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Statistical Report: Quantitative Urine Clinical Chemistry
Mail out date: November 26, 2012

This report summarizes data from the educational quantitative urine clinical chemistry proficiency test of November 26, 2012. Individual evaluation reports are provided for your laboratory for this testing.

Results for the quantitative urine clinical chemistry are listed as the mean ± 1SD for each instrument and reagent system as well as overall results. For albumin, creatinine, and albumin/creatinine ratio units shown are those most frequently used by participants; results from laboratories using different units were converted to the units shown. Please keep this in mind when comparing results reported by your laboratory. Individual laboratory reports were evaluated using ranges appropriate for units reported.

The following criteria were used for the educational quantitative urine clinical chemistry: Albumin (± 25%); Creatinine (± 17%); Albumin-Creatinine Ratio (± 20%); alpha-Amylase (not evaluated); Calcium (± 15%); Chloride (± 20%); Glucose (± 15%); Magnesium (± 20%); Sodium (± 15%); Phosphorus (± 20%); Potassium (± 15%); Total Protein (± 30%); Uric Acid (± 20%); Urea Nitrogen (± 15%). At low analyte concentrations, ranges were based on the dispersion of results obtained. Overall mean values were used for calculation of target concentrations for all analytes.

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.

New York State Department of Health - Wadsworth Center
Quantitative Urine Chemistry - Educational Proficiency Testing - 26 November 2012

Summary of Participant Performance (Mean and Standard Deviation)

Albumin
The following albumin results are summaries with all results converted to mg/L:

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
645.3 ± 49.63	418.7 ± 37.39	1049.9 ± 81.34	2543.5 ± 237.39	300.6 ± 23.11	n = 180	All Methods & Instruments
						<Method Principles>
634.8 ± 48.07	409.2 ± 38.32	1032.6 ± 75.61	2496.3 ± 231.41	297.4 ± 20.71	n = 80	Reporting in mg/dL
651.4 ± 47.97	426.6 ± 32.05	1062.1 ± 80.49	2568.2 ± 237.93	303.3 ± 25.66	n = 79	Reporting in mg/L
669.0 ± 58.15	429.8 ± 42.72	1084.0 ± 101.90	2649.6 ± 204.27	304.8 ± 22.60	n = 21	Reporting in ug/mL
						<Instruments>
619.0 ± 10.77	432.4 ± 9.46	1034.1 ± 26.19	2254.1 ± 342.47	318.6 ± 6.94	n = 7	Abbott Architect c System
627.8 ± 24.69	405.4 ± 26.13	1024.9 ± 58.43	2491.6 ± 120.41	294.7 ± 9.67	n = 37	Beckman Coulter AU Chemistry System
607.4 ± 46.03	370.0 ± 30.75	1052.6 ± 59.13	2384.8 ± 199.66	283.4 ± 20.29	n = 3	Beckman Coulter Immage
658.4 ± 39.97	420.9 ± 24.95	1086.3 ± 65.65	2701.6 ± 197.82	311.5 ± 21.25	n = 8	Beckman Coulter UniCel DxC 600
659.1 ± 48.32	420.7 ± 32.87	1062.4 ± 118.96	2654.4 ± 249.72	302.2 ± 27.07	n = 3	Beckman Coulter UniCel DxC 800
547.3 ± 20.08	336.1 ± 25.02	924.0 ± 25.42	1801.8 ± 477.71	247.9 ± 27.69	n = 3	Ortho Vitros 5,1FS
565.4 ± 43.22	360.9 ± 34.18	953.2 ± 22.28	2144.0 ± 689.11	259.4 ± 29.33	n = 6	Ortho Vitros 5600
661.0 ± 22.51	435.2 ± 13.30	1044.0 ± 34.80	2616.3 ± 78.89	303.5 ± 15.51	n = 9	Roche cobas c501
619.0 ± 16.34	401.2 ± 7.87	1023.9 ± 26.78	2470.9 ± 241.73	294.2 ± 11.36	n = 4	Roche Cobas INTEGRA
644.6 ± 24.35	432.6 ± 20.82	1019.6 ± 59.28	2456.6 ± 143.70	286.5 ± 11.64	n = 24	Roche MODULAR D/P
610.3 ± 29.49	387.4 ± 9.33	1025.2 ± 29.12	2455.9 ± 32.91	294.8 ± 6.51	n = 14	Siemens ADVIA 1800
596.7 ± 40.47	396.1 ± 14.15	979.5 ± 109.29	2207.0 ± 598.58	294.5 ± 13.85	n = 3	Siemens ADVIA 2400
>300	>300	>300	>300	297.8 ± 3.99	n = 3	Siemens DCA Vantage
612.3 ± 187.30	408.6 ± 96.92	901.3 ± 400.45	1665.1 ±1273.16	295.4 ± 46.13	n = 4	Siemens Dimension EXL
660.5 ± 17.81	433.0 ± 16.32	1091.4 ± 108.13	2695.2 ± 574.94	318.4 ± 18.63	n = 8	Siemens Dimension RxL
694.5 ± 37.03	447.3 ± 25.60	1131.3 ± 60.44	2713.8 ± 120.46	326.1 ± 23.00	n = 26	Siemens Dimension Vista
702.7 ± 46.41	445.0 ± 24.45	1120.3 ± 59.30	2780.4 ± 122.66	306.5 ± 43.47	n = 5	Other
						<Reagents>
621.1 ± 8.23	432.5 ± 9.32	1039.9 ± 27.63	2306.5 ± 353.68	318.6 ± 6.93	n = 6	Abbott
637.7 ± 42.20	410.5 ± 28.81	1055.1 ± 76.27	2574.5 ± 216.55	299.8 ± 20.86	n = 20	Beckman Coulter
630.0 ± 15.73	402.5 ± 30.13	1019.0 ± 78.86	2512.5 ± 98.55	296.4 ± 13.03	n = 21	Beckman Coulter AU Series
633.6 ± 48.60	413.1 ± 35.51	1022.1 ± 50.93	2521.1 ± 156.03	289.9 ± 9.46	n = 8	Kamiya
559.1 ± 41.58	355.2 ± 35.95	952.1 ± 48.76	2135.9 ± 594.41	253.7 ± 30.50	n = 7	Randox
658.5 ± 20.01	435.2 ± 11.67	1048.9 ± 36.04	2611.8 ± 70.73	305.9 ± 14.27	n = 11	Roche cobas c501/c311/c502/c701
644.6 ± 24.35	432.6 ± 20.82	1019.6 ± 59.28	2456.6 ± 143.70	286.5 ± 11.64	n = 24	Roche Hitachi and Modular D/P
624.6 ± 14.68	401.8 ± 9.23	1029.3 ± 26.83	2577.1 ± 69.58	290.1 ± 10.59	n = 6	Roche Integra and MIRA S
612.7 ± 37.59	388.3 ± 10.27	1031.0 ± 39.90	2469.9 ± 79.54	294.4 ± 10.01	n = 18	Siemens ADVIA/ADVIA Centaur
>300	>300	>300	>300	297.8 ± 3.99	n = 3	Siemens DCA
686.6 ± 34.68	444.0 ± 23.81	1125.4 ± 84.55	2722.9 ± 169.06	322.0 ± 21.10	n = 37	Siemens Dimension
690.9 ± 46.53	444.8 ± 21.00	1118.1 ± 4.46	2777.3 ± 122.00	326.5 ± 17.92	n = 6	Other

New York State Department of Health - Wadsworth Center
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Summary of Participant Performance (Mean and Standard Deviation)

Creatinine
The following creatinine results are summaries with all results converted to mg/dL:

