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Endocrinology Proficiency Test Program

Statistical Summary – January 2016 (Event 16-1)

This statistical report summarizes participant data for the five Endocrinology proficiency survey specimens shipped 25 January 2016. Test specimens E36-E40 were prepared by the quantitative transfer of constituents to a pooled human serum base. This 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

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 Endocrinology Section at (518) 474-6706 or email: clinchem@wadsworth.org

Please note that results of 17-hydroxyprogesterone and dehydroepiandrosterone (DHEA) are graded beginning with this event.

Statistical Summary (Mean and Standard Deviation)

Thyroxin (T4, µg/dL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
1.73 ± 0.67	7.57 ± 0.98	9.67 ± 1.17	13.38 ± 1.70	14.37 ± 1.66	n = 112	All Methods & Instruments
1.70	7.40	9.60	13.29	14.30	n = 112	Median value, All Methods & Instruments
<Instruments>						
2.37 ± 0.36	6.28 ± 0.36	7.62 ± 0.39	11.02 ± 0.47	11.83 ± 0.46	n = 10	Abbott Architect i System
1.50 ± 0.18	7.25 ± 0.57	9.68 ± 0.86	13.15 ± 0.94	14.33 ± 1.27	n = 12	Beckman Coulter ACCESS
1.88 ± 0.24	7.20 ± 0.45	9.11 ± 0.52	12.79 ± 0.57	14.03 ± 1.76	n = 3	Beckman Coulter AU Chemistry System
1.40 ± 0.00	7.43 ± 0.38	10.17 ± 0.42	13.31 ± 0.84	14.65 ± 0.88	n = 6	Beckman Coulter UniCel DxI 600
1.21 ± 0.25	7.10 ± 0.54	9.36 ± 0.68	12.73 ± 0.60	14.39 ± 0.69	n = 8	Beckman Coulter UniCel DxI 800
1.67 ± 0.08	7.56 ± 0.33	10.01 ± 0.51	13.59 ± 0.67	15.48 ± 0.59	n = 8	Ortho Vitros 5600
2.10 ± 0.12	7.22 ± 0.11	9.19 ± 0.25	13.37 ± 0.28	14.12 ± 0.21	n = 7	Roche cobas e601
2.20 ± 0.00	7.42 ± 0.50	9.45 ± 0.36	13.66 ± 0.26	14.49 ± 0.44	n = 3	Roche MODULAR E
0.55 ± 0.42	7.40 ± 0.40	9.15 ± 0.60	12.05 ± 0.52	12.75 ± 0.63	n = 13	Siemens ADVIA Centaur
1.94 ± 0.52	8.81 ± 0.53	10.20 ± 0.40	14.70 ± 0.35	15.00 ± 0.39	n = 5	Siemens Dimension EXL
2.33 ± 0.71	9.23 ± 0.72	11.40 ± 0.70	16.29 ± 0.47	16.56 ± 0.80	n = 21	Siemens Dimension Vista
1.27 ± 0.14	7.13 ± 0.50	9.04 ± 0.73	12.53 ± 1.31	13.99 ± 0.81	n = 3	Siemens Immulite 1000
1.11 ± 0.29	7.07 ± 0.84	8.55 ± 0.89	12.42 ± 0.55	12.79 ± 0.57	n = 4	Siemens Immulite 2000
2.14 ± 0.19	7.54 ± 0.47	9.45 ± 0.19	13.38 ± 1.01	14.17 ± 0.83	n = 4	Tosoh Bioscience
1.73 ± 0.54	7.30 ± 0.19	9.44 ± 0.73	13.07 ± 0.95	14.21 ± 1.08	n = 14	Mean of Above Means
<Reagents>						
2.37 ± 0.36	6.28 ± 0.36	7.62 ± 0.39	11.02 ± 0.47	11.83 ± 0.46	n = 10	Abbott
1.38 ± 0.22	7.25 ± 0.53	9.68 ± 0.79	13.04 ± 0.84	14.40 ± 0.92	n = 26	Beckman Coulter
1.88 ± 0.24	7.20 ± 0.45	9.11 ± 0.52	12.79 ± 0.57	14.03 ± 1.76	n = 3	Microgenics DRI
1.68 ± 0.07	7.60 ± 0.32	10.08 ± 0.51	13.62 ± 0.62	15.50 ± 0.55	n = 9	Ortho Clinical Diagnostics
