3.78 ± 0.06	3.75 ± 0.06	6.26 ± 0.06	2.90 ± 0.00	4.48 ± 0.05	n = 17	[ABJ] Abbott Architect c System
3.73 ± 0.05	3.70 ± 0.00	6.13 ± 0.07	2.88 ± 0.05	4.40 ± 0.00	n = 35	[OLC] Beckman Coulter AU Chemistry System
3.70 ± 0.00	3.67 ± 0.05	6.25 ± 0.06	2.80 ± 0.00	4.43 ± 0.05	n = 8	[BCG] Beckman Coulter UniCel DxC 600
3.73 ± 0.05	3.67 ± 0.05	6.28 ± 0.07	2.82 ± 0.07	4.40 ± 0.00	n = 6	[BCH] Beckman Coulter UniCel DxC 800
3.67 ± 0.05	3.67 ± 0.05	6.03 ± 0.05	2.80 ± 0.00	4.37 ± 0.05	n = 3	[IAA] i-STAT
3.75 ± 0.06	3.90 ± 0.00	6.33 ± 0.05	2.97 ± 0.05	4.70 ± 0.00	n = 6	[JJE] Ortho Vitros 250/350/950
3.74 ± 0.06	3.88 ± 0.08	6.30 ± 0.12	2.94 ± 0.06	4.69 ± 0.09	n = 10	[JJG] Ortho Vitros 5600
3.82 ± 0.05	3.78 ± 0.07	6.41 ± 0.10	2.98 ± 0.05	4.55 ± 0.06	n = 11	[ROC] Roche cobas c501
3.73 ± 0.05	3.73 ± 0.05	6.20 ± 0.09	2.90 ± 0.09	4.47 ± 0.05	n = 3	[ROT] Roche Cobas INTEGRA 800
3.90 ± 0.00	3.84 ± 0.06	6.40 ± 0.00	3.00 ± 0.00	4.54 ± 0.06	n = 5	[ROD] Roche MODULAR D/P
3.80 ± 0.00	3.80 ± 0.00	6.29 ± 0.07	2.92 ± 0.05	4.52 ± 0.05	n = 10	[BYE] Siemens ADVIA 1800
3.70 ± 0.00	3.70 ± 0.00	6.30 ± 0.00	2.80 ± 0.00	4.42 ± 0.05	n = 22	[DUE] Siemens Dimension EXL
3.74 ± 0.05	3.70 ± 0.00	6.05 ± 0.06	2.85 ± 0.06	4.37 ± 0.05	n = 28	[DUT] Siemens Dimension Vista
3.73 ± 0.05	3.70 ± 0.00	6.31 ± 0.06	2.80 ± 0.00	4.42 ± 0.04	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
3.78 ± 0.06	3.75 ± 0.06	6.26 ± 0.06	2.90 ± 0.00	4.48 ± 0.05	n = 17	[AB1] Abbott
3.70 ± 0.00	3.68 ± 0.05	6.24 ± 0.08	2.81 ± 0.05	4.40 ± 0.00	n = 18	[BC1] Beckman Coulter
3.73 ± 0.05	3.70 ± 0.00	6.13 ± 0.07	2.88 ± 0.05	4.40 ± 0.00	n = 33	[OL1] Beckman Coulter AU Series
3.67 ± 0.05	3.67 ± 0.05	6.03 ± 0.05	2.80 ± 0.00	4.37 ± 0.05	n = 3	[IA1] i-STAT
3.75 ± 0.06	3.91 ± 0.07	6.33 ± 0.09	2.95 ± 0.06	4.71 ± 0.06	n = 19	[JJ1] Ortho Clinical Diagnostics
3.80 ± 0.00	3.80 ± 0.00	6.41 ± 0.08	3.00 ± 0.00	4.56 ± 0.06	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
3.90 ± 0.00	3.84 ± 0.06	6.40 ± 0.00	3.00 ± 0.00	4.54 ± 0.06	n = 5	[R02] Roche Hitachi and Modular D/P
3.72 ± 0.04	3.72 ± 0.04	6.20 ± 0.08	2.87 ± 0.09	4.48 ± 0.04	n = 4	[R01] Roche Integra and MIRA
3.80 ± 0.00	3.80 ± 0.00	6.29 ± 0.07	2.90 ± 0.00	4.53 ± 0.05	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
3.72 ± 0.05	3.70 ± 0.00	6.18 ± 0.15	2.83 ± 0.05	4.40 ± 0.06	n = 58	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Chloride (mmol/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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105.0 ± 1.84	100.7 ± 2.40	117.1 ± 2.04	87.4 ± 1.47	111.6 ± 2.54	n = 187	[---] All Methods & Instruments
<Instruments>						
105.8 ± 1.00	102.9 ± 0.75	117.2 ± 1.24	88.4 ± 0.78	113.4 ± 1.33	n = 17	[ABJ] Abbott Architect c System
103.8 ± 0.79	99.3 ± 0.80	115.0 ± 0.87	86.6 ± 0.76	109.5 ± 0.85	n = 34	[OLC] Beckman Coulter AU Chemistry System
104.5 ± 0.57	102.0 ± 0.75	116.1 ± 0.60	87.6 ± 0.68	112.7 ± 0.69	n = 8	[BCG] Beckman Coulter UniCel DxC 600
105.0 ± 0.55	102.7 ± 0.97	117.1 ± 1.33	87.7 ± 0.97	112.9 ± 0.59	n = 6	[BCH] Beckman Coulter UniCel DxC 800
105.0 ± 0.00	102.2 ± 0.73	116.6 ± 0.79	87.0 ± 0.00	114.0 ± 0.90	n = 6	[JJE] Ortho Vitros 250/350/950
104.2 ± 0.61	102.0 ± 0.84	116.5 ± 1.10	86.6 ± 0.83	113.6 ± 0.97	n = 10	[JJG] Ortho Vitros 5600
100.2 ± 1.25	94.0 ± 0.91	115.0 ± 1.89	84.0 ± 1.22	105.5 ± 1.36	n = 11	[ROC] Roche cobas c501
105.4 ± 1.02	100.4 ± 1.02	116.4 ± 1.02	86.4 ± 1.02	110.7 ± 1.37	n = 3	[ROT] Roche Cobas INTEGRA 800
101.6 ± 1.33	94.8 ± 0.80	115.8 ± 0.80	84.2 ± 0.80	105.8 ± 1.07	n = 5	[ROD] Roche MODULAR D/P
105.4 ± 0.97	101.0 ± 0.97	118.0 ± 0.97	88.2 ± 0.65	112.1 ± 0.74	n = 10	[BYE] Siemens ADVIA 1800
106.1 ± 1.02	99.5 ± 0.81	118.4 ± 0.83	88.5 ± 0.90	111.0 ± 0.52	n = 21	[DUE] Siemens Dimension EXL
106.4 ± 0.94	101.9 ± 1.01	119.2 ± 1.30	87.9 ± 1.03	113.4 ± 0.91	n = 28	[DUT] Siemens Dimension Vista
106.0 ± 0.75	99.5 ± 0.90	118.4 ± 1.22	88.1 ± 0.60	110.7 ± 0.69	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
105.8 ± 1.00	102.9 ± 0.75	117.2 ± 1.24	88.4 ± 0.78	113.4 ± 1.33	n = 17	[AB1] Abbott
104.6 ± 0.62	102.1 ± 1.26	116.2 ± 1.02	87.5 ± 0.99	112.7 ± 1.26	n = 18	[BC1] Beckman Coulter
103.7 ± 0.82	99.3 ± 0.81	115.0 ± 0.87	86.6 ± 0.78	109.5 ± 0.87	n = 32	[OL1] Beckman Coulter AU Series
104.5 ± 0.97	102.2 ± 1.03	116.7 ± 1.22	86.8 ± 0.85	113.8 ± 1.28	n = 19	[JJ1] Ortho Clinical Diagnostics
100.2 ± 1.18	94.2 ± 1.00	115.0 ± 1.62	84.1 ± 1.04	105.7 ± 1.26	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
101.6 ± 1.33	94.8 ± 0.80	115.8 ± 0.80	84.2 ± 0.80	105.8 ± 1.07	n = 5	[R02] Roche Hitachi and Modular D/P
105.3 ± 0.90	100.0 ± 1.14	116.3 ± 0.90	86.0 ± 1.14	110.5 ± 1.22	n = 4	[R01] Roche Integra and MIRA
105.4 ± 0.90	101.1 ± 0.92	118.0 ± 0.85	88.1 ± 0.70	112.0 ± 0.75	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
106.2 ± 0.97	100.6 ± 1.64	118.8 ± 1.29	88.1 ± 0.91	112.2 ± 1.62	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Albumin (g/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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2.47 ± 0.12	4.45 ± 0.12	4.12 ± 0.12	4.09 ± 0.11	5.29 ± 0.15	n = 188	[---] All Methods & Instruments
<Instruments>						
2.53 ± 0.10	4.40 ± 0.15	4.16 ± 0.14	4.17 ± 0.08	5.18 ± 0.15	n = 17	[ABJ] Abbott Architect c System
2.41 ± 0.06	4.33 ± 0.10	4.08 ± 0.10	4.04 ± 0.10	5.12 ± 0.11	n = 35	[OLC] Beckman Coulter AU Chemistry System
2.53 ± 0.05	4.36 ± 0.07	4.12 ± 0.04	4.13 ± 0.05	5.20 ± 0.09	n = 8	[BCG] Beckman Coulter UniCel DxC 600
2.50 ± 0.00	4.43 ± 0.05	4.13 ± 0.05	4.13 ± 0.05	5.28 ± 0.07	n = 6	[BCH] Beckman Coulter UniCel DxC 800
2.18 ± 0.07	4.47 ± 0.12	4.17 ± 0.12	4.06 ± 0.08	5.59 ± 0.19	n = 6	[JJE] Ortho Vitros 250/350/950
2.20 ± 0.00	4.34 ± 0.10	4.09 ± 0.07	4.00 ± 0.00	5.35 ± 0.11	n = 10	[JJG] Ortho Vitros 5600
2.67 ± 0.08	4.61 ± 0.07	4.35 ± 0.10	4.30 ± 0.11	5.38 ± 0.08	n = 12	[ROC] Roche cobas c501
2.67 ± 0.05	4.54 ± 0.10	4.33 ± 0.05	4.23 ± 0.05	5.27 ± 0.05	n = 3	[ROT] Roche Cobas INTEGRA 800
2.65 ± 0.08	4.55 ± 0.08	4.30 ± 0.06	4.26 ± 0.06	5.35 ± 0.08	n = 5	[ROD] Roche MODULAR D/P
2.44 ± 0.06	4.47 ± 0.07	4.18 ± 0.08	4.10 ± 0.00	5.31 ± 0.12	n = 10	[BYE] Siemens ADVIA 1800
2.45 ± 0.06	4.52 ± 0.08	4.07 ± 0.09	4.07 ± 0.08	5.41 ± 0.09	n = 22	[DUE] Siemens Dimension EXL
2.48 ± 0.07	4.49 ± 0.08	4.05 ± 0.07	4.06 ± 0.07	5.34 ± 0.07	n = 28	[DUT] Siemens Dimension Vista
2.44 ± 0.07	4.47 ± 0.07	4.03 ± 0.05	4.03 ± 0.05	5.39 ± 0.09	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
2.53 ± 0.10	4.40 ± 0.15	4.16 ± 0.14	4.17 ± 0.08	5.18 ± 0.15	n = 17	[AB1] Abbott
2.52 ± 0.05	4.38 ± 0.07	4.12 ± 0.04	4.13 ± 0.05	5.22 ± 0.09	n = 16	[BC1] Beckman Coulter
2.41 ± 0.07	4.33 ± 0.10	4.07 ± 0.10	4.04 ± 0.10	5.12 ± 0.12	n = 34	[OL1] Beckman Coulter AU Series
2.21 ± 0.06	4.40 ± 0.13	4.13 ± 0.12	4.03 ± 0.08	5.43 ± 0.18	n = 19	[JJ1] Ortho Clinical Diagnostics
2.63 ± 0.10	4.58 ± 0.08	4.32 ± 0.11	4.27 ± 0.11	5.36 ± 0.09	n = 17	[R04] Roche cobas c311/c501/c502/c701/c702
2.65 ± 0.08	4.55 ± 0.08	4.30 ± 0.06	4.26 ± 0.06	5.35 ± 0.08	n = 5	[R02] Roche Hitachi and Modular D/P
2.65 ± 0.06	4.53 ± 0.09	4.29 ± 0.11	4.20 ± 0.08	5.25 ± 0.06	n = 4	[R01] Roche Integra and MIRA
2.45 ± 0.06	4.45 ± 0.07	4.18 ± 0.07	4.10 ± 0.00	5.30 ± 0.11	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
2.46 ± 0.06	4.50 ± 0.08	4.05 ± 0.08	4.06 ± 0.07	5.37 ± 0.09	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Total Protein (g/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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3.83 ± 0.13	7.34 ± 0.18	6.80 ± 0.17	6.71 ± 0.17	8.76 ± 0.21	n = 186	[---] All Methods & Instruments
<Instruments>						
3.65 ± 0.08	7.16 ± 0.16	6.63 ± 0.14	6.52 ± 0.15	8.57 ± 0.17	n = 18	[ABJ] Abbott Architect c System
3.72 ± 0.09	7.19 ± 0.13	6.64 ± 0.12	6.59 ± 0.11	8.57 ± 0.14	n = 34	[OLC] Beckman Coulter AU Chemistry System
3.87 ± 0.10	7.31 ± 0.13	6.81 ± 0.13	6.60 ± 0.14	8.71 ± 0.19	n = 9	[BCG] Beckman Coulter UniCel DxC 600
3.75 ± 0.06	7.23 ± 0.12	6.73 ± 0.07	6.52 ± 0.14	8.68 ± 0.10	n = 6	[BCH] Beckman Coulter UniCel DxC 800
3.93 ± 0.07	7.30 ± 0.23	6.82 ± 0.19	6.71 ± 0.21	8.81 ± 0.25	n = 6	[JJE] Ortho Vitros 250/350/950
3.86 ± 0.11	7.27 ± 0.13	6.80 ± 0.15	6.67 ± 0.15	8.80 ± 0.22	n = 10	[JJG] Ortho Vitros 5600
3.84 ± 0.08	7.42 ± 0.15	6.85 ± 0.15	6.83 ± 0.09	8.79 ± 0.15	n = 11	[ROC] Roche cobas c501
3.73 ± 0.05	7.26 ± 0.10	6.73 ± 0.14	6.67 ± 0.14	8.65 ± 0.19	n = 3	[ROT] Roche Cobas INTEGRA 800
3.81 ± 0.13	7.32 ± 0.08	6.75 ± 0.08	6.70 ± 0.10	8.71 ± 0.13	n = 5	[ROD] Roche MODULAR D/P
3.95 ± 0.08	7.44 ± 0.11	6.90 ± 0.13	6.79 ± 0.13	8.86 ± 0.16	n = 10	[BYE] Siemens ADVIA 1800
3.89 ± 0.04	7.46 ± 0.10	6.89 ± 0.09	6.84 ± 0.07	8.91 ± 0.09	n = 22	[DUE] Siemens Dimension EXL
3.89 ± 0.07	7.51 ± 0.13	6.93 ± 0.10	6.85 ± 0.09	8.92 ± 0.12	n = 28	[DUT] Siemens Dimension Vista
3.90 ± 0.10	7.41 ± 0.11	6.86 ± 0.11	6.75 ± 0.09	8.84 ± 0.14	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
3.65 ± 0.08	7.16 ± 0.16	6.63 ± 0.14	6.52 ± 0.15	8.57 ± 0.17	n = 18	[AB1] Abbott
3.82 ± 0.10	7.28 ± 0.13	6.78 ± 0.12	6.58 ± 0.14	8.69 ± 0.15	n = 17	[BC1] Beckman Coulter
3.72 ± 0.09	7.19 ± 0.13	6.64 ± 0.13	6.59 ± 0.11	8.57 ± 0.14	n = 33	[OL1] Beckman Coulter AU Series
3.90 ± 0.10	7.29 ± 0.17	6.83 ± 0.17	6.70 ± 0.16	8.82 ± 0.21	n = 19	[JJ1] Ortho Clinical Diagnostics
3.82 ± 0.08	7.36 ± 0.12	6.82 ± 0.15	6.79 ± 0.11	8.76 ± 0.15	n = 13	[R04] Roche cobas c311/c501/c502/c701/c702
3.81 ± 0.13	7.32 ± 0.08	6.75 ± 0.08	6.70 ± 0.10	8.71 ± 0.13	n = 5	[R02] Roche Hitachi and Modular D/P
3.72 ± 0.04	7.23 ± 0.08	6.68 ± 0.13	6.62 ± 0.15	8.60 ± 0.18	n = 4	[R01] Roche Integra and MIRA
3.95 ± 0.08	7.43 ± 0.11	6.90 ± 0.12	6.78 ± 0.11	8.86 ± 0.15	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
3.89 ± 0.06	7.48 ± 0.12	6.91 ± 0.10	6.83 ± 0.09	8.91 ± 0.11	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Cholesterol (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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128.5 ± 6.38	157.7 ± 4.90	240.9 ± 6.92	180.8 ± 5.52	190.4 ± 6.27	n = 164	[---] All Methods & Instruments
<Instruments>						
129.4 ± 1.85	161.3 ± 1.85	245.2 ± 2.11	184.9 ± 1.43	194.8 ± 1.52	n = 14	[ABJ] Abbott Architect c System
125.3 ± 2.25	153.8 ± 2.58	236.7 ± 4.02	177.9 ± 3.15	186.1 ± 3.18	n = 35	[OLC] Beckman Coulter AU Chemistry System
138.3 ± 0.52	158.4 ± 1.03	250.5 ± 2.81	184.4 ± 2.69	190.5 ± 2.88	n = 7	[BCG] Beckman Coulter UniCel DxC 600
140.2 ± 2.32	158.2 ± 2.55	246.2 ± 6.14	184.3 ± 4.20	190.4 ± 4.96	n = 5	[BCH] Beckman Coulter UniCel DxC 800
126.8 ± 3.23	164.0 ± 5.48	239.0 ± 5.48	182.9 ± 5.72	202.8 ± 4.89	n = 3	[JJE] Ortho Vitros 250/350/950
126.1 ± 2.61	164.3 ± 2.73	239.3 ± 4.37	181.9 ± 3.64	205.5 ± 3.71	n = 10	[JJG] Ortho Vitros 5600
133.9 ± 2.63	161.5 ± 4.10	245.9 ± 4.59	186.6 ± 4.03	193.5 ± 3.12	n = 10	[ROC] Roche cobas c501
132.0 ± 1.50	159.2 ± 2.58	242.6 ± 3.21	183.5 ± 2.17	190.7 ± 1.58	n = 4	[ROD] Roche MODULAR D/P
140.3 ± 2.74	159.1 ± 2.77	247.4 ± 5.30	183.7 ± 4.49	192.5 ± 3.75	n = 10	[BYE] Siemens ADVIA 1800
123.0 ± 3.71	154.4 ± 3.63	235.8 ± 4.38	176.0 ± 5.18	187.3 ± 4.32	n = 18	[DUE] Siemens Dimension EXL
125.3 ± 4.21	156.5 ± 4.42	237.6 ± 8.20	178.6 ± 5.28	189.4 ± 6.32	n = 23	[DUT] Siemens Dimension Vista
105.7 ± 51.06	133.7 ± 64.52	202.3 ± 97.89	148.3 ± 71.78	159.7 ± 77.12	n = 4	[DUX] Siemens Dimension Xpand
<Reagents>						
129.4 ± 1.85	161.3 ± 1.85	245.2 ± 2.11	184.9 ± 1.43	194.8 ± 1.52	n = 14	[AB1] Abbott
138.2 ± 2.33	157.8 ± 2.45	247.4 ± 5.51	183.5 ± 3.46	189.8 ± 3.51	n = 15	[BC1] Beckman Coulter
125.2 ± 2.12	153.7 ± 2.70	236.5 ± 4.12	177.7 ± 3.21	185.9 ± 3.26	n = 33	[OL1] Beckman Coulter AU Series
126.7 ± 3.44	164.9 ± 4.30	240.5 ± 5.73	183.0 ± 4.81	206.5 ± 4.96	n = 16	[JJ1] Ortho Clinical Diagnostics
133.1 ± 2.74	161.2 ± 3.80	246.2 ± 4.49	186.3 ± 3.51	193.8 ± 2.84	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
132.0 ± 1.50	159.2 ± 2.58	242.6 ± 3.21	183.5 ± 2.17	190.7 ± 1.58	n = 4	[R02] Roche Hitachi and Modular D/P
131.2 ± 2.11	156.9 ± 3.47	243.4 ± 5.30	183.7 ± 2.26	191.3 ± 4.16	n = 4	[R01] Roche Integra and MIRA
140.3 ± 2.49	159.0 ± 2.39	247.8 ± 4.82	183.3 ± 5.18	192.5 ± 3.42	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
124.3 ± 3.90	155.6 ± 4.03	237.2 ± 6.58	177.2 ± 5.22	188.4 ± 5.26	n = 46	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