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
128.2 ± 6.94	95.8 ± 6.45	48.3 ± 2.70	80.3 ± 5.37	30.3 ± 2.29	n = 272	All Methods & Instruments
						<Method Principles>
128.1 ± 6.94	95.7 ± 6.43	48.2 ± 2.69	80.2 ± 5.36	30.3 ± 2.28	n = 268	Reporting in mg/dL
133.7 ± 3.52	102.6 ± 3.10	51.3 ± 1.62	85.6 ± 2.57	32.5 ± 0.77	n = 3	Reporting in mg/L
						<Instruments>
121.0 ± 2.51	89.5 ± 1.74	45.4 ± 1.09	74.9 ± 1.51	28.4 ± 0.81	n = 13	Abbott Architect c System
136.9 ± 4.84	106.2 ± 3.74	51.2 ± 0.95	89.2 ± 3.12	33.6 ± 0.89	n = 47	Beckman Coulter AU Chemistry System
135.4 ± 2.75	103.7 ± 1.32	51.5 ± 1.56	85.4 ± 2.79	32.3 ± 1.13	n = 3	Beckman Coulter CX
134.5 ± 4.66	101.6 ± 4.58	51.7 ± 2.02	85.0 ± 4.70	33.0 ± 1.44	n = 3	Beckman Coulter LX-20
135.0 ± 3.90	102.4 ± 2.29	51.9 ± 1.38	84.7 ± 2.10	32.8 ± 0.99	n = 13	Beckman Coulter UniCel DxC 600
130.1 ± 2.14	98.4 ± 1.97	50.0 ± 1.01	81.8 ± 1.42	31.5 ± 0.43	n = 10	Beckman Coulter UniCel DxC 800
127.8 ± 3.11	92.0 ± 3.55	46.5 ± 1.86	78.7 ± 2.99	28.4 ± 1.11	n = 13	Ortho Vitros 5,1FS
125.5 ± 3.50	90.2 ± 1.98	45.8 ± 0.82	75.6 ± 1.40	28.1 ± 0.42	n = 15	Ortho Vitros 5600
130.2 ± 3.85	96.9 ± 3.38	49.1 ± 1.57	81.2 ± 2.64	31.1 ± 1.01	n = 18	Roche cobas c501
124.1 ± 1.88	91.2 ± 1.33	46.9 ± 0.83	76.4 ± 1.02	29.3 ± 0.93	n = 7	Roche Cobas INTEGRA
126.2 ± 4.17	93.5 ± 2.62	47.6 ± 1.37	78.2 ± 2.42	29.7 ± 1.08	n = 31	Roche MODULAR D/P
123.5 ± 5.24	91.5 ± 3.21	46.7 ± 1.52	76.0 ± 2.74	29.3 ± 0.99	n = 18	Siemens ADVIA 1800
115.9 ± 3.37	84.4 ± 3.29	44.7 ± 1.60	73.3 ± 2.50	27.8 ± 0.73	n = 3	Siemens ADVIA 2400
127.0 ± 3.76	96.5 ± 3.16	48.6 ± 1.59	82.9 ± 2.90	31.4 ± 0.67	n = 3	Siemens DCA Vantage
130.9 ± 3.21	96.6 ± 1.10	47.7 ± 0.41	81.1 ± 1.67	29.8 ± 0.95	n = 5	Siemens Dimension EXL
135.2 ± 5.73	98.4 ± 2.09	49.1 ± 1.47	82.6 ± 2.51	30.4 ± 0.98	n = 10	Siemens Dimension RxL
126.5 ± 2.89	95.7 ± 2.59	47.8 ± 1.71	80.0 ± 1.98	29.5 ± 1.33	n = 40	Siemens Dimension Vista
120.0 ± 3.64	88.4 ± 2.24	44.4 ± 1.02	75.4 ± 1.74	27.3 ± 0.70	n = 5	Siemens Dimension Xpand
126.3 ± 11.17	98.6 ± 4.91	47.8 ± 3.54	80.5 ± 4.20	30.0 ± 3.42	n = 5	Other
						<Reagents>
121.0 ± 2.51	89.5 ± 1.74	45.4 ± 1.09	74.9 ± 1.51	28.4 ± 0.81	n = 13	Abbott
133.7 ± 4.60	101.4 ± 3.78	51.0 ± 1.44	84.5 ± 3.46	32.5 ± 1.19	n = 34	Beckman Coulter
137.0 ± 4.59	106.7 ± 3.26	51.2 ± 0.99	89.3 ± 2.89	33.7 ± 0.88	n = 38	Beckman Coulter AU Series
120.6 ± 8.73	96.0 ± 6.27	50.3 ± 6.72	80.4 ± 7.35	31.4 ± 3.44	n = 3	In-House
126.5 ± 3.64	90.8 ± 3.10	46.1 ± 1.29	76.7 ± 2.93	28.2 ± 0.84	n = 28	Ortho Clinical Diagnostics
130.2 ± 3.65	96.4 ± 4.03	49.1 ± 1.48	80.9 ± 2.88	31.1 ± 0.99	n = 19	Roche cobas c501/c311/c502/c701
126.2 ± 4.17	93.5 ± 2.62	47.6 ± 1.37	78.2 ± 2.42	29.7 ± 1.08	n = 31	Roche Hitachi and Modular D/P
124.0 ± 1.38	91.2 ± 1.20	46.6 ± 0.87	76.4 ± 0.97	29.3 ± 0.73	n = 10	Roche Integra and MIRA S
121.9 ± 6.01	90.3 ± 4.13	46.2 ± 1.87	75.4 ± 3.06	29.0 ± 1.15	n = 22	Siemens ADVIA/ADVIA Centaur
127.0 ± 3.76	96.5 ± 3.16	48.6 ± 1.59	82.9 ± 2.90	31.4 ± 0.67	n = 3	Siemens DCA
127.6 ± 4.69	96.0 ± 3.01	47.8 ± 2.01	80.3 ± 2.46	29.5 ± 1.37	n = 57	Siemens Dimension
123.1 ± 3.46	96.1 ± 2.61	48.8 ± 2.06	80.4 ± 2.81	30.5 ± 2.02	n = 6	Other

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Summary of Participant Performance (Mean and Standard Deviation)

Albumin-Creatinine Ratio
The following albumin-creatinine ratio results are summaries with all results converted to µg/mg:

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
499.6 ± 50.30	433.1 ± 51.00	2171.2 ± 202.28	3144.3 ± 347.73	977.3 ± 104.12	n = 156	All Methods & Instruments
						<Method Principles>
509.1 ± 46.44	441.7 ± 52.07	2198.9 ± 202.01	3185.5 ± 333.04	991.5 ± 107.73	n = 99	Reporting in mg/g
484.8 ± 45.10	420.2 ± 42.86	2127.7 ± 179.78	3074.2 ± 357.72	954.6 ± 89.97	n = 53	Reporting in ug/mg
454.6 ± 82.94	411.2 ± 60.46	2012.1 ± 533.67	2724.6 ±1015.83	955.9 ± 130.33	n = 4	Other
						<Instruments>
432.9 ± 118.75	393.3 ± 59.46	1615.8 ± 859.92	1930.7 ±1679.74	937.4 ± 73.40	n = 22	Clinical Analyzer calculation
477.3 ± 56.90	420.9 ± 73.55	2012.4 ± 303.02	2832.7 ± 750.43	948.7 ± 119.69	n = 9	Manual Calculation
						<Reagents>
504.4 ± 49.24	439.2 ± 47.52	2190.8 ± 193.79	3143.6 ± 332.82	988.3 ± 105.60	n = 124	Lab Information System
432.9 ± 118.75	393.3 ± 59.46	1615.8 ± 859.92	1930.7 ±1679.74	937.4 ± 73.40	n = 22	Clinical Analyzer calculation
477.3 ± 56.90	420.9 ± 73.55	2012.4 ± 303.02	2832.7 ± 750.43	948.7 ± 119.69	n = 9	Manual Calculation

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Summary of Participant Performance (Mean and Standard Deviation)