2.16 ± 0.11	7.24 ± 0.27	9.26 ± 0.28	13.42 ± 0.28	14.14 ± 0.24	n = 12	Roche Elecsys/Modular E/e601/e411
0.55 ± 0.42	7.40 ± 0.40	9.15 ± 0.60	12.05 ± 0.52	12.75 ± 0.63	n = 13	Siemens ADVIA/ADVIA Centaur
2.20 ± 0.62	9.06 ± 0.70	11.05 ± 0.85	15.91 ± 0.91	16.12 ± 1.11	n = 25	Siemens Dimension
1.19 ± 0.25	7.08 ± 0.68	8.77 ± 0.87	12.47 ± 0.90	13.27 ± 0.86	n = 7	Siemens Immulite
1.73 ± 0.59	7.28 ± 0.17	9.33 ± 0.91	12.87 ± 1.19	14.00 ± 1.38	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T4 (ng/dL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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0.37 ± 0.06	1.21 ± 0.14	1.50 ± 0.25	2.26 ± 0.37	2.54 ± 0.47	n = 136	All Methods & Instruments
0.38	1.20	1.48	2.26	2.59	n = 136	Median value, All Methods & Instruments
<Instruments>						
0.45 ± 0.04	1.11 ± 0.04	1.30 ± 0.03	1.92 ± 0.08	1.97 ± 0.10	n = 12	Abbott Architect i System
0.40 ± 0.00	1.20 ± 0.00	1.31 ± 0.07	1.97 ± 0.05	2.14 ± 0.09	n = 11	Beckman Coulter ACCESS
0.37 ± 0.06	1.10 ± 0.00	1.34 ± 0.07	2.07 ± 0.14	2.29 ± 0.10	n = 7	Beckman Coulter UniCel DxI 600
0.37 ± 0.07	1.13 ± 0.06	1.31 ± 0.07	2.07 ± 0.13	2.32 ± 0.13	n = 8	Beckman Coulter UniCel DxI 800
0.29 ± 0.04	1.42 ± 0.11	2.26 ± 0.12	4.28 ± 0.18	4.67 ± 0.10	n = 9	Ortho Vitros 5600
0.36 ± 0.03	1.41 ± 0.03	1.82 ± 0.14	3.45 ± 0.54	3.67 ± 0.58	n = 7	Roche cobas e601
0.39 ± 0.02	1.45 ± 0.05	1.82 ± 0.13	3.13 ± 0.41	3.40 ± 0.55	n = 3	Roche MODULAR E
0.34 ± 0.06	1.25 ± 0.06	1.61 ± 0.11	2.65 ± 0.20	2.84 ± 0.16	n = 16	Siemens ADVIA Centaur
0.37 ± 0.03	1.11 ± 0.06	1.44 ± 0.05	2.23 ± 0.05	2.58 ± 0.05	n = 11	Siemens Dimension EXL
0.39 ± 0.01	1.14 ± 0.04	1.46 ± 0.04	2.24 ± 0.05	2.56 ± 0.07	n = 29	Siemens Dimension Vista
0.28 ± 0.09	1.00 ± 0.09	1.11 ± 0.02	1.82 ± 0.15	1.93 ± 0.09	n = 3	Siemens Dimension Xpand
0.35 ± 0.04	1.31 ± 0.07	1.57 ± 0.06	2.37 ± 0.09	2.61 ± 0.10	n = 6	Siemens Immulite 2000
0.30 ± 0.01	1.43 ± 0.05	2.00 ± 0.01	3.49 ± 0.11	3.85 ± 0.15	n = 4	Tosoh Bioscience
0.36 ± 0.05	1.23 ± 0.16	1.53 ± 0.32	2.48 ± 0.72	2.72 ± 0.78	n = 13	Mean of Above Means
<Reagents>						
0.45 ± 0.04	1.11 ± 0.04	1.30 ± 0.03	1.92 ± 0.08	1.97 ± 0.10	n = 12	Abbott
0.38 ± 0.05	1.16 ± 0.06	1.32 ± 0.07	2.01 ± 0.10	2.23 ± 0.14	n = 26	Beckman Coulter
0.29 ± 0.03	1.41 ± 0.10	2.22 ± 0.14	4.23 ± 0.19	4.62 ± 0.16	n = 11	Ortho Clinical Diagnostics
0.36 ± 0.04	1.42 ± 0.04	1.80 ± 0.14	3.29 ± 0.50	3.51 ± 0.57	n = 13	Roche Elecsys/Modular E/e601/e411
0.34 ± 0.06	1.26 ± 0.06	1.61 ± 0.11	2.67 ± 0.20	2.85 ± 0.16	n = 17	Siemens ADVIA/ADVIA Centaur
0.31 ± 0.10	1.03 ± 0.13	1.21 ± 0.18	1.96 ± 0.27	2.09 ± 0.39	n = 6	Siemens Dimension
0.39 ± 0.02	1.14 ± 0.04	1.46 ± 0.05	2.24 ± 0.05	2.56 ± 0.07	n = 38	Siemens Dimension LOCI
0.35 ± 0.06	1.34 ± 0.07	1.63 ± 0.12	2.40 ± 0.11	2.64 ± 0.09	n = 8	Siemens Immulite