HDL-Cholesterol (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
35.5 ± 3.20	44.8 ± 4.66	70.3 ± 5.44	39.1 ± 9.13	53.6 ± 6.48	n = 159	[---] All Methods & Instruments
34.1 ± 3.85	47.3 ± 3.52	70.3 ± 4.60	38.5 ± 7.92	56.9 ± 8.66	n = 16	[---] All Precipitation Methods
35.6 ± 3.12	44.6 ± 4.65	70.3 ± 5.54	39.2 ± 9.23	53.2 ± 6.18	n = 143	[---] All Homogeneous (Direct) Methods
25.5 ± 0.57	29.0 ± 1.14	60.5 ± 1.71	26.0 ± 1.14	35.5 ± 1.71	n = 2	[AX1] Abaxis
39.0 ± 1.37	50.1 ± 2.05	77.1 ± 2.52	49.0 ± 2.23	60.0 ± 1.94	n = 12	[AB1] Abbott
37.3 ± 0.73	49.1 ± 0.76	77.1 ± 1.34	48.8 ± 1.08	59.3 ± 1.43	n = 12	[BC1] Beckman Coulter
36.9 ± 1.75	47.8 ± 2.08	74.8 ± 2.73	48.1 ± 2.35	57.9 ± 2.54	n = 28	[OL1] Beckman Coulter AU Series
31.5 ± 1.55	47.1 ± 2.43	71.2 ± 3.54	38.5 ± 2.01	60.0 ± 2.55	n = 9	[JJ1] Ortho Clinical Diagnostics
33.3 ± 0.74	40.0 ± 0.94	66.3 ± 0.93	29.2 ± 1.31	47.1 ± 0.94	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
34.0 ± 0.00	40.9 ± 1.13	67.0 ± 1.50	30.2 ± 0.41	48.2 ± 1.27	n = 4	[R01] Roche Integra and MIRA
33.5 ± 1.23	39.7 ± 1.51	65.4 ± 3.21	30.3 ± 3.17	48.1 ± 2.33	n = 4	[R02] Roche MODULAR D/P
30.1 ± 1.42	37.2 ± 1.70	66.6 ± 2.53	41.9 ± 1.88	45.6 ± 1.69	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
36.7 ± 1.74	43.6 ± 2.05	67.1 ± 2.70	32.4 ± 1.86	50.9 ± 2.22	n = 40	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