Calcium (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
4.05 ± 0.69	5.00 ± 0.36	12.18 ± 0.45	3.48 ± 0.98	10.60 ± 0.59	n = 171	All Methods & Instruments
						<Method Principles>
4.50 ± 0.64	5.02 ± 0.39	12.22 ± 0.41	3.97 ± 1.19	10.76 ± 0.42	n = 81	o-Cresolphthalein
3.74 ± 0.48	5.04 ± 0.37	12.20 ± 0.52	3.23 ± 0.55	10.61 ± 0.71	n = 67	Arsenazo dye
3.54 ± 0.26	4.87 ± 0.18	11.98 ± 0.18	2.76 ± 0.30	9.96 ± 0.17	n = 18	Ion selective electrode
4.02 ± 0.31	5.03 ± 0.20	12.17 ± 0.45	3.30 ± 0.09	10.77 ± 0.41	n = 4	Other
						<Instruments>
3.74 ± 0.32	4.94 ± 0.20	12.02 ± 0.30	3.03 ± 0.23	10.20 ± 0.46	n = 10	Abbott Architect c System
4.03 ± 0.23	4.85 ± 0.29	11.92 ± 0.24	3.40 ± 0.52	10.36 ± 0.33	n = 24	Beckman Coulter AU Chemistry System
3.49 ± 0.23	4.77 ± 0.26	11.94 ± 0.18	2.59 ± 0.08	9.92 ± 0.12	n = 7	Beckman Coulter UniCel DxC 600
3.61 ± 0.36	4.93 ± 0.15	11.70 ± 1.44	2.93 ± 0.46	10.00 ± 0.22	n = 9	Beckman Coulter UniCel DxC 800
3.19 ± 0.24	5.29 ± 0.39	12.77 ± 0.20	3.12 ± 0.89	11.21 ± 0.42	n = 8	Ortho Vitros 5,1FS
3.15 ± 0.27	5.16 ± 0.41	12.90 ± 0.21	3.08 ± 0.69	11.69 ± 0.23	n = 11	Ortho Vitros 5600
3.85 ± 0.19	4.71 ± 0.17	11.64 ± 1.57	2.81 ± 0.14	10.67 ± 0.29	n = 8	Roche cobas c501
3.97 ± 0.32	4.39 ± 0.27	12.33 ± 1.17	2.76 ± 0.23	11.25 ± 0.53	n = 4	Roche Cobas INTEGRA
4.00 ± 0.33	4.83 ± 0.33	12.40 ± 0.35	3.14 ± 0.34	10.74 ± 0.55	n = 20	Roche MODULAR D/P
3.95 ± 0.22	5.01 ± 0.40	12.20 ± 0.21	3.11 ± 0.29	10.64 ± 0.31	n = 15	Siemens ADVIA 1800
3.74 ± 0.12	4.95 ± 0.19	11.89 ± 0.25	3.02 ± 0.24	10.15 ± 0.40	n = 3	Siemens ADVIA 2400
5.05 ± 0.27	5.30 ± 0.22	12.30 ± 0.10	5.15 ± 0.87	10.81 ± 0.43	n = 6	Siemens Dimension RxL
<5	5.24 ± 0.21	12.07 ± 0.32	<5	10.73 ± 0.36	n = 33	Siemens Dimension Vista
<5	5.33 ± 0.05	12.26 ± 0.10	<5	10.72 ± 0.24	n = 3	Siemens Dimension Xpand
						<Reagents>
3.74 ± 0.32	4.94 ± 0.20	12.02 ± 0.30	3.03 ± 0.23	10.20 ± 0.46	n = 10	Abbott
3.55 ± 0.25	4.88 ± 0.21	12.01 ± 0.21	2.84 ± 0.44	9.97 ± 0.19	n = 19	Beckman Coulter
4.04 ± 0.23	4.83 ± 0.27	11.91 ± 0.25	3.37 ± 0.52	10.34 ± 0.32	n = 23	Beckman Coulter AU Series
3.61 ± 0.25	4.87 ± 0.33	11.75 ± 0.28	3.23 ± 0.49	10.23 ± 0.34	n = 3	Genzyme
3.16 ± 0.26	5.22 ± 0.40	12.85 ± 0.21	3.08 ± 0.76	11.46 ± 0.46	n = 19	Ortho Clinical Diagnostics
3.93 ± 0.16	4.69 ± 0.15	11.85 ± 1.55	2.81 ± 0.14	10.73 ± 0.21	n = 8	Roche cobas c501/c311/c502/c701
4.05 ± 0.34	4.87 ± 0.33	12.49 ± 0.21	3.15 ± 0.30	10.80 ± 0.51	n = 19	Roche Hitachi and Modular D/P
4.01 ± 0.27	4.48 ± 0.30	12.52 ± 1.06	2.86 ± 0.28	11.36 ± 0.46	n = 5	Roche Integra and MIRA S
3.92 ± 0.26	5.02 ± 0.41	12.13 ± 0.27	3.13 ± 0.33	10.59 ± 0.38	n = 19	Siemens ADVIA/ADVIA Centaur
<5	5.25 ± 0.21	12.14 ± 0.30	<5	10.74 ± 0.36	n = 41	Siemens Dimension

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Summary of Participant Performance (Mean and Standard Deviation)

Chloride (mmol/L)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
85.01 ± 5.31	125.80 ± 4.15	187.56 ± 3.52	34.22 ± 2.41	255.90 ± 9.37	n = 187	All Methods & Instruments
						<Method Principles>
85.10 ± 5.12	125.92 ± 4.05	187.58 ± 3.56	34.17 ± 2.28	255.64 ± 8.84	n = 166	Ion selective electrode (diluted)
83.65 ± 6.41	124.52 ± 4.85	187.54 ± 3.31	34.63 ± 3.48	259.25 ± 12.71	n = 20	Ion selective electrode (undiluted)
						<Instruments>
83.68 ± 1.32	123.49 ± 2.27	186.85 ± 1.59	36.15 ± 2.30	261.73 ± 4.50	n = 14	Abbott Architect c System
84.09 ± 1.50	126.81 ± 1.69	191.60 ± 3.20	35.82 ± 0.93	267.27 ± 4.26	n = 29	Beckman Coulter AU Chemistry System
84.46 ± 1.11	125.80 ± 1.56	186.31 ± 3.08	36.37 ± 1.22	253.14 ± 4.91	n = 3	Beckman Coulter LX-20
84.44 ± 2.55	124.69 ± 2.19	183.03 ± 3.18	34.84 ± 1.40	248.10 ± 5.69	n = 12	Beckman Coulter UniCel DxC 600
85.44 ± 1.54	125.64 ± 0.53	185.56 ± 3.57	35.49 ± 1.51	251.13 ± 6.38	n = 9	Beckman Coulter UniCel DxC 800
76.00 ± 0.00	118.37 ± 1.25	186.09 ± 1.27	29.49 ± 1.07	261.60 ± 12.59	n = 14	Roche cobas c501
82.62 ± 0.99	122.87 ± 0.43	185.26 ± 1.61	34.80 ± 0.53	252.20 ± 11.14	n = 4	Roche Cobas INTEGRA
79.81 ± 1.49	121.71 ± 1.54	189.01 ± 2.93	31.19 ± 1.33	250.40 ± 13.96	n = 21	Roche MODULAR D/P
85.13 ± 1.26	125.42 ± 0.72	185.45 ± 1.08	34.77 ± 0.67	253.53 ± 2.18	n = 16	Siemens ADVIA 1800
85.12 ± 2.05	124.80 ± 2.36	185.00 ± 1.80	34.28 ± 0.51	255.48 ± 3.63	n = 3	Siemens ADVIA 2400
105.35 ± 1.58	131.87 ± 1.13	189.65 ± 1.58	54.00 ± 1.14	249.40 ± 24.01	n = 4	Siemens Dimension EXL
100.05 ± 5.21	129.12 ± 1.72	186.32 ± 2.21	49.10 ± 5.16	253.00 ± 4.48	n = 9	Siemens Dimension RxL
90.09 ± 1.49	129.46 ± 1.41	188.02 ± 2.67	33.64 ± 0.89	252.44 ± 4.00	n = 37	Siemens Dimension Vista
103.81 ± 4.23	131.00 ± 2.12	188.72 ± 2.18	52.21 ± 3.06	258.00 ± 2.72	n = 5	Siemens Dimension Xpand
						<Reagents>
83.68 ± 1.32	123.49 ± 2.27	186.85 ± 1.59	36.15 ± 2.30	261.73 ± 4.50	n = 14	Abbott
84.91 ± 1.90	125.49 ± 1.90	185.19 ± 4.43	35.34 ± 1.64	250.34 ± 7.62	n = 27	Beckman Coulter
84.21 ± 1.52	126.89 ± 1.57	191.83 ± 3.08	35.79 ± 0.99	267.40 ± 3.96	n = 27	Beckman Coulter AU Series
132.75 ± 89.09	122.74 ± 1.37	182.54 ± 5.40	38.85 ± 7.95	171.57 ± 73.53	n = 3	Ortho Clinical Diagnostics
75.81 ± 0.78	118.64 ± 1.41	186.09 ± 1.24	29.38 ± 1.04	260.66 ± 13.23	n = 14	Roche cobas c501/c311/c502/c701
79.81 ± 1.49	121.71 ± 1.54	189.01 ± 2.93	31.19 ± 1.33	250.40 ± 13.96	n = 21	Roche Hitachi and Modular D/P
82.08 ± 2.32	122.87 ± 0.43	184.87 ± 1.65	34.32 ± 1.46	254.84 ± 9.22	n = 5	Roche Integra and MIRA S
84.96 ± 1.57	125.37 ± 1.13	185.51 ± 1.30	34.65 ± 0.67	253.75 ± 2.68	n = 20	Siemens ADVIA/ADVIA Centaur
93.06 ± 6.34	129.74 ± 1.66	188.02 ± 2.66	38.27 ± 8.94	253.68 ± 4.41	n = 53	Siemens Dimension