0.36 ± 0.05	1.23 ± 0.15	1.53 ± 0.30	2.43 ± 0.67	2.64 ± 0.72	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T3-Uptake (%)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
32.69 ± 5.15 32.00	36.69 ± 4.26 36.30	36.31 ± 4.42 36.30	39.47 ± 4.31 40.10	40.58 ± 4.47 41.00	n = 71 n = 71	All Methods & Instruments Median value, All Methods & Instruments
						<Instruments>
32.92 ± 1.21	31.87 ± 1.16	30.66 ± 1.26	32.62 ± 1.53	32.94 ± 1.72	n = 5	Abbott Architect i System
36.29 ± 2.36	40.37 ± 2.18	40.74 ± 1.93	41.41 ± 1.58	43.96 ± 1.92	n = 9	Beckman Coulter ACCESS
30.32 ± 3.07	34.48 ± 3.63	34.00 ± 2.70	37.00 ± 1.80	39.00 ± 1.80	n = 3	Beckman Coulter AU Chemistry System
36.59 ± 1.10	40.78 ± 1.01	41.26 ± 1.79	43.62 ± 0.96	44.20 ± 0.83	n = 3	Beckman Coulter UniCel DxI 600
36.89 ± 1.25	42.39 ± 2.03	41.16 ± 1.72	42.55 ± 2.05	45.04 ± 2.39	n = 7	Beckman Coulter UniCel DxI 800
46.75 ± 0.29	38.41 ± 1.20	36.34 ± 1.05	40.13 ± 1.20	41.33 ± 1.09	n = 5	Ortho Vitros 5600
26.01 ± 1.92	32.12 ± 2.24	31.57 ± 1.91	33.11 ± 1.27	34.90 ± 1.88	n = 7	Siemens ADVIA Centaur
31.76 ± 0.80	36.28 ± 1.61	37.00 ± 1.54	40.17 ± 1.07	41.15 ± 1.28	n = 5	Siemens Dimension EXL
31.56 ± 1.45	36.90 ± 2.13	36.56 ± 1.82	41.64 ± 2.07	41.88 ± 2.08	n = 15	Siemens Dimension Vista
27.36 ± 1.13	30.73 ± 1.53	29.53 ± 0.73	31.67 ± 1.12	32.75 ± 1.66	n = 4	Siemens Immulite 2000
32.90 ± 5.09	36.44 ± 4.23	35.94 ± 4.53	38.70 ± 4.60	40.05 ± 4.74	n = 10	Mean of Above Means
						<Reagents>
32.92 ± 1.21	31.87 ± 1.16	30.66 ± 1.26	32.62 ± 1.53	32.94 ± 1.72	n = 5	Abbott
36.77 ± 1.80	41.18 ± 2.17	40.98 ± 1.84	42.19 ± 1.88	44.35 ± 2.01	n = 19	Beckman Coulter
46.87 ± 0.46	38.60 ± 1.07	36.37 ± 0.85	40.12 ± 1.04	41.54 ± 1.04	n = 6	Ortho Clinical Diagnostics
31.02 ± 0.24	35.30 ± 0.18	36.53 ± 0.23	40.18 ± 0.24	40.63 ± 0.42	n = 3	Roche Elecsys/Modular E/e601/e411
26.01 ± 1.92	32.12 ± 2.24	31.57 ± 1.91	33.11 ± 1.27	34.90 ± 1.88	n = 7	Siemens ADVIA/ADVIA Centaur
31.60 ± 1.25	36.65 ± 1.87	36.67 ± 1.74	41.17 ± 2.01	41.62 ± 1.95	n = 20	Siemens Dimension
26.55 ± 1.52	30.70 ± 1.38	29.21 ± 0.80	31.61 ± 0.88	32.77 ± 1.43	n = 6	Siemens Immulite
31.97 ± 6.01	35.05 ± 3.90	34.54 ± 4.21	37.44 ± 4.79	38.50 ± 4.88	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T Uptake (Unit)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
1.114 ± 0.093 1.010	1.040 ± 0.034 1.020	1.028 ± 0.063 0.980	0.897 ± 0.109 0.830	0.920 ± 0.104 0.830	n = 5 n = 5	All Methods & Instruments Median value, All Methods & Instruments
1.177 ± 0.023	1.039 ± 0.044	0.986 ± 0.010	0.825 ± 0.019	0.846 ± 0.039	n = 3	<Instruments> Roche cobas e601
1.177 ± 0.023	1.039 ± 0.044	0.986 ± 0.010	0.825 ± 0.019	0.846 ± 0.039	n = 3	<Reagents> Roche Elecsys/Modular E/e601/e411

Statistical Summary (Mean and Standard Deviation)