LDL-Cholesterol (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
76.6 ± 7.37	90.3 ± 6.48	146.5 ± 7.95	93.5 ± 9.15	115.0 ± 8.43	n = 80	[-A-] Calculated Results Friedewald formula [LDL=TC-HDL-(Trigs÷5)]
75.0 ± 9.61	80.9 ± 13.28	137.0 ± 13.76	102.8 ± 9.79	99.7 ± 14.97	n = 72	[---] All Homogeneous (Direct) Methods
71.6 ± 3.50	76.1 ± 3.68	131.7 ± 5.39	99.0 ± 4.62	92.5 ± 4.46	n = 5	[AB1] Abbott
68.1 ± 8.29	71.7 ± 7.07	127.4 ± 8.88	90.5 ± 4.60	89.3 ± 7.13	n = 4	[BC1] Beckman Coulter
66.6 ± 3.35	67.7 ± 3.68	123.8 ± 5.90	93.2 ± 5.06	84.1 ± 4.54	n = 17	[OL1] Beckman Coulter AU Series
69.3 ± 1.38	73.9 ± 1.66	136.7 ± 1.29	100.1 ± 3.58	95.5 ± 1.85	n = 5	[JJ1] Ortho Clinical Diagnostics
92.2 ± 5.89	105.2 ± 5.09	161.7 ± 3.81	117.1 ± 3.96	128.6 ± 4.25	n = 8	[R04] Roche cobas c311/c501/c502/c701/c702
94.2 ± 1.54	105.1 ± 2.05	159.3 ± 3.37	115.4 ± 2.56	125.8 ± 2.36	n = 3	[R02] Roche Hitachi and Modular D/P
78.0 ± 3.45	81.5 ± 3.45	151.4 ± 6.85	113.6 ± 5.29	103.5 ± 4.36	n = 5	[BY1] Siemens ADVIA/ADVIA Centaur
77.2 ± 2.91	86.5 ± 4.89	137.0 ± 4.80	104.9 ± 3.45	104.5 ± 4.72	n = 19	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Triglycerides (mg/dL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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83.7 ± 7.34	117.7 ± 6.89	118.2 ± 7.73	241.1 ± 10.99	113.9 ± 6.85	n = 162	[---] All Methods & Instruments
<Instruments>						
91.8 ± 2.65	115.0 ± 1.77	118.4 ± 3.08	236.1 ± 3.20	110.7 ± 2.02	n = 13	[ABJ] Abbott Architect c System
77.7 ± 1.58	112.9 ± 3.22	112.5 ± 2.27	234.9 ± 5.39	108.8 ± 2.49	n = 32	[OLC] Beckman Coulter AU Chemistry System
87.3 ± 2.34	122.5 ± 4.36	131.7 ± 2.87	257.0 ± 3.49	120.2 ± 4.56	n = 7	[BCG] Beckman Coulter UniCel DxC 600
86.1 ± 1.83	120.9 ± 1.27	128.2 ± 2.32	256.9 ± 3.37	119.7 ± 2.04	n = 5	[BCH] Beckman Coulter UniCel DxC 800
77.3 ± 0.51	122.0 ± 0.00	118.0 ± 1.80	248.4 ± 4.72	120.1 ± 2.05	n = 3	[JJE] Ortho Vitros 250/350/950
76.2 ± 1.62	120.5 ± 4.13	114.9 ± 3.45	244.2 ± 7.69	118.2 ± 2.89	n = 10	[JJG] Ortho Vitros 5600
89.4 ± 1.67	123.2 ± 2.93	120.9 ± 1.66	246.8 ± 4.95	116.8 ± 1.41	n = 10	[ROC] Roche cobas c501
85.0 ± 0.00	116.1 ± 2.81	117.4 ± 2.61	237.6 ± 5.22	112.7 ± 2.41	n = 5	[ROD] Roche MODULAR D/P
90.8 ± 3.33	121.9 ± 3.03	124.7 ± 2.56	246.3 ± 5.58	118.2 ± 2.34	n = 10	[BYE] Siemens ADVIA 1800
77.1 ± 2.18	109.4 ± 2.03	110.5 ± 1.89	229.2 ± 2.36	105.2 ± 1.30	n = 18	[DUE] Siemens Dimension EXL
90.7 ± 2.14	123.6 ± 2.38	125.6 ± 2.10	249.8 ± 4.96	120.0 ± 2.71	n = 25	[DUT] Siemens Dimension Vista
77.4 ± 1.02	106.4 ± 1.02	110.3 ± 0.51	226.2 ± 2.36	103.3 ± 0.51	n = 3	[DUX] Siemens Dimension Xpand
<Reagents>						
91.8 ± 2.65	115.0 ± 1.77	118.4 ± 3.08	236.1 ± 3.20	110.7 ± 2.02	n = 13	[AB1] Abbott
86.5 ± 2.49	121.1 ± 3.58	129.7 ± 3.35	256.1 ± 4.39	119.2 ± 4.23	n = 14	[BC1] Beckman Coulter
77.7 ± 1.51	112.9 ± 2.76	112.5 ± 2.04	234.8 ± 5.08	108.7 ± 2.42	n = 30	[OL1] Beckman Coulter AU Series
76.8 ± 1.88	121.3 ± 4.38	115.9 ± 3.88	246.1 ± 9.10	119.0 ± 3.28	n = 16	[JJ1] Ortho Clinical Diagnostics
88.7 ± 2.21	121.8 ± 3.76	120.6 ± 2.32	245.3 ± 6.53	116.8 ± 1.86	n = 14	[R04] Roche cobas c311/c501/c502/c701/c702
85.0 ± 0.00	116.1 ± 2.81	117.4 ± 2.61	237.6 ± 5.22	112.7 ± 2.41	n = 5	[R02] Roche Hitachi and Modular D/P
80.5 ± 3.77	114.7 ± 5.24	112.0 ± 6.41	234.5 ± 10.58	109.3 ± 5.01	n = 4	[R01] Roche Integra and MIRA
90.6 ± 2.79	122.2 ± 2.42	125.0 ± 2.08	245.9 ± 7.02	118.6 ± 1.88	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
84.3 ± 7.74	116.5 ± 8.79	119.1 ± 9.05	239.7 ± 12.21	113.2 ± 8.92	n = 47	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Homocysteine (μmol/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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10.00 ± 1.26	13.61 ± 2.13	29.64 ± 2.44	18.72 ± 1.89	16.50 ± 2.23	n = 46	[---] All Methods & Instruments
<Instruments>						
8.68 ± 0.44	12.06 ± 0.26	25.41 ± 0.60	16.19 ± 0.37	14.77 ± 0.41	n = 5	[ABH] Abbott Architect i System
10.69 ± 1.27	14.84 ± 2.76	31.27 ± 1.05	20.39 ± 1.72	17.86 ± 1.15	n = 10	[OLC] Beckman Coulter AU Chemistry System
10.70 ± 0.46	14.46 ± 0.47	30.01 ± 0.93	19.75 ± 0.72	17.57 ± 0.32	n = 3	[ROG] Roche cobas c502
9.38 ± 0.68	10.94 ± 0.81	29.06 ± 1.13	18.21 ± 0.90	13.93 ± 1.07	n = 8	[COB] Siemens ADVIA Centaur
9.23 ± 0.50	13.15 ± 0.88	28.35 ± 0.60	17.54 ± 1.17	15.74 ± 1.09	n = 4	[DUT] Siemens Dimension Vista
10.06 ± 1.06	14.57 ± 0.64	31.28 ± 1.80	18.12 ± 0.61	17.41 ± 1.03	n = 7	[DPD] Siemens Immulite 2000
<Reagents>						
8.87 ± 0.67	12.06 ± 0.26	25.65 ± 1.08	16.29 ± 0.66	14.91 ± 0.61	n = 6	[AB1] Abbott
10.61 ± 1.07	15.16 ± 0.11	31.08 ± 1.15	20.52 ± 1.65	17.80 ± 0.96	n = 7	[DZ1] Diazyme
10.70 ± 0.46	14.46 ± 0.47	30.01 ± 0.93	19.75 ± 0.72	17.57 ± 0.32	n = 3	[R04] Roche cobas c311/c501/c502/c701/c702
9.38 ± 0.68	10.94 ± 0.81	29.06 ± 1.13	18.21 ± 0.90	13.93 ± 1.07	n = 8	[BY1] Siemens ADVIA/ADVIA Centaur
9.41 ± 0.56	13.41 ± 1.01	28.47 ± 0.68	17.96 ± 1.38	16.18 ± 0.68	n = 3	[DA5] Siemens Dimension
10.06 ± 1.06	14.57 ± 0.64	31.28 ± 1.80	18.12 ± 0.61	17.41 ± 1.03	n = 7	[DP5] Siemens Immulite