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Summary of Participant Performance (Mean and Standard Deviation)

Glucose (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
424.1 ± 13.48	1.1 ± 0.64	1.1 ± 0.92	287.8 ± 8.45	25.6 ± 1.67	n = 128	All Methods & Instruments
						<Method Principles>
422.1 ± 14.24	1.1 ± 0.52	1.1 ± 0.80	286.4 ± 7.94	25.5 ± 1.33	n = 75	Hexokinase, UV
420.1 ± 12.79	1.0 ± 0.59	1.0 ± 0.59	286.1 ± 8.41	25.2 ± 1.70	n = 27	Hexokinase, colorimetric
436.6 ± 4.71	<20	<20	296.3 ± 3.44	27.9 ± 1.22	n = 15	Glucose oxidase, colorimetric
426.4 ± 5.43	5.1 ± 4.36	5.3 ± 4.22	291.0 ± 6.35	25.0 ± 1.89	n = 8	Glucose oxidase, O2 electrode
						<Instruments>
442.1 ± 9.05	<1	<1	294.5 ± 6.22	25.4 ± 0.56	n = 7	Abbott Architect c System
412.8 ± 9.16	7.2 ± 5.59	7.2 ± 5.89	281.1 ± 5.53	25.1 ± 0.49	n = 15	Beckman Coulter AU Chemistry System
429.5 ± 4.71	3.7 ± 3.61	4.1 ± 3.31	289.6 ± 9.49	25.1 ± 1.70	n = 6	Beckman Coulter UniCel DxC 600
426.1 ± 4.12	5.6 ± 3.31	5.2 ± 3.63	289.7 ± 2.72	24.8 ± 1.67	n = 6	Beckman Coulter UniCel DxC 800
437.7 ± 3.62	<20	<20	296.1 ± 3.01	28.0 ± 1.37	n = 6	Ortho Vitros 5,1FS
435.6 ± 4.98	<20	<20	296.2 ± 3.53	27.9 ± 1.02	n = 10	Ortho Vitros 5600
422.0 ± 6.19	1.5 ± 0.80	1.4 ± 1.04	288.8 ± 5.50	26.3 ± 0.54	n = 8	Roche cobas c501
431.6 ± 7.10	1.6 ± 0.69	1.7 ± 0.72	292.6 ± 4.73	26.5 ± 0.87	n = 17	Roche MODULAR D/P
422.3 ± 10.86	<1	0.5 ± 0.56	286.6 ± 5.91	26.0 ± 0.74	n = 12	Siemens ADVIA 1800
421.9 ± 5.72	6.7 ± 9.49	6.3 ± 9.73	285.1 ± 3.72	26.6 ± 1.02	n = 3	Siemens ADVIA 2400
427.9 ± 8.31	1.0 ± 0.90	0.7 ± 0.51	288.5 ± 1.86	26.3 ± 0.51	n = 3	Siemens Dimension RxL
410.0 ± 10.44	<1	<1	279.6 ± 8.73	23.7 ± 0.82	n = 25	Siemens Dimension Vista
						<Reagents>
442.1 ± 9.05	<1	<1	294.5 ± 6.22	25.4 ± 0.56	n = 7	Abbott
426.9 ± 5.99	4.3 ± 3.29	4.4 ± 3.21	289.9 ± 5.44	25.0 ± 1.89	n = 15	Beckman Coulter
411.2 ± 8.72	8.4 ± 4.63	8.4 ± 4.89	280.2 ± 5.45	25.0 ± 0.00	n = 13	Beckman Coulter AU Series
436.5 ± 4.46	<20	<20	296.2 ± 3.30	27.9 ± 1.16	n = 16	Ortho Clinical Diagnostics
419.5 ± 8.90	1.5 ± 0.80	1.3 ± 1.02	287.0 ± 6.07	26.1 ± 0.71	n = 10	Roche cobas c501/c311/c502/c701
431.6 ± 7.10	1.6 ± 0.69	1.7 ± 0.72	292.6 ± 4.73	26.5 ± 0.87	n = 17	Roche Hitachi and Modular D/P
421.1 ± 8.88	<1	0.7 ± 0.54	285.9 ± 5.37	26.0 ± 0.75	n = 16	Siemens ADVIA/ADVIA Centaur
413.3 ± 12.04	<1	<1	282.2 ± 9.17	24.0 ± 1.24	n = 30	Siemens Dimension

New York State Department of Health - Wadsworth Center
Quantitative Urine Chemistry - Educational Proficiency Testing - 26 November 2012

Summary of Participant Performance (Mean and Standard Deviation)

Magnesium (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
13.14 ± 0.90	2.00 ± 0.28	7.40 ± 0.43	7.18 ± 0.54	9.94 ± 0.64	n = 120	All Methods & Instruments
						<Method Principles>
13.36 ± 0.80	2.01 ± 0.30	7.36 ± 0.31	7.30 ± 0.33	10.15 ± 0.59	n = 17	Calmagite
13.67 ± 0.64	2.08 ± 0.16	7.69 ± 0.23	7.46 ± 0.34	10.21 ± 0.31	n = 31	Methylthymol blue
12.95 ± 0.76	2.03 ± 0.18	7.24 ± 0.36	7.16 ± 0.42	9.66 ± 0.48	n = 47	Xylidyl blue (Magon)
12.59 ± 0.54	1.20 ± 0.00	7.54 ± 0.44	6.35 ± 0.48	10.82 ± 0.30	n = 9	Formazon dye
11.83 ± 1.45	1.79 ± 0.31	6.39 ± 0.81	6.08 ± 0.83	8.77 ± 1.10	n = 4	Chlorophosphonazo III
11.78 ± 1.12	1.73 ± 0.35	6.27 ± 0.72	5.68 ± 0.72	8.95 ± 0.87	n = 8	Arsenazo dye
13.50 ± 0.63	1.99 ± 0.06	7.30 ± 0.15	7.24 ± 0.12	9.91 ± 0.20	n = 4	Other
						<Instruments>
11.33 ± 0.83	1.77 ± 0.30	5.98 ± 0.42	5.47 ± 0.61	8.67 ± 0.61	n = 6	Abbott Architect c System
13.01 ± 0.63	2.05 ± 0.06	7.33 ± 0.18	7.29 ± 0.26	9.78 ± 0.19	n = 12	Beckman Coulter AU Chemistry System
13.16 ± 0.55	1.83 ± 0.14	7.28 ± 0.09	7.14 ± 0.21	10.24 ± 0.56	n = 4	Beckman Coulter UniCel DxC 600
13.65 ± 0.71	2.03 ± 0.25	7.44 ± 0.37	7.45 ± 0.31	10.13 ± 0.65	n = 8	Beckman Coulter UniCel DxC 800
13.36 ± 0.68	1.96 ± 0.04	7.24 ± 0.11	7.20 ± 0.07	9.86 ± 0.26	n = 3	ICP/MS
12.45 ± 0.54	1.26 ± 0.10	7.77 ± 0.05	6.56 ± 0.73	10.90 ± 0.09	n = 3	Ortho Vitros 5,1FS
12.59 ± 0.53	1.20 ± 0.00	7.36 ± 0.48	6.18 ± 0.35	10.71 ± 0.37	n = 8	Ortho Vitros 5600
11.91 ± 1.45	1.78 ± 0.24	6.76 ± 0.88	6.27 ± 0.86	9.14 ± 1.28	n = 3	Roche cobas c501
12.81 ± 0.52	2.06 ± 0.16	7.11 ± 0.29	7.03 ± 0.35	9.41 ± 0.42	n = 19	Roche MODULAR D/P
13.31 ± 1.04	1.94 ± 0.25	7.34 ± 0.52	7.22 ± 0.53	9.77 ± 0.56	n = 12	Siemens ADVIA 1800
12.94 ± 0.48	2.26 ± 0.27	7.58 ± 0.51	7.23 ± 0.41	9.58 ± 0.41	n = 3	Siemens ADVIA 2400
13.79 ± 0.65	2.08 ± 0.14	7.69 ± 0.21	7.50 ± 0.34	10.22 ± 0.29	n = 27	Siemens Dimension Vista
						<Reagents>
11.33 ± 0.83	1.77 ± 0.30	5.98 ± 0.42	5.47 ± 0.61	8.67 ± 0.61	n = 6	Abbott
13.38 ± 0.73	2.01 ± 0.26	7.37 ± 0.31	7.30 ± 0.32	10.15 ± 0.63	n = 15	Beckman Coulter
12.95 ± 0.64	2.06 ± 0.06	7.36 ± 0.16	7.32 ± 0.25	9.80 ± 0.18	n = 11	Beckman Coulter AU Series
13.75 ± 0.54	1.99 ± 0.07	7.31 ± 0.17	7.24 ± 0.15	9.83 ± 0.24	n = 3	In-House
12.55 ± 0.53	1.20 ± 0.00	7.50 ± 0.45	6.23 ± 0.44	10.78 ± 0.32	n = 11	Ortho Clinical Diagnostics
12.29 ± 1.37	1.78 ± 0.20	6.73 ± 0.74	6.47 ± 0.75	9.23 ± 1.06	n = 4	Roche cobas c501/c311/c502/c701
12.81 ± 0.52	2.06 ± 0.16	7.11 ± 0.29	7.03 ± 0.35	9.41 ± 0.42	n = 19	Roche Hitachi and Modular D/P
13.29 ± 0.95	2.04 ± 0.30	7.37 ± 0.52	7.27 ± 0.51	9.78 ± 0.55	n = 16	Siemens ADVIA/ADVIA Centaur
13.72 ± 0.62	2.08 ± 0.15	7.68 ± 0.22	7.46 ± 0.33	10.22 ± 0.29	n = 30	Siemens Dimension