Triiodothyronine (T3, ng/dL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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33.2 ± 7.41	125.3 ± 11.14	164.8 ± 17.78	214.0 ± 19.34	207.1 ± 28.09	n = 82	All Methods & Instruments
32.0	125.0	164.0	215.0	211.0	n = 82	Median value, All Methods & Instruments
<Instruments>						
38.4 ± 6.94	121.8 ± 6.32	160.7 ± 9.14	210.8 ± 17.56	200.8 ± 13.84	n = 11	Abbott Architect i System
36.5 ± 6.68	117.4 ± 6.32	145.3 ± 5.06	194.5 ± 7.85	174.2 ± 3.61	n = 7	Beckman Coulter ACCESS
37.6 ± 5.72	119.9 ± 7.83	148.8 ± 9.77	202.9 ± 20.83	176.1 ± 15.69	n = 7	Beckman Coulter UniCel DxI 600
30.4 ± 3.48	111.4 ± 7.49	138.8 ± 9.02	194.0 ± 12.06	169.7 ± 7.71	n = 7	Beckman Coulter UniCel DxI 800
108.2 ± 9.67	144.8 ± 5.97	181.9 ± 9.37	230.2 ± 10.16	218.9 ± 14.39	n = 6	Ortho Vitros 5600
33.7 ± 3.50	140.4 ± 5.71	179.7 ± 4.24	227.9 ± 6.49	224.0 ± 7.54	n = 4	Roche cobas e601
31.4 ± 1.02	140.0 ± 3.58	179.3 ± 1.37	227.0 ± 6.37	225.7 ± 7.74	n = 3	Roche MODULAR E
28.9 ± 4.30	126.3 ± 8.86	173.8 ± 13.97	223.8 ± 16.15	230.8 ± 8.45	n = 23	Siemens ADVIA Centaur
36.8 ± 8.59	124.1 ± 5.34	166.6 ± 16.56	200.5 ± 9.50	193.5 ± 15.61	n = 4	Siemens Immulite 2000
55.0 ± 4.51	123.6 ± 2.56	157.3 ± 2.26	203.0 ± 2.70	187.3 ± 6.76	n = 3	Tosoh Bioscience
34.4 ± 3.88	126.2 ± 11.14	163.7 ± 16.08	211.1 ± 15.26	200.0 ± 24.56	n = 10	Mean of Above Means
<Reagents>						
38.4 ± 6.94	121.8 ± 6.32	160.7 ± 9.14	210.8 ± 17.56	200.8 ± 13.84	n = 11	Abbott
34.5 ± 6.26	116.1 ± 8.06	144.4 ± 8.37	195.8 ± 13.29	173.2 ± 10.01	n = 21	Beckman Coulter
107.5 ± 8.92	143.0 ± 7.10	178.8 ± 11.61	228.4 ± 10.12	217.4 ± 13.46	n = 7	Ortho Clinical Diagnostics
32.1 ± 2.82	139.6 ± 4.95	179.8 ± 2.12	226.2 ± 7.08	224.7 ± 7.04	n = 8	Roche Elecsys/Modular E/e601/e411
28.5 ± 4.25	126.3 ± 8.31	174.4 ± 13.31	225.1 ± 15.86	232.3 ± 10.26	n = 25	Siemens ADVIA/ADVIA Centaur
40.0 ± 0.00	125.5 ± 5.91	168.6 ± 13.21	203.4 ± 8.70	201.1 ± 16.47	n = 6	Siemens Immulite
34.8 ± 4.55	128.2 ± 10.35	169.5 ± 12.26	215.5 ± 13.74	209.8 ± 20.15	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T3 (pg/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
0.98 ± 0.30	3.51 ± 0.39	4.39 ± 0.46	6.33 ± 0.66	6.04 ± 0.77	n = 71	All Methods & Instruments
1.00	3.50	4.40	6.36	6.11	n = 71	Median value, All Methods & Instruments
<Instruments>						
1.20 ± 0.23	3.38 ± 0.19	4.25 ± 0.26	5.99 ± 0.44	5.70 ± 0.42	n = 10	Abbott Architect i System
1.19 ± 0.19	3.38 ± 0.04	3.95 ± 0.16	5.82 ± 0.25	5.42 ± 0.22	n = 5	Beckman Coulter ACCESS
1.16 ± 0.29	3.19 ± 0.19	3.72 ± 0.21	6.07 ± 0.58	5.27 ± 0.49	n = 4	Beckman Coulter UniCel DxI 600
0.93 ± 0.57	3.12 ± 0.39	3.58 ± 0.18	5.20 ± 0.20	4.89 ± 0.31	n = 4	Beckman Coulter UniCel DxI 800
0.77 ± 0.16	4.31 ± 0.27	5.30 ± 0.25	8.20 ± 0.19	7.87 ± 0.38	n = 3	Ortho Vitros 5600
0.99 ± 0.13	3.67 ± 0.11	4.44 ± 0.09	6.33 ± 0.14	6.20 ± 0.16	n = 15	Siemens ADVIA Centaur