Summary of Participant Performance (Mean and Standard Deviation)

Troponin I (µg/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
2.910 ± 3.642	9.506 ± 12.457	5.433 ± 6.526	0.016 ± 0.014	10.628 ± 13.682	n = 125	[---] All Methods & Instruments
<Instruments>						
10.480 ± 0.552	42.204 ± 1.916	18.585 ± 1.026	0.010 ± 0.000	45.173 ± 5.504	n = 15	[ABH] Abbott Architect i System
0.833 ± 0.035	2.489 ± 0.114	1.930 ± 0.133	0.011 ± 0.010	2.802 ± 0.162	n = 12	[SAA] Beckman Coulter ACCESS
0.703 ± 0.052	2.253 ± 0.158	1.665 ± 0.128	0.010 ± 0.009	2.524 ± 0.164	n = 5	[BCV] Beckman Coulter UniCel DxI 600
0.652 ± 0.029	2.098 ± 0.062	1.511 ± 0.096	0.024 ± 0.033	2.417 ± 0.051	n = 7	[BCU] Beckman Coulter UniCel DxI 800
8.264 ± 0.373	22.663 ± 0.758	15.114 ± 0.837	0.010 ± 0.000	25.275 ± 0.802	n = 9	[JJG] Ortho Vitros 5600
4.682 ± 0.575	17.570 ± 2.129	8.829 ± 1.137	0.009 ± 0.005	19.758 ± 2.250	n = 15	[COB] Siemens ADVIA Centaur
1.028 ± 0.033	3.298 ± 0.061	1.881 ± 0.061	0.036 ± 0.017	3.650 ± 0.136	n = 19	[DUE] Siemens Dimension EXL
1.054 ± 0.045	3.196 ± 0.090	1.856 ± 0.061	0.014 ± 0.006	3.619 ± 0.095	n = 27	[DUT] Siemens Dimension Vista
0.903 ± 0.023	2.710 ± 0.489	1.427 ± 0.407	0.034 ± 0.010	3.550 ± 0.135	n = 3	[DUX] Siemens Dimension Xpand
11.170 ± 0.443	30.898 ± 0.769	18.579 ± 0.578	0.122 ± 0.015	34.774 ± 2.277	n = 3	[TOM] Tosoh Bioscience
<Reagents>						
10.484 ± 0.552	42.207 ± 1.918	18.585 ± 1.029	0.010 ± 0.000	44.732 ± 6.196	n = 16	[AB1] Abbott
0.755 ± 0.097	2.335 ± 0.217	1.760 ± 0.233	0.010 ± 0.010	2.638 ± 0.235	n = 24	[BC1] Beckman Coulter
8.171 ± 0.457	22.501 ± 0.973	14.711 ± 1.394	0.010 ± 0.000	25.103 ± 1.058	n = 10	[JJ1] Ortho Clinical Diagnostics
1.136 ± 0.120	2.990 ± 0.145	1.928 ± 0.152	< 0.300	3.230 ± 0.014	n = 3	[R03] Roche Elecsys/Modular E/e601/e411
4.682 ± 0.575	17.570 ± 2.129	8.829 ± 1.137	0.009 ± 0.005	19.758 ± 2.250	n = 15	[BY1] Siemens ADVIA/ADVIA Centaur
0.921 ± 0.033	2.994 ± 0.113	1.692 ± 0.057	0.031 ± 0.014	3.478 ± 0.028	n = 5	[DA5] Siemens Dimension
1.044 ± 0.043	3.240 ± 0.094	1.868 ± 0.060	0.025 ± 0.018	3.634 ± 0.108	n = 45	[DA6] Siemens Dimension LOCI