New York State Department of Health – Wadsworth Center
Quantitative Urine Chemistry – Educational Proficiency Testing – 26 November 2012

Summary of Participant Performance (Mean and Standard Deviation)

Sodium (mmol/L)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
90.3 ± 5.03	124.3 ± 4.17	187.1 ± 4.37	34.6 ± 2.24	256.9 ± 6.98	n = 217	All Methods & Instruments
						<Method Principles>
89.7 ± 4.86	123.9 ± 3.68	186.7 ± 3.67	34.6 ± 2.24	257.0 ± 6.56	n = 181	Ion selective electrode (diluted)
93.7 ± 4.32	128.3 ± 5.54	194.0 ± 8.56	35.0 ± 1.89	258.9 ± 12.65	n = 35	Ion selective electrode (undiluted)
						<Instruments>
91.0 ± 1.62	123.3 ± 1.79	184.3 ± 1.94	34.5 ± 1.05	253.0 ± 3.65	n = 14	Abbott Architect c System
92.3 ± 2.20	125.6 ± 1.74	189.1 ± 2.61	37.0 ± 1.25	262.3 ± 4.37	n = 31	Beckman Coulter AU Chemistry System
90.7 ± 1.37	124.7 ± 1.37	186.1 ± 2.86	34.0 ± 0.90	254.0 ± 4.60	n = 3	Beckman Coulter LX-20
90.1 ± 1.99	123.8 ± 2.37	184.0 ± 3.92	33.7 ± 1.21	251.4 ± 5.66	n = 13	Beckman Coulter UniCel DxC 600
92.3 ± 1.46	125.5 ± 0.83	185.6 ± 1.18	35.0 ± 1.28	254.1 ± 3.32	n = 10	Beckman Coulter UniCel DxC 800
95.3 ± 4.39	130.5 ± 5.18	199.2 ± 5.13	34.0 ± 3.00	263.9 ± 17.07	n = 13	Ortho Vitros 5,1FS
96.8 ± 2.02	133.9 ± 1.63	203.3 ± 3.39	34.3 ± 2.95	259.3 ± 19.76	n = 12	Ortho Vitros 5600
90.8 ± 1.31	124.8 ± 0.68	186.9 ± 1.39	35.2 ± 1.39	256.0 ± 4.31	n = 15	Roche cobas c501
90.8 ± 1.23	126.2 ± 0.61	190.0 ± 1.15	35.0 ± 1.20	253.5 ± 16.02	n = 4	Roche Cobas INTEGRA
91.6 ± 1.76	125.9 ± 1.92	189.5 ± 1.86	35.0 ± 1.72	255.6 ± 7.48	n = 23	Roche MODULAR D/P
92.0 ± 1.08	125.6 ± 0.81	189.1 ± 2.19	35.5 ± 0.72	261.8 ± 2.13	n = 16	Siemens ADVIA 1800
92.0 ± 0.90	125.0 ± 0.90	189.0 ± 0.90	35.3 ± 0.51	263.3 ± 3.16	n = 3	Siemens ADVIA 2400
85.9 ± 1.13	120.5 ± 0.83	181.2 ± 2.08	33.6 ± 0.70	249.0 ± 3.23	n = 10	Siemens Dimension RxL
80.4 ± 3.06	118.8 ± 2.73	184.4 ± 2.71	31.8 ± 2.17	259.2 ± 3.96	n = 38	Siemens Dimension Vista
86.3 ± 0.72	122.5 ± 1.39	185.4 ± 2.84	33.5 ± 0.57	254.8 ± 4.55	n = 6	Siemens Dimension Xpand
						<Reagents>
91.0 ± 1.62	123.3 ± 1.79	184.3 ± 1.94	34.5 ± 1.05	253.0 ± 3.65	n = 14	Abbott
91.2 ± 1.99	124.8 ± 2.09	185.3 ± 3.09	34.4 ± 1.47	253.4 ± 5.50	n = 29	Beckman Coulter
92.2 ± 2.06	125.5 ± 1.64	189.2 ± 2.53	37.0 ± 1.28	262.4 ± 4.31	n = 29	Beckman Coulter AU Series
96.1 ± 3.51	132.0 ± 4.62	201.0 ± 5.15	34.1 ± 2.97	261.7 ± 18.57	n = 25	Ortho Clinical Diagnostics
90.9 ± 1.31	124.8 ± 0.84	187.2 ± 1.63	35.3 ± 1.36	255.5 ± 4.50	n = 16	Roche cobas c501/c311/c502/c701
91.6 ± 1.76	125.9 ± 1.92	189.5 ± 1.86	35.0 ± 1.72	255.6 ± 7.48	n = 23	Roche Hitachi and Modular D/P
90.8 ± 1.23	126.2 ± 0.61	190.0 ± 1.15	35.0 ± 1.20	253.5 ± 16.02	n = 4	Roche Integra and MIRA S
92.0 ± 1.04	125.5 ± 0.89	188.9 ± 2.01	35.5 ± 0.69	262.0 ± 2.37	n = 20	Siemens ADVIA/ADVIA Centaur
82.7 ± 3.87	119.9 ± 2.62	184.0 ± 2.90	32.6 ± 1.98	256.8 ± 5.86	n = 54	Siemens Dimension

New York State Department of Health - Wadsworth Center
Quantitative Urine Chemistry - Educational Proficiency Testing - 26 November 2012

Summary of Participant Performance (Mean and Standard Deviation)