0.59 ± 0.09	3.22 ± 0.14	4.51 ± 0.14	6.56 ± 0.16	6.50 ± 0.16	n = 15	Siemens Dimension Vista
1.09 ± 0.11	3.90 ± 0.16	4.37 ± 0.45	5.92 ± 0.36	5.12 ± 0.38	n = 5	Siemens Immulite 2000
1.02 ± 0.21	3.47 ± 0.38	4.22 ± 0.50	6.02 ± 0.41	5.70 ± 0.82	n = 8	Mean of Above Means
<Reagents>						
1.20 ± 0.23	3.38 ± 0.19	4.25 ± 0.26	5.99 ± 0.44	5.70 ± 0.42	n = 10	Abbott
1.15 ± 0.31	3.27 ± 0.29	3.77 ± 0.25	5.68 ± 0.50	5.23 ± 0.42	n = 13	Beckman Coulter
0.82 ± 0.16	4.39 ± 0.27	5.36 ± 0.22	8.24 ± 0.17	7.96 ± 0.36	n = 4	Ortho Clinical Diagnostics
1.23 ± 0.09	4.28 ± 0.09	5.19 ± 0.06	7.87 ± 0.14	7.20 ± 0.16	n = 4	Roche Elecsys/Modular E/e601/e411
1.00 ± 0.13	3.67 ± 0.11	4.43 ± 0.10	6.31 ± 0.15	6.18 ± 0.17	n = 16	Siemens ADVIA/ADVIA Centaur
0.64 ± 0.10	3.22 ± 0.13	4.53 ± 0.05	6.71 ± 0.20	6.63 ± 0.10	n = 3	Siemens Dimension
0.58 ± 0.08	3.21 ± 0.14	4.49 ± 0.18	6.53 ± 0.13	6.46 ± 0.16	n = 12	Siemens Dimension LOCI
1.11 ± 0.11	3.88 ± 0.15	4.54 ± 0.60	6.09 ± 0.51	5.15 ± 0.29	n = 6	Siemens Immulite
0.99 ± 0.26	3.63 ± 0.48	4.55 ± 0.48	6.57 ± 0.87	6.27 ± 0.95	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Thyrotropin (TSH, $\mu\text{U/mL}$)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
6.87 $\pm$ 0.33	1.71 $\pm$ 0.12	10.09 $\pm$ 0.66	4.74 $\pm$ 0.27	7.67 $\pm$ 0.46	n = 165	All Methods & Instruments
6.90	1.71	10.10	4.77	7.68	n = 165	Median value, All Methods & Instruments
<Instruments>						
6.57 $\pm$ 0.41	1.50 $\pm$ 0.09	9.19 $\pm$ 0.51	4.27 $\pm$ 0.30	6.89 $\pm$ 0.37	n = 13	Abbott Architect i System
6.86 $\pm$ 0.53	1.67 $\pm$ 0.13	10.43 $\pm$ 0.61	4.76 $\pm$ 0.39	7.94 $\pm$ 0.46	n = 18	Beckman Coulter ACCESS
6.94 $\pm$ 0.17	1.71 $\pm$ 0.08	10.69 $\pm$ 0.40	4.82 $\pm$ 0.14	8.17 $\pm$ 0.31	n = 8	Beckman Coulter UniCel DxI 600
6.85 $\pm$ 0.34	1.67 $\pm$ 0.11	10.59 $\pm$ 0.60	4.80 $\pm$ 0.27	7.96 $\pm$ 0.45	n = 8	Beckman Coulter UniCel DxI 800
9.89 $\pm$ 0.21	1.79 $\pm$ 0.06	14.15 $\pm$ 0.26	6.17 $\pm$ 0.13	10.64 $\pm$ 0.25	n = 10	Ortho Vitros 5600
6.89 $\pm$ 0.12	1.80 $\pm$ 0.02	9.67 $\pm$ 0.08	4.79 $\pm$ 0.02	7.50 $\pm$ 0.07	n = 4	Roche cobas e411
6.94 $\pm$ 0.13	1.82 $\pm$ 0.04	9.49 $\pm$ 0.23	4.72 $\pm$ 0.13	7.35 $\pm$ 0.21	n = 9	Roche cobas e601
7.01 $\pm$ 0.09	1.84 $\pm$ 0.03	9.56 $\pm$ 0.19	4.77 $\pm$ 0.06	7.40 $\pm$ 0.15	n = 3	Roche MODULAR E
7.04 $\pm$ 0.25	1.64 $\pm$ 0.10	10.27 $\pm$ 0.57	4.76 $\pm$ 0.25	7.75 $\pm$ 0.39	n = 18	Siemens ADVIA Centaur
6.91 $\pm$ 0.17	1.83 $\pm$ 0.08	10.48 $\pm$ 0.34	4.84 $\pm$ 0.16	7.90 $\pm$ 0.28	n = 18	Siemens Dimension EXL
6.72 $\pm$ 0.18	1.71 $\pm$ 0.04	10.06 $\pm$ 0.25	4.70 $\pm$ 0.13	7.58 $\pm$ 0.19	n = 30	Siemens Dimension Vista
6.35 $\pm$ 0.46	1.42 $\pm$ 0.12	8.84 $\pm$ 0.62	4.36 $\pm$ 0.06	6.88 $\pm$ 0.05	n = 3	Siemens Dimension Xpand
7.02 $\pm$ 0.36	1.68 $\pm$ 0.04	9.87 $\pm$ 0.41	4.87 $\pm$ 0.09	7.80 $\pm$ 0.29	n = 4	Siemens Immulite 1000