Troponin T (µg/L)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
0.152 ± 0.012	0.504 ± 0.027	0.321 ± 0.018	0.010 ± 0.000	0.596 ± 0.035	n = 15	[---] All Methods & Instruments
<Instruments>						
0.155 ± 0.007	0.502 ± 0.021	0.324 ± 0.012	0.010 ± 0.000	0.595 ± 0.025	n = 8	[R0A] Roche cobas e601
0.146 ± 0.010	0.503 ± 0.023	0.320 ± 0.018	0.010 ± 0.000	0.583 ± 0.034	n = 3	[R0E] Roche MODULAR E
<Reagents>						
0.152 ± 0.012	0.504 ± 0.027	0.321 ± 0.018	0.010 ± 0.000	0.596 ± 0.035	n = 15	[R03] Roche Elecsys/Modular E/e601/e411

Summary of Participant Performance (Mean and Standard Deviation)

Alanine Aminotransferase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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57.7 ± 6.55	107.7 ± 9.59	222.0 ± 18.91	376.2 ± 33.04	127.7 ± 10.69	n = 190	[---] All Methods & Instruments
<Instruments>						
56.8 ± 1.95	109.8 ± 2.12	225.5 ± 3.25	383.8 ± 4.62	130.6 ± 2.13	n = 17	[ABJ] Abbott Architect c System
48.5 ± 1.70	92.9 ± 3.04	190.7 ± 5.59	322.7 ± 10.12	111.3 ± 3.46	n = 35	[OLC] Beckman Coulter AU Chemistry System
59.7 ± 0.51	105.0 ± 1.49	216.5 ± 1.96	362.3 ± 3.58	123.8 ± 1.99	n = 9	[BCG] Beckman Coulter UniCel DxC 600
58.6 ± 0.79	103.4 ± 0.79	215.7 ± 1.83	358.3 ± 3.81	123.5 ± 1.24	n = 6	[BCH] Beckman Coulter UniCel DxC 800
70.4 ± 4.38	114.8 ± 2.39	232.9 ± 3.27	404.2 ± 5.02	131.5 ± 0.84	n = 6	[JJE] Ortho Vitros 250/350/950
71.1 ± 3.66	118.5 ± 6.53	233.1 ± 5.61	404.2 ± 8.87	134.3 ± 6.01	n = 10	[JJG] Ortho Vitros 5600
55.0 ± 1.11	104.5 ± 1.87	216.9 ± 4.98	369.0 ± 8.84	124.3 ± 3.25	n = 11	[ROC] Roche cobas c501
54.3 ± 0.51	100.7 ± 1.37	211.7 ± 1.37	359.3 ± 2.26	120.0 ± 1.80	n = 3	[ROT] Roche Cobas INTEGRA 800
54.9 ± 1.59	104.3 ± 2.15	213.1 ± 1.83	361.6 ± 6.43	123.8 ± 2.10	n = 5	[ROD] Roche MODULAR D/P
60.0 ± 1.22	112.7 ± 0.90	232.2 ± 3.11	392.2 ± 6.43	133.9 ± 2.20	n = 10	[BYE] Siemens ADVIA 1800
62.6 ± 2.53	117.2 ± 4.00	242.7 ± 9.06	407.9 ± 14.18	139.8 ± 4.97	n = 22	[DUE] Siemens Dimension EXL
58.2 ± 2.40	110.2 ± 4.20	226.6 ± 7.10	382.6 ± 12.84	131.5 ± 5.09	n = 28	[DUT] Siemens Dimension Vista
63.8 ± 3.80	118.4 ± 5.71	242.8 ± 10.79	406.8 ± 16.83	141.1 ± 6.66	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
56.6 ± 2.02	109.6 ± 2.27	225.3 ± 3.21	383.7 ± 4.37	130.4 ± 2.17	n = 18	[AB1] Abbott
59.4 ± 1.00	104.4 ± 1.51	216.4 ± 2.12	361.0 ± 3.94	123.8 ± 1.80	n = 18	[BC1] Beckman Coulter
48.4 ± 1.60	92.9 ± 2.98	190.5 ± 5.45	322.2 ± 9.83	111.0 ± 3.38	n = 32	[OL1] Beckman Coulter AU Series
70.4 ± 3.86	116.1 ± 5.87	232.3 ± 4.91	402.9 ± 8.59	131.6 ± 4.43	n = 19	[JJ1] Ortho Clinical Diagnostics
54.8 ± 1.36	104.2 ± 1.71	216.2 ± 4.31	367.4 ± 6.85	123.8 ± 2.97	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
54.9 ± 1.59	104.3 ± 2.15	213.1 ± 1.83	361.6 ± 6.43	123.8 ± 2.10	n = 5	[R02] Roche Hitachi and Modular D/P
54.4 ± 0.55	101.6 ± 1.37	212.9 ± 1.83	362.1 ± 4.34	121.2 ± 1.89	n = 5	[R01] Roche Integra and MIRA
59.8 ± 1.38	112.3 ± 2.13	231.3 ± 4.12	390.6 ± 8.71	133.2 ± 2.94	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
60.8 ± 3.70	113.8 ± 5.64	235.2 ± 13.04	395.7 ± 21.41	136.5 ± 7.15	n = 21	[DA5] Siemens Dimension
60.7 ± 3.64	114.5 ± 6.04	235.6 ± 11.43	396.5 ± 18.31	136.1 ± 6.91	n = 37	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

Aspartate Aminotransferase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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276.5 ± 19.06	64.1 ± 4.09	117.2 ± 10.02	548.8 ± 49.50	76.6 ± 4.86	n = 188	[---] All Methods & Instruments
<Instruments>						
280.8 ± 4.22	65.1 ± 1.10	119.7 ± 2.30	562.5 ± 8.47	77.1 ± 1.34	n = 16	[ABJ] Abbott Architect c System
243.5 ± 8.09	56.2 ± 1.78	103.8 ± 3.92	489.1 ± 20.09	67.5 ± 2.45	n = 34	[OLC] Beckman Coulter AU Chemistry System
272.0 ± 3.67	63.1 ± 0.92	118.5 ± 2.68	530.3 ± 14.68	75.6 ± 1.59	n = 9	[BCG] Beckman Coulter UniCel DxC 600
265.3 ± 3.97	62.3 ± 1.21	115.2 ± 4.14	515.1 ± 13.52	74.2 ± 1.45	n = 6	[BCH] Beckman Coulter UniCel DxC 800
301.1 ± 5.66	66.5 ± 1.52	140.0 ± 2.32	710.7 ± 15.19	81.6 ± 0.55	n = 6	[JJE] Ortho Vitros 250/350/950
305.5 ± 12.19	67.3 ± 2.97	140.6 ± 6.65	713.0 ± 16.57	80.9 ± 2.78	n = 10	[JJG] Ortho Vitros 5600
290.7 ± 6.38	64.9 ± 0.81	120.9 ± 2.64	582.4 ± 5.56	77.6 ± 1.82	n = 11	[ROC] Roche cobas c501
281.8 ± 2.36	61.3 ± 0.51	116.1 ± 2.05	550.3 ± 5.09	74.3 ± 1.37	n = 3	[ROT] Roche Cobas INTEGRA 800
275.5 ± 8.53	66.0 ± 2.12	118.2 ± 3.27	551.4 ± 17.15	78.2 ± 1.78	n = 5	[ROD] Roche MODULAR D/P
300.8 ± 3.97	69.6 ± 2.30	128.8 ± 3.08	605.0 ± 8.91	82.6 ± 2.40	n = 10	[BYE] Siemens ADVIA 1800
269.8 ± 6.65	64.2 ± 1.85	114.1 ± 3.84	541.3 ± 14.17	76.4 ± 1.84	n = 22	[DUE] Siemens Dimension EXL
278.8 ± 6.27	64.8 ± 2.09	116.8 ± 4.36	561.4 ± 20.52	77.9 ± 3.03	n = 28	[DUT] Siemens Dimension Vista
276.5 ± 5.06	66.9 ± 1.82	117.0 ± 3.61	549.0 ± 15.18	78.8 ± 2.19	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
280.7 ± 4.00	65.1 ± 1.04	119.8 ± 2.24	562.9 ± 7.97	77.3 ± 1.41	n = 17	[AB1] Abbott
269.9 ± 5.60	62.8 ± 1.18	117.3 ± 4.70	523.9 ± 20.55	75.0 ± 2.05	n = 18	[BC1] Beckman Coulter
243.3 ± 8.47	56.1 ± 1.80	103.7 ± 4.08	488.5 ± 21.04	67.4 ± 2.54	n = 32	[OL1] Beckman Coulter AU Series
302.4 ± 8.92	67.1 ± 2.17	139.8 ± 4.03	712.4 ± 16.56	80.9 ± 2.04	n = 19	[JJ1] Ortho Clinical Diagnostics
288.4 ± 6.58	64.6 ± 0.89	120.8 ± 2.13	580.9 ± 5.47	77.2 ± 1.70	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
275.5 ± 8.53	66.0 ± 2.12	118.2 ± 3.27	551.4 ± 17.15	78.2 ± 1.78	n = 5	[R02] Roche Hitachi and Modular D/P
282.9 ± 3.13	61.8 ± 0.80	117.7 ± 2.85	559.8 ± 14.03	74.4 ± 1.52	n = 5	[R01] Roche Integra and MIRA
300.0 ± 4.84	69.3 ± 2.17	128.3 ± 3.42	601.5 ± 12.13	82.2 ± 2.41	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
275.2 ± 7.89	64.8 ± 2.23	115.7 ± 4.43	550.4 ± 21.23	77.4 ± 2.66	n = 59	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