Phosphorus (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
128.54 ± 5.83	79.10 ± 3.60	63.58 ± 3.06	97.89 ± 4.53	53.04 ± 2.49	n = 150	All Methods & Instruments
						<Method Principles>
127.43 ± 3.94	78.28 ± 2.95	63.05 ± 2.52	97.68 ± 3.38	52.50 ± 1.82	n = 73	Phosphomolybdate - no reduction
128.44 ± 3.93	79.49 ± 3.18	63.91 ± 2.24	98.58 ± 3.17	54.32 ± 2.29	n = 4	Phosphomolybdate reduction (ANS)
130.52 ± 8.48	80.40 ± 3.80	64.28 ± 3.35	98.04 ± 5.93	53.74 ± 2.96	n = 44	Phosphomolybdate reduction (PMA phe
131.74 ± 6.89	79.94 ± 4.40	65.03 ± 4.07	99.08 ± 5.74	54.24 ± 3.15	n = 20	Phosphomolybdate reduction-other
126.17 ± 3.93	77.83 ± 2.51	61.76 ± 0.47	98.19 ± 2.53	51.69 ± 2.06	n = 7	Other
						<Instruments>
128.18 ± 1.88	78.72 ± 0.98	63.32 ± 0.81	99.34 ± 1.11	53.09 ± 0.66	n = 8	Abbott Architect c System
126.84 ± 3.02	77.61 ± 2.72	62.38 ± 2.71	96.57 ± 3.13	51.97 ± 1.48	n = 21	Beckman Coulter AU Chemistry System
137.18 ± 6.15	82.12 ± 3.29	66.72 ± 2.32	102.56 ± 3.82	55.89 ± 2.37	n = 6	Beckman Coulter UniCel DxC 600
130.14 ± 5.90	80.04 ± 3.76	65.19 ± 2.55	99.94 ± 4.37	54.38 ± 2.04	n = 7	Beckman Coulter UniCel DxC 800
135.06 ± 5.41	83.14 ± 2.65	67.59 ± 2.98	104.15 ± 4.52	57.12 ± 2.84	n = 6	Ortho Vitros 5,1FS
134.00 ± 4.99	83.04 ± 3.01	67.46 ± 2.98	102.88 ± 4.24	56.74 ± 1.88	n = 11	Ortho Vitros 5600
128.69 ± 1.32	79.32 ± 1.39	63.13 ± 1.30	98.64 ± 1.81	53.09 ± 0.95	n = 7	Roche cobas c501
128.88 ± 1.06	79.27 ± 0.70	63.82 ± 1.35	99.09 ± 0.64	53.00 ± 0.15	n = 4	Roche Cobas INTEGRA
125.35 ± 2.92	76.63 ± 1.93	61.77 ± 1.99	95.81 ± 2.82	51.64 ± 1.60	n = 20	Roche MODULAR D/P
130.15 ± 4.19	79.27 ± 2.97	63.67 ± 2.85	98.45 ± 3.68	53.30 ± 2.36	n = 14	Siemens ADVIA 1800
123.09 ± 5.05	74.36 ± 2.28	61.08 ± 2.22	94.88 ± 3.65	50.30 ± 1.09	n = 3	Siemens ADVIA 2400
140.23 ± 4.76	83.50 ± 0.75	66.87 ± 0.77	105.00 ± 3.57	55.70 ± 0.87	n = 5	Siemens Dimension RxL
118.77 ± 15.57	78.90 ± 3.59	62.65 ± 2.58	94.35 ± 3.92	52.00 ± 2.19	n = 30	Siemens Dimension Vista
						<Reagents>
128.18 ± 1.88	78.72 ± 0.98	63.32 ± 0.81	99.34 ± 1.11	53.09 ± 0.66	n = 8	Abbott
133.90 ± 7.68	81.42 ± 3.79	65.77 ± 2.76	101.44 ± 4.63	55.10 ± 2.44	n = 16	Beckman Coulter
127.09 ± 2.87	77.42 ± 2.44	62.21 ± 2.33	96.86 ± 2.79	51.86 ± 1.42	n = 20	Beckman Coulter AU Series
133.87 ± 5.78	82.81 ± 3.18	67.22 ± 3.29	102.92 ± 4.79	56.65 ± 2.49	n = 18	Ortho Clinical Diagnostics
128.64 ± 2.53	78.98 ± 1.58	63.27 ± 1.26	98.37 ± 1.78	52.92 ± 0.97	n = 8	Roche cobas c501/c311/c502/c701
125.35 ± 2.92	76.63 ± 1.93	61.77 ± 1.99	95.81 ± 2.82	51.64 ± 1.60	n = 20	Roche Hitachi and Modular D/P
128.88 ± 1.06	79.27 ± 0.70	63.82 ± 1.35	99.09 ± 0.64	53.00 ± 0.15	n = 4	Roche Integra and MIRA S
128.69 ± 4.99	78.22 ± 3.45	63.16 ± 2.93	97.66 ± 3.82	52.58 ± 2.46	n = 18	Siemens ADVIA/ADVIA Centaur
122.87 ± 17.42	79.53 ± 3.93	63.38 ± 3.26	95.66 ± 5.30	52.79 ± 2.60	n = 35	Siemens Dimension

New York State Department of Health - Wadsworth Center
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Summary of Participant Performance (Mean and Standard Deviation)

Potassium (mmol/L)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
72.76 ± 5.79	36.80 ± 2.10	23.26 ± 1.00	53.28 ± 4.01	17.26 ± 0.82	n = 216	All Methods & Instruments
						<Method Principles>
71.95 ± 5.42	36.54 ± 2.10	23.16 ± 1.04	52.74 ± 4.04	17.30 ± 0.82	n = 180	Ion selective electrode (diluted)
77.74 ± 4.89	38.13 ± 1.26	23.72 ± 0.55	56.01 ± 2.36	17.11 ± 0.74	n = 35	Ion selective electrode (undiluted)
						<Instruments>
73.28 ± 0.61	36.58 ± 0.33	23.05 ± 0.11	53.56 ± 0.66	17.09 ± 0.19	n = 14	Abbott Architect c System
75.01 ± 2.25	38.06 ± 0.98	23.92 ± 0.60	55.63 ± 1.29	17.92 ± 0.15	n = 30	Beckman Coulter AU Chemistry System
71.38 ± 1.13	36.80 ± 0.36	23.75 ± 0.46	52.75 ± 0.46	17.89 ± 0.20	n = 3	Beckman Coulter LX-20
71.06 ± 0.64	36.31 ± 0.25	23.23 ± 0.34	52.21 ± 0.63	17.76 ± 0.34	n = 13	Beckman Coulter UniCel DxC 600
71.50 ± 0.46	36.75 ± 0.31	23.43 ± 0.33	52.54 ± 0.55	17.91 ± 0.16	n = 10	Beckman Coulter UniCel DxC 800
80.84 ± 1.71	38.66 ± 0.69	23.82 ± 0.41	57.32 ± 1.27	16.67 ± 0.45	n = 13	Ortho Vitros 5,1FS
80.78 ± 0.99	38.89 ± 0.84	24.00 ± 0.23	57.13 ± 1.09	16.46 ± 0.22	n = 12	Ortho Vitros 5600
73.40 ± 1.63	36.97 ± 0.57	23.10 ± 0.26	53.98 ± 1.07	17.43 ± 0.31	n = 14	Roche cobas c501
75.08 ± 0.90	38.18 ± 0.61	23.76 ± 0.29	55.99 ± 0.92	17.59 ± 0.30	n = 4	Roche Cobas INTEGRA
75.54 ± 3.39	38.15 ± 1.15	23.83 ± 0.50	55.22 ± 2.30	17.71 ± 0.38	n = 22	Roche MODULAR D/P
74.68 ± 1.05	37.59 ± 0.63	23.98 ± 0.08	54.73 ± 0.66	17.97 ± 0.13	n = 17	Siemens ADVIA 1800
74.45 ± 1.35	37.00 ± 0.00	23.50 ± 0.45	54.32 ± 0.49	17.92 ± 0.15	n = 3	Siemens ADVIA 2400
70.22 ± 0.88	36.17 ± 0.31	23.03 ± 0.14	52.13 ± 0.34	16.87 ± 0.14	n = 3	Siemens Dimension EXL
67.23 ± 1.11	34.79 ± 0.25	22.18 ± 0.22	49.35 ± 0.66	16.71 ± 0.40	n = 11	Siemens Dimension RxL
63.27 ± 1.58	33.23 ± 0.66	21.42 ± 0.40	45.52 ± 1.12	16.11 ± 0.19	n = 38	Siemens Dimension Vista
69.89 ± 0.44	36.02 ± 0.47	22.76 ± 0.10	52.09 ± 0.90	16.83 ± 0.13	n = 5	Siemens Dimension Xpand
						<Reagents>
73.28 ± 0.61	36.58 ± 0.33	23.05 ± 0.11	53.56 ± 0.66	17.09 ± 0.19	n = 14	Abbott
71.35 ± 0.78	36.60 ± 0.48	23.39 ± 0.44	52.48 ± 0.75	17.87 ± 0.21	n = 29	Beckman Coulter
75.20 ± 2.50	38.11 ± 1.08	23.94 ± 0.62	55.74 ± 1.06	17.91 ± 0.16	n = 28	Beckman Coulter AU Series
80.78 ± 1.38	38.74 ± 0.78	23.91 ± 0.38	57.19 ± 1.26	16.53 ± 0.38	n = 24	Ortho Clinical Diagnostics
73.23 ± 1.79	36.91 ± 0.61	23.07 ± 0.24	53.87 ± 1.14	17.39 ± 0.33	n = 15	Roche cobas c501/c311/c502/c701
75.54 ± 3.39	38.15 ± 1.15	23.83 ± 0.50	55.22 ± 2.30	17.71 ± 0.38	n = 22	Roche Hitachi and Modular D/P
75.08 ± 0.90	38.18 ± 0.61	23.76 ± 0.29	55.99 ± 0.92	17.59 ± 0.30	n = 4	Roche Integra and MIRA S
74.65 ± 1.12	37.48 ± 0.63	23.91 ± 0.21	54.67 ± 0.65	17.96 ± 0.14	n = 21	Siemens ADVIA/ADVIA Centaur
64.83 ± 3.45	33.85 ± 1.34	21.76 ± 0.70	46.99 ± 3.07	16.31 ± 0.40	n = 55	Siemens Dimension