7.06 $\pm$ 0.32	1.68 $\pm$ 0.11	9.96 $\pm$ 0.41	4.80 $\pm$ 0.25	7.76 $\pm$ 0.32	n = 9	Siemens Immulite 2000
6.94 $\pm$ 0.87	1.70 $\pm$ 0.08	10.31 $\pm$ 0.83	4.90 $\pm$ 0.39	7.82 $\pm$ 0.59	n = 4	Tosoh Bioscience
6.92 $\pm$ 0.13	1.71 $\pm$ 0.10	10.00 $\pm$ 0.55	4.79 $\pm$ 0.06	7.67 $\pm$ 0.36	n = 15	Mean of Above Means
<Reagents>						
6.57 $\pm$ 0.41	1.50 $\pm$ 0.09	9.19 $\pm$ 0.51	4.27 $\pm$ 0.30	6.89 $\pm$ 0.37	n = 13	Abbott
6.88 $\pm$ 0.42	1.68 $\pm$ 0.12	10.54 $\pm$ 0.55	4.78 $\pm$ 0.31	8.00 $\pm$ 0.44	n = 34	Beckman Coulter
9.90 $\pm$ 0.20	1.79 $\pm$ 0.05	14.14 $\pm$ 0.24	6.16 $\pm$ 0.12	10.66 $\pm$ 0.24	n = 11	Ortho Clinical Diagnostics
6.92 $\pm$ 0.15	1.81 $\pm$ 0.04	9.52 $\pm$ 0.24	4.74 $\pm$ 0.10	7.39 $\pm$ 0.18	n = 18	Roche Elecsys/Modular E/e601/e411
7.12 $\pm$ 0.27	1.66 $\pm$ 0.12	10.45 $\pm$ 0.62	4.83 $\pm$ 0.29	7.91 $\pm$ 0.40	n = 12	Siemens ADVIA/ADVIA Centaur
6.64 $\pm$ 0.29	1.55 $\pm$ 0.17	9.42 $\pm$ 0.80	4.49 $\pm$ 0.22	7.14 $\pm$ 0.40	n = 6	Siemens Dimension
6.79 $\pm$ 0.20	1.75 $\pm$ 0.08	10.20 $\pm$ 0.36	4.74 $\pm$ 0.15	7.69 $\pm$ 0.27	n = 46	Siemens Dimension LOCI
7.06 $\pm$ 0.33	1.68 $\pm$ 0.09	9.93 $\pm$ 0.40	4.83 $\pm$ 0.21	7.77 $\pm$ 0.31	n = 13	Siemens Immulite
6.97 $\pm$ 0.26	1.63 $\pm$ 0.07	10.11 $\pm$ 0.35	4.72 $\pm$ 0.23	7.56 $\pm$ 0.31	n = 7	Siemens TSH-3
6.88 $\pm$ 0.19	1.68 $\pm$ 0.10	9.93 $\pm$ 0.51	4.77 $\pm$ 0.05	7.57 $\pm$ 0.38	n = 9	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Vitamin B12 (pg/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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154.6 ± 72.30	578.8 ± 67.85	484.0 ± 54.33	610.3 ± 66.89	447.2 ± 46.70	n = 116	All Methods & Instruments
166.0	572.0	485.0	605.0	449.0	n = 116	Median value, All Methods & Instruments
						<Instruments>
313.1 ± 36.02	647.6 ± 48.63	504.7 ± 37.71	667.0 ± 55.28	473.2 ± 38.52	n = 10	Abbott Architect i System
85.1 ± 16.37	546.4 ± 26.19	450.0 ± 25.18	559.4 ± 28.95	410.6 ± 26.57	n = 12	Beckman Coulter ACCESS
57.7 ± 15.51	482.6 ± 43.61	393.1 ± 32.77	527.4 ± 47.48	369.0 ± 25.52	n = 8	Beckman Coulter UniCel DxI 600
56.6 ± 10.34	466.6 ± 22.85	387.0 ± 28.72	515.1 ± 20.97	375.0 ± 21.13	n = 9	Beckman Coulter UniCel DxI 800
190.3 ± 14.09	595.6 ± 28.89	493.5 ± 16.47	628.9 ± 40.93	462.7 ± 21.75	n = 9	Ortho Vitros 5600
208.7 ± 11.81	611.9 ± 21.66	510.0 ± 20.53	646.8 ± 25.69	471.3 ± 12.39	n = 7	Roche cobas e601
152.3 ± 20.94	575.3 ± 40.79	485.4 ± 35.21	605.7 ± 36.81	441.2 ± 30.29	n = 24	Siemens ADVIA Centaur
196.0 ± 12.93	555.3 ± 12.69	485.1 ± 15.03	594.6 ± 16.24	446.8 ± 14.04	n = 18	Siemens Dimension Vista
162.7 ± 4.44	704.4 ± 39.97	550.6 ± 22.44	747.4 ± 18.48	496.5 ± 13.17	n = 6	Siemens Immulite 2000
83.5 ± 24.92	667.8 ± 47.41	600.1 ± 42.14	704.0 ± 51.07	571.8 ± 44.05	n = 5	Tosoh Bioscience