 α -Amylase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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134.9 ± 25.05	279.6 ± 50.01	55.0 ± 7.32	187.2 ± 30.11	331.6 ± 59.94	n = 165	[---] All Methods & Instruments
<Instruments>						
147.8 ± 2.65	308.2 ± 5.71	59.3 ± 1.50	203.1 ± 4.83	366.4 ± 7.81	n = 16	[ABJ] Abbott Architect c System
108.6 ± 5.24	226.7 ± 10.23	41.8 ± 2.04	149.6 ± 6.60	269.1 ± 10.51	n = 29	[OLC] Beckman Coulter AU Chemistry System
142.4 ± 6.68	293.1 ± 13.60	61.0 ± 1.37	196.2 ± 10.20	358.6 ± 4.88	n = 6	[BCG] Beckman Coulter UniCel DxC 600
136.9 ± 3.95	282.6 ± 7.18	59.0 ± 0.90	190.0 ± 3.19	337.0 ± 8.26	n = 6	[BCH] Beckman Coulter UniCel DxC 800
81.7 ± 3.62	173.9 ± 11.37	59.5 ± 2.32	131.4 ± 5.91	202.0 ± 20.20	n = 4	[JJE] Ortho Vitros 250/350/950
78.7 ± 6.53	176.0 ± 5.30	64.3 ± 3.92	128.0 ± 13.68	210.7 ± 4.76	n = 10	[JJG] Ortho Vitros 5600
130.2 ± 2.12	269.0 ± 4.26	59.9 ± 0.98	187.2 ± 2.83	320.8 ± 4.89	n = 11	[ROC] Roche cobas c501
131.0 ± 1.80	267.7 ± 1.37	59.7 ± 0.51	185.0 ± 0.90	318.1 ± 2.86	n = 3	[ROT] Roche Cobas INTEGRA 800
127.3 ± 2.57	265.4 ± 4.57	58.9 ± 1.27	183.2 ± 3.65	316.4 ± 5.87	n = 5	[ROD] Roche MODULAR D/P
132.7 ± 2.85	275.7 ± 5.17	59.3 ± 1.34	190.2 ± 3.83	330.3 ± 7.34	n = 10	[BYE] Siemens ADVIA 1800
159.5 ± 2.67	327.5 ± 6.79	54.5 ± 0.68	214.1 ± 3.71	388.3 ± 6.93	n = 19	[DUE] Siemens Dimension EXL
155.1 ± 1.76	320.2 ± 4.21	51.5 ± 1.08	208.1 ± 2.29	379.6 ± 5.70	n = 28	[DUT] Siemens Dimension Vista
158.3 ± 2.54	325.7 ± 5.08	53.7 ± 0.90	215.7 ± 3.79	387.0 ± 6.50	n = 4	[DUX] Siemens Dimension Xpand
<Reagents>						
147.7 ± 2.52	308.6 ± 5.66	59.3 ± 1.42	203.3 ± 4.67	366.7 ± 7.55	n = 17	[AB1] Abbott
139.4 ± 7.60	288.0 ± 14.45	60.4 ± 1.69	193.2 ± 9.99	348.6 ± 16.28	n = 8	[BC1] Beckman Coulter
108.8 ± 5.04	227.1 ± 9.92	41.9 ± 2.05	149.8 ± 6.52	269.4 ± 10.36	n = 29	[OL1] Beckman Coulter AU Series
139.9 ± 2.81	288.4 ± 6.84	59.7 ± 1.38	192.9 ± 4.08	343.1 ± 9.09	n = 6	[BC2] Beckman Coulter IFCC Standardized
80.1 ± 5.22	176.4 ± 7.19	61.9 ± 4.87	131.8 ± 5.89	208.3 ± 11.49	n = 17	[JJ1] Ortho Clinical Diagnostics
130.0 ± 2.36	268.4 ± 4.12	59.9 ± 0.87	187.1 ± 2.53	320.5 ± 4.87	n = 13	[R04] Roche cobas c311/c501/c502/c701/c702
127.3 ± 2.57	265.4 ± 4.57	58.9 ± 1.27	183.2 ± 3.65	316.4 ± 5.87	n = 5	[R02] Roche Hitachi and Modular D/P
130.3 ± 1.50	266.1 ± 2.37	59.7 ± 0.47	184.9 ± 1.30	316.5 ± 2.82	n = 5	[R01] Roche Integra and MIRA
132.2 ± 3.29	275.1 ± 5.99	58.9 ± 1.55	189.5 ± 5.58	329.2 ± 8.29	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
156.7 ± 3.08	322.9 ± 6.18	52.7 ± 1.84	210.4 ± 4.27	383.0 ± 7.30	n = 52	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Alkaline Phosphatase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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128.2 ± 11.49	301.4 ± 26.20	47.9 ± 4.81	198.2 ± 16.95	360.4 ± 30.68	n = 189	[---] All Methods & Instruments
<Instruments>						
134.6 ± 5.25	312.0 ± 12.13	49.0 ± 2.21	199.5 ± 8.44	367.3 ± 14.50	n = 16	[ABJ] Abbott Architect c System
114.9 ± 6.96	270.1 ± 14.68	41.9 ± 2.62	175.6 ± 10.00	321.6 ± 17.38	n = 35	[OLC] Beckman Coulter AU Chemistry System
114.8 ± 2.91	274.4 ± 6.15	42.7 ± 1.40	178.0 ± 4.52	328.2 ± 6.79	n = 8	[BCG] Beckman Coulter UniCel DxC 600
111.1 ± 3.19	265.2 ± 8.65	42.0 ± 2.20	170.9 ± 4.83	313.4 ± 13.86	n = 6	[BCH] Beckman Coulter UniCel DxC 800
125.1 ± 6.00	294.8 ± 10.23	56.8 ± 2.16	210.3 ± 6.27	367.9 ± 14.82	n = 6	[JJE] Ortho Vitros 250/350/950
120.6 ± 6.87	287.6 ± 12.14	56.0 ± 2.69	206.4 ± 9.73	362.1 ± 14.64	n = 10	[JJG] Ortho Vitros 5600
128.0 ± 2.23	302.1 ± 6.14	48.0 ± 1.28	197.4 ± 6.25	357.4 ± 7.79	n = 12	[ROC] Roche cobas c501
131.1 ± 2.05	305.4 ± 5.58	46.0 ± 0.90	197.0 ± 5.48	364.8 ± 8.59	n = 3	[ROT] Roche Cobas INTEGRA 800
127.9 ± 6.19	293.0 ± 7.69	46.7 ± 1.38	191.9 ± 6.60	348.8 ± 8.41	n = 5	[ROD] Roche MODULAR D/P
132.9 ± 4.08	309.4 ± 9.14	48.8 ± 1.50	203.9 ± 7.19	367.5 ± 11.24	n = 10	[BYE] Siemens ADVIA 1800
137.8 ± 4.09	325.7 ± 7.06	49.4 ± 2.54	211.2 ± 5.57	387.8 ± 10.75	n = 22	[DUE] Siemens Dimension EXL
138.8 ± 3.82	329.2 ± 8.00	50.4 ± 1.32	212.8 ± 6.05	391.3 ± 10.44	n = 28	[DUT] Siemens Dimension Vista
137.6 ± 3.91	322.9 ± 8.45	49.8 ± 2.47	208.7 ± 6.52	386.6 ± 8.90	n = 8	[DUX] Siemens Dimension Xpand
<Reagents>						
134.2 ± 5.36	310.8 ± 12.66	48.9 ± 2.12	199.1 ± 8.29	366.1 ± 14.75	n = 17	[AB1] Abbott
113.6 ± 3.97	271.1 ± 9.48	42.5 ± 2.00	175.6 ± 6.91	323.4 ± 12.06	n = 17	[BC1] Beckman Coulter
114.9 ± 6.71	269.7 ± 14.05	41.9 ± 2.55	175.5 ± 9.64	321.2 ± 16.39	n = 32	[OL1] Beckman Coulter AU Series
121.4 ± 7.03	289.2 ± 12.00	56.3 ± 2.53	206.7 ± 8.96	361.3 ± 16.40	n = 19	[JJ1] Ortho Clinical Diagnostics
127.2 ± 2.71	301.0 ± 6.69	47.6 ± 1.44	196.6 ± 5.40	355.7 ± 7.03	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
127.9 ± 6.19	293.0 ± 7.69	46.7 ± 1.38	191.9 ± 6.60	348.8 ± 8.41	n = 5	[R02] Roche Hitachi and Modular D/P
130.5 ± 1.62	303.9 ± 5.49	46.9 ± 1.27	198.3 ± 4.47	362.3 ± 7.60	n = 5	[R01] Roche Integra and MIRA
132.5 ± 3.50	309.4 ± 8.18	48.5 ± 1.43	203.2 ± 6.51	367.4 ± 10.09	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
138.5 ± 3.60	325.0 ± 7.73	50.1 ± 1.19	211.1 ± 4.98	388.7 ± 9.65	n = 22	[DA5] Siemens Dimension
138.2 ± 4.07	328.0 ± 8.16	50.0 ± 2.26	212.1 ± 6.48	389.9 ± 10.74	n = 36	[DA8] Siemens Dimension IFCC Standardized