New York State Department of Health - Wadsworth Center
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Summary of Participant Performance (Mean and Standard Deviation)

Total Protein (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
81.71 ± 8.59	50.66 ± 2.37	121.65 ± 5.02	287.50 ± 16.48	37.67 ± 2.64	n = 219	All Methods & Instruments
						<Method Principles>
82.55 ± 10.47	50.37 ± 2.30	120.87 ± 4.72	285.61 ± 15.98	37.60 ± 2.66	n = 83	Biuret (alkaline cupric sulfate)
103.81 ± 19.28	62.55 ± 10.79	164.60 ± 38.06	455.17 ± 128.47	40.26 ± 4.96	n = 3	Refractometry
74.14 ± 2.38	50.16 ± 1.43	121.74 ± 3.50	299.64 ± 9.86	36.57 ± 1.22	n = 30	Tubidimetric/Benzethonium Chloride
83.41 ± 5.51	51.27 ± 2.39	122.68 ± 4.99	284.79 ± 16.30	38.05 ± 2.44	n = 90	Pyrogallol red
113.16 ± 5.60	67.66 ± 2.36	163.45 ± 9.55	496.10 ± 36.33	42.13 ± 2.72	n = 9	Pyrocatechol Violet
80.29 ± 10.54	48.63 ± 1.79	113.17 ± 3.28	275.65 ± 25.96	34.42 ± 1.23	n = 4	Other
						<Instruments>
74.30 ± 1.84	49.90 ± 1.14	123.81 ± 1.94	297.40 ± 8.09	36.83 ± 1.12	n = 13	Abbott Architect c System
80.48 ± 3.24	50.48 ± 1.61	125.48 ± 3.78	294.01 ± 16.83	37.11 ± 1.18	n = 36	Beckman Coulter AU Chemistry System
86.80 ± 2.36	50.26 ± 2.26	118.63 ± 3.87	283.21 ± 18.76	36.00 ± 0.90	n = 3	Beckman Coulter LX-20
91.68 ± 2.28	52.55 ± 1.20	124.22 ± 2.24	288.28 ± 9.15	37.00 ± 1.00	n = 11	Beckman Coulter UniCel DxC 600
93.22 ± 1.81	53.10 ± 1.66	125.15 ± 2.84	290.44 ± 12.46	37.64 ± 1.44	n = 9	Beckman Coulter UniCel DxC 800
112.28 ± 6.04	65.79 ± 3.29	159.69 ± 15.33	495.92 ± 39.75	40.58 ± 2.44	n = 11	Ortho Vitros 5,1FS
110.63 ± 7.04	65.92 ± 3.99	164.62 ± 15.08	500.14 ± 40.66	41.40 ± 3.51	n = 13	Ortho Vitros 5600
74.82 ± 4.22	49.21 ± 2.56	121.22 ± 5.96	302.38 ± 13.62	35.63 ± 1.83	n = 15	Roche cobas c501
73.64 ± 0.86	50.89 ± 0.70	119.26 ± 1.03	296.55 ± 10.33	36.97 ± 0.63	n = 5	Roche Cobas INTEGRA
73.58 ± 2.71	49.73 ± 1.62	119.23 ± 3.73	295.08 ± 7.86	36.69 ± 1.28	n = 25	Roche MODULAR D/P
80.90 ± 5.15	48.36 ± 1.55	113.65 ± 3.62	270.36 ± 20.67	34.79 ± 1.26	n = 17	Siemens ADVIA 1800
85.48 ± 7.34	48.32 ± 0.68	115.72 ± 3.78	274.98 ± 7.55	33.17 ± 1.34	n = 3	Siemens ADVIA 2400
83.31 ± 1.47	50.75 ± 0.54	399.01 ± 512.80	276.29 ± 2.31	38.79 ± 1.45	n = 3	Siemens Dimension EXL
86.03 ± 2.44	52.64 ± 1.47	120.70 ± 1.92	279.11 ± 5.66	40.92 ± 1.78	n = 8	Siemens Dimension RxL
84.73 ± 2.95	52.16 ± 1.89	122.09 ± 2.54	275.15 ± 12.42	40.27 ± 1.49	n = 38	Siemens Dimension Vista
83.86 ± 2.73	51.44 ± 1.02	118.55 ± 1.84	282.61 ± 12.11	39.38 ± 1.18	n = 4	Siemens Dimension Xpand
						<Reagents>
74.30 ± 1.84	49.90 ± 1.14	123.81 ± 1.94	297.40 ± 8.09	36.83 ± 1.12	n = 13	Abbott
89.83 ± 5.12	52.18 ± 2.12	123.86 ± 4.20	290.28 ± 13.60	36.91 ± 1.56	n = 27	Beckman Coulter
80.33 ± 3.26	50.39 ± 1.62	125.43 ± 3.81	292.19 ± 15.37	37.04 ± 1.22	n = 33	Beckman Coulter AU Series
111.45 ± 6.54	65.92 ± 3.62	163.29 ± 14.06	498.47 ± 39.56	41.15 ± 2.89	n = 23	Ortho Clinical Diagnostics
76.73 ± 1.96	48.51 ± 1.08	122.93 ± 2.86	300.77 ± 9.60	35.43 ± 2.73	n = 3	Pointe Scientific
75.24 ± 3.79	49.99 ± 1.99	121.99 ± 5.11	300.01 ± 13.79	36.10 ± 1.13	n = 15	Roche cobas c501/c311/c502/c701
73.22 ± 2.07	49.79 ± 1.68	119.08 ± 3.08	295.56 ± 7.49	36.68 ± 1.26	n = 22	Roche Hitachi and Modular D/P
73.66 ± 0.76	51.12 ± 0.83	119.40 ± 0.93	299.46 ± 11.36	37.00 ± 0.00	n = 6	Roche Integra and MIRA S
81.69 ± 6.04	48.35 ± 1.41	113.97 ± 3.66	271.58 ± 18.51	34.55 ± 1.51	n = 20	Siemens ADVIA/ADVIA Centaur
84.71 ± 2.91	51.98 ± 1.81	121.40 ± 2.73	276.31 ± 10.57	40.13 ± 1.56	n = 51	Siemens Dimension

New York State Department of Health - Wadsworth Center
Quantitative Urine Chemistry - Educational Proficiency Testing - 26 November 2012

Summary of Participant Performance (Mean and Standard Deviation)