145.3 ± 79.22	586.3 ± 77.04	486.5 ± 62.82	618.3 ± 75.20	448.9 ± 55.71	n = 10	Mean of Above Means
						<Reagents>
313.1 ± 36.02	647.6 ± 48.63	504.7 ± 37.71	667.0 ± 55.28	473.2 ± 38.52	n = 10	Abbott
66.2 ± 21.25	504.5 ± 50.96	414.7 ± 43.36	536.1 ± 41.79	388.7 ± 31.72	n = 29	Beckman Coulter
192.1 ± 13.97	600.8 ± 31.47	494.4 ± 15.78	632.0 ± 39.69	465.2 ± 21.68	n = 10	Ortho Clinical Diagnostics
212.0 ± 10.91	618.2 ± 22.82	513.1 ± 20.74	650.8 ± 27.24	476.1 ± 13.03	n = 12	Roche Elecsys/Modular E/e601/e411
150.2 ± 21.27	576.0 ± 38.57	488.1 ± 34.59	607.2 ± 36.36	443.8 ± 30.33	n = 26	Siemens ADVIA/ADVIA Centaur
195.3 ± 13.24	554.0 ± 11.52	483.8 ± 14.57	594.9 ± 16.91	446.1 ± 14.31	n = 17	Siemens Dimension LOCI
162.7 ± 4.44	704.4 ± 39.97	550.6 ± 22.44	747.4 ± 18.48	496.5 ± 13.17	n = 6	Siemens Immulite
83.5 ± 24.92	667.8 ± 47.41	600.1 ± 42.14	704.0 ± 51.07	571.8 ± 44.05	n = 5	Tosoh AIA
168.8 ± 72.94	610.2 ± 63.88	505.0 ± 48.58	642.1 ± 63.93	466.0 ± 44.30	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Folic Acid (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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9.22 ± 2.75	16.87 ± 4.38	3.00 ± 0.81	21.28 ± 4.06	6.41 ± 1.53	n = 116	All Methods & Instruments
9.50	17.20	3.10	20.00	6.68	n = 116	Median value, All Methods & Instruments
						<Instruments>
10.68 ± 1.08	18.44 ± 1.25	3.03 ± 0.30	23.65 ± 4.32	7.03 ± 0.51	n = 10	Abbott Architect i System
9.52 ± 0.41	17.50 ± 0.87	3.37 ± 0.19	24.44 ± 0.28	7.32 ± 0.29	n = 12	Beckman Coulter ACCESS
9.78 ± 1.07	17.25 ± 1.72	3.21 ± 0.23	24.97 ± 3.37	7.05 ± 0.49	n = 7	Beckman Coulter UniCel DxI 600
9.47 ± 0.49	17.26 ± 0.70	3.08 ± 0.19	23.71 ± 1.59	6.65 ± 0.43	n = 9	Beckman Coulter UniCel DxI 800
7.86 ± 0.62	16.82 ± 1.06	2.56 ± 0.36	20.00 ± 0.00	5.79 ± 0.29	n = 9	Ortho Vitros 5600
9.68 ± 0.40	16.31 ± 0.42	4.42 ± 0.18	20.03 ± 0.98	6.97 ± 0.20	n = 7	Roche cobas e601
12.69 ± 1.49	21.10 ± 2.10	3.11 ± 0.35	24.00 ± 0.00	7.04 ± 0.81	n = 21	Siemens ADVIA Centaur
5.25 ± 0.31	9.18 ± 0.45	1.78 ± 0.10	15.20 ± 0.91	3.33 ± 0.18	n = 23	Siemens Dimension Vista
9.69 ± 1.46	20.77 ± 2.83	3.22 ± 0.18	24.00 ± 0.00	6.75 ± 0.84	n = 6	Siemens Immulite 2000
7.04 ± 0.39	13.76 ± 0.88	3.51 ± 0.63	18.45 ± 1.67	5.68 ± 0.48	n = 5	Tosoh Bioscience
9.27 ± 1.88	17.35 ± 2.78	3.15 ± 0.54	22.27 ± 3.09	6.79 ± 0.54	n = 10	Mean of Above Means
						<Reagents>
10.68 ± 1.08	18.44 ± 1.25	3.03 ± 0.30	23.65 ± 4.32	7.03 ± 0.51	n = 10	Abbott
9.54 ± 0.61	17.35 ± 1.03	3.24 ± 0.24	24.27 ± 0.76	7.08 ± 0.50	n = 28	Beckman Coulter
7.85 ± 0.58	16.76 ± 0.93	2.56 ± 0.34	20.00 ± 0.00	5.82 ± 0.28	n = 10	Ortho Clinical Diagnostics
9.80 ± 0.62	16.34 ± 0.50	4.42 ± 0.17	20.00 ± 0.00	7.01 ± 0.35	n = 11	Roche Elecsys/Modular E/e601/e411
12.88 ± 1.55	21.38 ± 2.20	3.16 ± 0.40	24.00 ± 0.00	7.16 ± 0.92	n = 23	Siemens ADVIA/ADVIA Centaur