Summary of Participant Performance (Mean and Standard Deviation)

 γ -Glutamyltransferase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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70.2 $\pm$ 16.09	192.0 $\pm$ 40.09	42.9 $\pm$ 9.38	112.0 $\pm$ 24.53	229.0 $\pm$ 49.05	n = 149	[---] All Methods & Instruments
<Instruments>						
67.4 $\pm$ 4.64	187.2 $\pm$ 10.03	40.7 $\pm$ 2.94	106.7 $\pm$ 6.04	224.8 $\pm$ 13.63	n = 11	[ABJ] Abbott Architect c System
53.1 $\pm$ 2.34	146.2 $\pm$ 6.21	33.2 $\pm$ 1.39	83.8 $\pm$ 3.48	174.5 $\pm$ 7.49	n = 29	[OLC] Beckman Coulter AU Chemistry System
71.2 $\pm$ 1.45	197.8 $\pm$ 3.87	37.8 $\pm$ 0.73	108.1 $\pm$ 2.14	236.5 $\pm$ 5.42	n = 6	[BCG] Beckman Coulter UniCel DxC 600
69.8 $\pm$ 0.80	192.2 $\pm$ 2.10	37.0 $\pm$ 0.64	105.3 $\pm$ 1.81	227.8 $\pm$ 5.43	n = 5	[BCH] Beckman Coulter UniCel DxC 800
109.7 $\pm$ 3.07	303.5 $\pm$ 6.32	55.3 $\pm$ 1.37	159.0 $\pm$ 0.90	367.2 $\pm$ 9.49	n = 3	[JJE] Ortho Vitros 250/350/950
112.6 $\pm$ 2.01	301.7 $\pm$ 4.85	57.3 $\pm$ 1.00	158.1 $\pm$ 3.41	356.4 $\pm$ 9.20	n = 10	[JJG] Ortho Vitros 5600
60.5 $\pm$ 0.65	168.9 $\pm$ 1.72	36.6 $\pm$ 0.55	95.7 $\pm$ 1.09	201.8 $\pm$ 3.15	n = 10	[ROC] Roche cobas c501
60.0 $\pm$ 1.14	169.3 $\pm$ 2.26	36.0 $\pm$ 0.00	97.5 $\pm$ 1.23	205.9 $\pm$ 2.04	n = 4	[ROD] Roche MODULAR D/P
64.8 $\pm$ 2.24	182.7 $\pm$ 5.18	40.5 $\pm$ 1.76	104.0 $\pm$ 3.66	218.2 $\pm$ 6.36	n = 10	[BYE] Siemens ADVIA 1800
81.8 $\pm$ 2.44	214.8 $\pm$ 4.46	53.2 $\pm$ 1.96	130.2 $\pm$ 3.35	257.0 $\pm$ 5.66	n = 18	[DUE] Siemens Dimension EXL
81.3 $\pm$ 1.75	222.3 $\pm$ 5.05	50.3 $\pm$ 1.77	131.7 $\pm$ 2.46	265.4 $\pm$ 4.97	n = 25	[DUT] Siemens Dimension Vista
<Reagents>						
67.0 $\pm$ 4.23	186.5 $\pm$ 9.70	40.6 $\pm$ 2.76	106.4 $\pm$ 5.78	223.6 $\pm$ 13.42	n = 12	[AB1] Abbott
70.3 $\pm$ 1.40	194.6 $\pm$ 4.13	37.4 $\pm$ 0.78	106.9 $\pm$ 2.31	232.2 $\pm$ 6.62	n = 13	[BC1] Beckman Coulter
53.1 $\pm$ 2.40	146.1 $\pm$ 6.33	33.2 $\pm$ 1.42	83.8 $\pm$ 3.56	174.4 $\pm$ 7.64	n = 28	[OL1] Beckman Coulter AU Series
112.1 $\pm$ 2.38	302.2 $\pm$ 5.72	57.1 $\pm$ 1.17	158.2 $\pm$ 2.76	357.9 $\pm$ 9.80	n = 16	[JJ1] Ortho Clinical Diagnostics
60.2 $\pm$ 1.05	168.5 $\pm$ 1.76	36.5 $\pm$ 0.65	95.7 $\pm$ 1.16	201.7 $\pm$ 2.91	n = 13	[R04] Roche cobas c311/c501/c502/c701/c702
60.0 $\pm$ 1.14	169.3 $\pm$ 2.26	36.0 $\pm$ 0.00	97.5 $\pm$ 1.23	205.9 $\pm$ 2.04	n = 4	[R02] Roche Hitachi and Modular D/P
59.8 $\pm$ 1.54	167.8 $\pm$ 1.54	37.0 $\pm$ 0.90	94.3 $\pm$ 0.51	197.7 $\pm$ 3.07	n = 3	[R01] Roche Integra and MIRA
64.6 $\pm$ 2.04	182.4 $\pm$ 4.73	40.5 $\pm$ 1.75	103.6 $\pm$ 3.00	218.4 $\pm$ 5.75	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
81.5 $\pm$ 2.04	218.9 $\pm$ 6.07	51.5 $\pm$ 2.48	131.1 $\pm$ 2.85	261.8 $\pm$ 6.76	n = 45	[DA5] Siemens Dimension

Summary of Participant Performance (Mean and Standard Deviation)