Uric Acid (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
37.45 ± 2.49	20.73 ± 1.26	9.03 ± 0.91	35.51 ± 2.07	12.91 ± 1.27	n = 156	All Methods & Instruments
						<Method Principles>
38.50 ± 3.14	20.71 ± 1.40	8.91 ± 1.15	36.15 ± 1.52	13.03 ± 1.17	n = 11	Uricase (NAD-NADH reaction)
35.89 ± 2.51	20.27 ± 1.18	9.25 ± 0.83	34.60 ± 2.54	12.87 ± 1.40	n = 52	Uricase/allantoin (differential abs
38.17 ± 1.88	20.98 ± 1.21	8.92 ± 0.89	35.88 ± 1.64	12.90 ± 1.25	n = 89	Uricase/peroxidase (colorimetric)
36.98 ± 1.88	20.74 ± 0.80	9.03 ± 0.64	35.35 ± 1.23	13.15 ± 0.72	n = 4	Other
						<Instruments>
37.34 ± 1.34	20.10 ± 0.62	8.52 ± 0.45	34.59 ± 1.06	12.86 ± 0.71	n = 9	Abbott Architect c System
38.82 ± 1.31	21.07 ± 0.29	9.30 ± 0.35	37.03 ± 1.38	13.49 ± 1.04	n = 22	Beckman Coulter AU Chemistry System
40.05 ± 1.08	22.79 ± 0.39	10.75 ± 0.37	37.90 ± 0.52	14.44 ± 0.68	n = 6	Beckman Coulter UniCel DxC 600
40.23 ± 1.75	22.88 ± 0.49	10.55 ± 0.49	37.54 ± 0.95	14.23 ± 1.54	n = 8	Beckman Coulter UniCel DxC 800
39.30 ± 0.95	21.64 ± 0.42	8.52 ± 0.52	36.37 ± 1.13	12.75 ± 1.17	n = 7	Ortho Vitros 5,1FS
38.67 ± 2.24	20.58 ± 1.25	8.16 ± 0.40	35.71 ± 1.24	12.60 ± 0.99	n = 10	Ortho Vitros 5600
37.94 ± 1.11	20.63 ± 0.30	8.54 ± 0.29	35.33 ± 1.10	12.69 ± 0.70	n = 9	Roche cobas c501
37.01 ± 2.30	20.33 ± 0.62	8.36 ± 0.28	35.25 ± 1.99	11.99 ± 1.51	n = 4	Roche Cobas INTEGRA
35.98 ± 0.99	19.56 ± 0.58	7.96 ± 0.28	34.12 ± 0.90	11.63 ± 0.75	n = 20	Roche MODULAR D/P
38.69 ± 1.50	21.74 ± 0.71	9.29 ± 0.47	36.27 ± 1.10	13.57 ± 0.74	n = 14	Siemens ADVIA 1800
34.82 ± 3.58	20.85 ± 0.19	8.65 ± 0.27	35.60 ± 0.73	11.71 ± 3.17	n = 3	Siemens ADVIA 2400
38.83 ± 1.96	22.48 ± 2.44	9.27 ± 0.95	39.15 ± 0.73	12.96 ± 1.56	n = 5	Siemens Dimension RxL
34.63 ± 1.02	19.91 ± 0.46	9.44 ± 0.46	33.32 ± 1.04	12.90 ± 0.80	n = 31	Siemens Dimension Vista
						<Reagents>
37.34 ± 1.34	20.10 ± 0.62	8.52 ± 0.45	34.59 ± 1.06	12.86 ± 0.71	n = 9	Abbott
39.72 ± 1.66	22.74 ± 0.67	10.45 ± 0.60	37.35 ± 1.03	14.03 ± 1.42	n = 18	Beckman Coulter
38.83 ± 1.45	21.07 ± 0.31	9.27 ± 0.31	37.14 ± 1.36	13.39 ± 1.16	n = 20	Beckman Coulter AU Series
39.33 ± 1.18	21.21 ± 0.88	8.31 ± 0.51	35.98 ± 1.21	12.65 ± 1.09	n = 17	Ortho Clinical Diagnostics
38.07 ± 1.06	20.68 ± 0.32	8.57 ± 0.28	35.53 ± 1.20	12.78 ± 0.67	n = 10	Roche cobas c501/c311/c502/c701
35.98 ± 0.99	19.56 ± 0.58	7.96 ± 0.28	34.12 ± 0.90	11.63 ± 0.75	n = 20	Roche Hitachi and Modular D/P
37.01 ± 2.30	20.33 ± 0.62	8.36 ± 0.28	35.25 ± 1.99	11.99 ± 1.51	n = 4	Roche Integra and MIRA S
38.34 ± 1.66	21.49 ± 0.79	9.16 ± 0.46	36.05 ± 1.09	13.53 ± 0.67	n = 18	Siemens ADVIA/ADVIA Centaur
34.90 ± 1.42	20.03 ± 0.60	9.45 ± 0.56	34.03 ± 2.15	12.97 ± 0.93	n = 38	Siemens Dimension

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Summary of Participant Performance (Mean and Standard Deviation)

Urea Nitrogen (mg/dL)

Specimen: U06	Specimen: U07	Specimen: U08	Specimen: U09	Specimen: U10	Number	Instrument or Reagent System
1124.8 ± 51.55	520.1 ± 19.98	790.7 ± 29.06	679.6 ± 24.41	1166.8 ± 49.71	n = 160	All Methods & Instruments
						<Method Principles>
1116.9 ± 47.39	519.6 ± 20.03	789.7 ± 29.92	677.8 ± 23.77	1160.1 ± 50.39	n = 132	Urease w/glutamate dehydrogenase
1163.8 ± 59.20	534.5 ± 26.29	812.4 ± 35.79	703.7 ± 32.95	1206.8 ± 45.65	n = 10	Urease, conductivity rate
1170.2 ± 35.51	519.5 ± 12.38	789.5 ± 14.94	682.4 ± 17.83	1190.5 ± 22.70	n = 16	Urease with indicator dye
						<Instruments>
1110.6 ± 36.32	511.9 ± 9.87	779.6 ± 21.73	669.4 ± 15.14	1155.9 ± 32.05	n = 9	Abbott Architect c System
1095.3 ± 40.70	514.1 ± 17.53	783.3 ± 25.76	670.4 ± 17.75	1141.9 ± 39.38	n = 25	Beckman Coulter AU Chemistry System
1152.3 ± 57.17	517.3 ± 14.58	794.8 ± 19.35	679.6 ± 18.08	1202.3 ± 36.34	n = 8	Beckman Coulter UniCel DxC 600
1145.4 ± 18.79	531.7 ± 24.54	818.4 ± 33.78	698.1 ± 36.33	1195.8 ± 44.61	n = 8	Beckman Coulter UniCel DxC 800
1185.5 ± 21.73	524.8 ± 10.61	796.7 ± 15.43	699.8 ± 29.17	1205.7 ± 15.40	n = 6	Ortho Vitros 5,1FS
1156.0 ± 32.64	517.1 ± 8.93	786.4 ± 14.26	680.6 ± 13.34	1179.1 ± 23.31	n = 13	Ortho Vitros 5600
1113.6 ± 19.23	513.4 ± 10.56	784.5 ± 21.63	675.1 ± 17.60	1155.2 ± 38.26	n = 11	Roche cobas c501
1102.9 ± 28.97	515.4 ± 17.39	780.8 ± 16.48	666.4 ± 12.26	1143.5 ± 28.69	n = 20	Roche MODULAR D/P
1171.0 ± 51.14	548.6 ± 19.31	833.7 ± 28.28	712.4 ± 28.11	1220.2 ± 47.38	n = 13	Siemens ADVIA 1800
1114.6 ± 84.50	524.0 ± 33.46	804.4 ± 42.38	686.2 ± 26.71	1180.8 ± 85.91	n = 3	Siemens ADVIA 2400
1220.8 ± 58.50	565.3 ± 21.83	848.0 ± 52.03	739.8 ± 27.72	1198.9 ± 130.95	n = 5	Siemens Dimension RxL
1111.1 ± 33.40	517.0 ± 16.18	782.3 ± 28.05	678.7 ± 23.09	1146.7 ± 39.87	n = 30	Siemens Dimension Vista
						<Reagents>
1110.6 ± 36.32	511.9 ± 9.87	779.6 ± 21.73	669.4 ± 15.14	1155.9 ± 32.05	n = 9	Abbott
1154.3 ± 46.55	524.7 ± 19.87	805.3 ± 25.85	689.0 ± 26.23	1202.8 ± 40.26	n = 19	Beckman Coulter
1094.5 ± 34.23	514.0 ± 14.75	782.8 ± 23.03	669.3 ± 14.68	1140.9 ± 33.75	n = 23	Beckman Coulter AU Series
1166.7 ± 32.14	519.5 ± 10.57	789.5 ± 15.17	683.6 ± 15.75	1188.1 ± 24.50	n = 19	Ortho Clinical Diagnostics
1105.1 ± 37.70	513.8 ± 9.33	782.7 ± 21.39	673.4 ± 17.76	1150.2 ± 47.21	n = 12	Roche cobas c501/c311/c502/c701
1102.9 ± 28.97	515.4 ± 17.39	780.8 ± 16.48	666.4 ± 12.26	1143.5 ± 28.69	n = 20	Roche Hitachi and Modular D/P
1158.7 ± 60.01	545.0 ± 22.86	830.3 ± 28.93	707.7 ± 28.32	1215.6 ± 49.62	n = 17	Siemens ADVIA/ADVIA Centaur
1122.3 ± 46.23	523.9 ± 23.66	791.1 ± 37.79	686.8 ± 30.01	1160.0 ± 56.43	n = 37	Siemens Dimension