Creatine Kinase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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161.7 ± 10.99	195.8 ± 15.24	299.1 ± 22.65	153.3 ± 10.42	232.8 ± 16.61	n = 167	[---] All Methods & Instruments
<Instruments>						
165.6 ± 3.54	205.8 ± 5.09	315.1 ± 6.34	158.0 ± 3.52	245.2 ± 7.29	n = 16	[ABJ] Abbott Architect c System
140.1 ± 6.09	166.7 ± 9.24	263.0 ± 10.47	129.5 ± 6.12	200.3 ± 10.23	n = 31	[OLC] Beckman Coulter AU Chemistry System
167.1 ± 3.01	204.7 ± 4.11	309.4 ± 4.32	157.0 ± 2.45	237.8 ± 7.85	n = 6	[BCG] Beckman Coulter UniCel DxC 600
164.1 ± 3.90	194.8 ± 7.98	303.4 ± 4.94	153.4 ± 4.99	230.0 ± 8.18	n = 6	[BCH] Beckman Coulter UniCel DxC 800
168.7 ± 8.39	207.3 ± 8.99	274.2 ± 6.99	158.7 ± 2.47	237.9 ± 2.72	n = 4	[JJE] Ortho Vitros 250/350/950
173.2 ± 7.05	212.1 ± 8.22	267.3 ± 11.62	154.1 ± 6.50	240.5 ± 10.22	n = 10	[JJG] Ortho Vitros 5600
172.2 ± 6.43	207.7 ± 6.62	327.2 ± 9.70	158.1 ± 5.09	247.1 ± 9.09	n = 12	[ROC] Roche cobas c501
161.8 ± 0.41	199.5 ± 3.85	307.3 ± 5.11	159.0 ± 2.25	238.0 ± 6.87	n = 5	[ROD] Roche MODULAR D/P
160.9 ± 6.00	189.3 ± 9.94	300.2 ± 9.32	148.5 ± 6.06	226.4 ± 12.73	n = 10	[BYE] Siemens ADVIA 1800
161.5 ± 4.84	196.4 ± 4.42	304.6 ± 7.10	155.8 ± 4.98	235.4 ± 6.95	n = 19	[DUE] Siemens Dimension EXL
163.1 ± 3.29	198.0 ± 5.74	308.4 ± 4.53	158.3 ± 3.05	236.5 ± 7.13	n = 28	[DUT] Siemens Dimension Vista
152.8 ± 4.91	185.4 ± 4.98	297.5 ± 4.60	148.7 ± 3.33	221.0 ± 8.66	n = 4	[DUX] Siemens Dimension Xpand
<Reagents>						
165.2 ± 3.65	205.6 ± 4.98	315.3 ± 6.10	158.0 ± 3.41	245.3 ± 6.90	n = 17	[AB1] Abbott
165.1 ± 4.86	196.5 ± 10.92	305.0 ± 6.84	153.9 ± 5.53	232.2 ± 11.17	n = 15	[BC1] Beckman Coulter
139.5 ± 6.11	165.8 ± 9.41	262.3 ± 10.47	129.0 ± 6.23	199.3 ± 10.17	n = 28	[OL1] Beckman Coulter AU Series
173.5 ± 7.55	211.9 ± 7.91	269.8 ± 9.91	156.0 ± 5.79	239.1 ± 8.69	n = 17	[JJ1] Ortho Clinical Diagnostics
169.6 ± 7.28	205.9 ± 6.63	322.9 ± 12.18	158.2 ± 4.71	245.5 ± 8.30	n = 16	[R04] Roche cobas c311/c501/c502/c701/c702
161.8 ± 0.41	199.5 ± 3.85	307.3 ± 5.11	159.0 ± 2.25	238.0 ± 6.87	n = 5	[R02] Roche Hitachi and Modular D/P
159.9 ± 5.92	189.0 ± 8.81	298.9 ± 8.78	147.9 ± 5.55	226.3 ± 11.15	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
162.2 ± 4.57	196.6 ± 6.11	306.2 ± 6.55	157.0 ± 4.71	235.6 ± 7.92	n = 49	[DA5] Siemens Dimension
161.7 ± 1.37	196.9 ± 5.72	307.6 ± 2.56	157.0 ± 0.90	232.3 ± 3.16	n = 3	[DA6] Siemens Dimension LOCI

Summary of Participant Performance (Mean and Standard Deviation)

Creatine Kinase-MB (ng/mL)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
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9.37 ± 1.50	31.56 ± 4.76	55.48 ± 8.55	1.15 ± 0.34	37.15 ± 5.61	n = 101	[-A-] All Methods - Results reported in ng/mL
8.77 ± 0.52	28.55 ± 1.55	49.96 ± 3.18	1.64 ± 1.27	32.97 ± 1.93	n = 15	[AB1] Abbott
10.71 ± 0.31	37.83 ± 2.21	63.67 ± 3.29	1.41 ± 0.09	45.28 ± 2.39	n = 8	[SAA] Beckman Coulter ACCESS
10.50 ± 0.42	39.53 ± 1.23	65.38 ± 2.33	1.44 ± 0.07	46.16 ± 2.08	n = 11	[BC1] Beckman Coulter UniCel
7.31 ± 0.36	23.76 ± 1.15	40.06 ± 2.69	0.88 ± 0.05	27.64 ± 1.79	n = 9	[JJ1] Ortho Clinical Diagnostics
10.52 ± 0.46	31.63 ± 1.37	59.37 ± 2.42	1.65 ± 0.21	37.72 ± 1.36	n = 14	[R03] Roche Elecsys/Modular E/e601/e411
11.01 ± 0.50	33.78 ± 1.04	59.51 ± 2.73	0.78 ± 0.18	39.33 ± 1.89	n = 11	[BY1] Siemens ADVIA/ADVIA Centaur
7.78 ± 0.64	31.13 ± 1.84	57.68 ± 4.85	0.89 ± 0.15	36.94 ± 2.78	n = 14	[DA5] Siemens Dimension
8.80 ± 0.45	29.85 ± 0.88	48.72 ± 1.93	1.03 ± 0.15	35.06 ± 1.15	n = 15	[DA6] Siemens Dimension LOCI

Summary of Participant Performance (Mean and Standard Deviation)

Lactate Dehydrogenase (U/L 37°C)

Specimen: C41	Specimen: C42	Specimen: C43	Specimen: C44	Specimen: C45	Number	[Code] Instrument or Reagent System
429.3 ± 39.48	235.2 ± 22.28	382.1 ± 35.86	129.2 ± 12.46	280.4 ± 26.68	n = 145	[-A-] All Methods - Lactate to Pyruvate
1104.0 ± 37.78	609.5 ± 6.20	951.2 ± 26.92	329.7 ± 12.34	732.2 ± 18.45	n = 17	[-B-] All Methods - Pyruvate to Lactate
<Instruments>						
456.9 ± 7.93	245.6 ± 4.35	401.8 ± 7.05	136.5 ± 3.32	293.5 ± 5.32	n = 15	[ABJ] Abbott Architect c System
385.5 ± 20.51	206.6 ± 10.85	339.1 ± 18.40	114.7 ± 6.71	247.4 ± 12.53	n = 32	[OLC] Beckman Coulter AU Chemistry System
369.0 ± 6.08	199.0 ± 0.66	326.1 ± 4.00	112.7 ± 2.51	240.5 ± 2.98	n = 7	[BCG] Beckman Coulter UniCel DxC 600
361.5 ± 4.21	198.1 ± 1.43	316.2 ± 8.34	108.5 ± 4.94	235.2 ± 1.93	n = 6	[BCH] Beckman Coulter UniCel DxC 800
1113.1 ± 17.26	611.3 ± 7.03	956.8 ± 16.61	334.9 ± 8.29	739.8 ± 14.20	n = 5	[JJE] Ortho Vitros 250/350/950
1091.3 ± 34.45	607.1 ± 6.68	940.5 ± 21.95	325.2 ± 10.45	726.9 ± 13.92	n = 10	[JJG] Ortho Vitros 5600
453.2 ± 13.68	247.4 ± 5.37	405.3 ± 13.72	136.3 ± 5.97	294.9 ± 5.43	n = 12	[ROC] Roche cobas c501
450.1 ± 18.39	250.5 ± 4.79	403.7 ± 6.97	137.7 ± 3.66	297.4 ± 4.19	n = 5	[ROD] Roche MODULAR D/P
432.7 ± 20.76	240.7 ± 8.40	387.6 ± 14.92	134.1 ± 8.07	287.7 ± 9.98	n = 10	[BYE] Siemens ADVIA 1800
449.4 ± 12.09	246.8 ± 7.50	399.4 ± 13.05	133.1 ± 4.89	295.8 ± 9.74	n = 16	[DUE] Siemens Dimension EXL
453.6 ± 9.04	249.3 ± 5.13	402.9 ± 7.67	136.8 ± 4.97	296.8 ± 7.70	n = 28	[DUT] Siemens Dimension Vista
442.8 ± 6.95	244.9 ± 3.72	399.9 ± 8.46	127.5 ± 2.74	291.2 ± 5.12	n = 3	[DUX] Siemens Dimension Xpand
<Reagents>						
455.5 ± 9.68	245.3 ± 4.32	401.1 ± 7.35	136.2 ± 3.81	293.0 ± 5.36	n = 16	[AB1] Abbott
364.7 ± 7.38	198.8 ± 0.74	322.3 ± 6.89	111.4 ± 4.62	237.6 ± 3.77	n = 15	[BC1] Beckman Coulter
384.9 ± 20.35	206.1 ± 10.78	338.6 ± 18.07	114.4 ± 6.67	246.9 ± 12.36	n = 30	[OL1] Beckman Coulter AU Series
1104.9 ± 33.97	608.9 ± 6.74	948.7 ± 24.85	330.5 ± 12.65	734.5 ± 18.48	n = 18	[JJ1] Ortho Clinical Diagnostics
451.2 ± 14.26	246.8 ± 5.57	402.6 ± 12.44	135.7 ± 4.88	294.2 ± 5.35	n = 15	[R04] Roche cobas c311/c501/c502/c701/c702
450.1 ± 18.39	250.5 ± 4.79	403.7 ± 6.97	137.7 ± 3.66	297.4 ± 4.19	n = 5	[R02] Roche Hitachi and Modular D/P
433.1 ± 18.77	240.5 ± 7.63	387.8 ± 13.54	133.9 ± 7.23	287.5 ± 9.42	n = 12	[BY1] Siemens ADVIA/ADVIA Centaur
451.3 ± 10.39	248.1 ± 5.93	401.6 ± 10.07	135.0 ± 5.46	295.9 ± 8.40	n = 46	[DA5] Siemens Dimension