5.29 ± 0.30	9.23 ± 0.45	1.79 ± 0.10	15.26 ± 0.95	3.34 ± 0.18	n = 21	Siemens Dimension LOCI
9.69 ± 1.46	20.77 ± 2.83	3.22 ± 0.18	24.00 ± 0.00	6.75 ± 0.84	n = 6	Siemens Immulite
7.04 ± 0.39	13.76 ± 0.88	3.51 ± 0.63	18.45 ± 1.67	5.68 ± 0.48	n = 5	Tosoh AIA
9.13 ± 2.25	17.16 ± 3.56	3.13 ± 0.67	21.48 ± 3.26	6.70 ± 0.66	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Cortisol (µg/dL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
3.28 ± 0.47	7.22 ± 0.82	30.59 ± 3.24	16.80 ± 2.16	10.63 ± 1.24	n = 72	All Methods & Instruments
3.30	7.20	30.60	16.60	10.51	n = 72	Median value, All Methods & Instruments
						<Instruments>
3.69 ± 0.31	6.84 ± 0.28	26.81 ± 0.73	15.31 ± 0.39	9.66 ± 0.25	n = 8	Abbott Architect i System
3.20 ± 0.31	7.05 ± 0.43	30.98 ± 1.75	15.94 ± 1.17	10.27 ± 0.58	n = 6	Beckman Coulter ACCESS
3.30 ± 0.25	6.62 ± 0.23	29.36 ± 1.02	15.37 ± 0.72	9.48 ± 0.23	n = 7	Beckman Coulter UniCel DxI 600
3.28 ± 0.31	6.48 ± 0.52	28.66 ± 1.77	15.43 ± 1.03	9.30 ± 0.76	n = 6	Beckman Coulter UniCel DxI 800
2.26 ± 0.14	5.85 ± 0.24	26.40 ± 1.04	14.09 ± 0.47	9.51 ± 0.46	n = 6	Ortho Vitros 5600
3.45 ± 0.22	7.86 ± 0.53	32.84 ± 2.55	18.86 ± 1.12	11.68 ± 0.84	n = 21	Siemens ADVIA Centaur
2.99 ± 0.19	7.41 ± 0.46	30.03 ± 2.05	15.87 ± 1.41	11.12 ± 0.94	n = 5	Siemens Immulite 2000
3.26 ± 0.34	6.87 ± 0.63	29.26 ± 2.24	15.47 ± 0.52	10.05 ± 0.90	n = 7	Mean of Above Means
						<Reagents>
3.69 ± 0.31	6.84 ± 0.28	26.81 ± 0.73	15.31 ± 0.39	9.66 ± 0.25	n = 8	Abbott
3.26 ± 0.30	6.70 ± 0.46	29.58 ± 1.71	15.56 ± 1.01	9.67 ± 0.67	n = 19	Beckman Coulter
2.26 ± 0.14	5.85 ± 0.24	26.40 ± 1.04	14.09 ± 0.47	9.51 ± 0.46	n = 6	Ortho Clinical Diagnostics
2.64 ± 0.22	7.55 ± 0.44	33.13 ± 1.21	17.89 ± 0.72	11.35 ± 0.41	n = 6	Roche Elecsys/Modular E/e601/e411
3.45 ± 0.22	7.88 ± 0.53	32.80 ± 2.44	18.81 ± 1.03	11.63 ± 0.82	n = 23	Siemens ADVIA/ADVIA Centaur
3.35 ± 0.60	7.66 ± 0.54	31.39 ± 3.17	16.49 ± 1.81	11.41 ± 1.17	n = 7	Siemens Immulite
3.16 ± 0.53	7.14 ± 0.73	30.11 ± 2.96	16.31 ± 1.72	10.54 ± 1.06	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Insulin (µU/mL)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
291.21 ± 42.17	46.42 ± 9.12	225.14 ± 55.34	125.31 ± 34.78	371.02 ± 90.75	n = 37	All Methods & Instruments
281.00	42.10	210.00	114.00	359.00	n = 37	Median value, All Methods & Instruments
<Instruments>						
280.15 ± 6.69	42.14 ± 1.05	208.27 ± 3.02	114.74 ± 0.76	378.94 ± 43.16	n = 4	Abbott Architect i System
278.88 ± 14.13	41.48 ± 2.75	211.06 ± 14.91	110.03 ± 6.51	305.32 ± 9.73	n = 3	Beckman Coulter ACCESS
276.88 ± 11.10	41.62 ± 2.04	186.55 ± 26.58	109.79 ± 5.77	331.81 ± 35.34	n = 3	Beckman Coulter UniCel DxI 600
270.82 ± 7.30	40.14 ± 1.70	203.94 ± 10.58	104.45 ± 0.53	328.64 ± 35.06	n = 5	Beckman Coulter UniCel DxI 800
394.61 ± 63.69	60.29 ± 3.35	322.68 ± 29.43	189.39 ± 8.56	502.53 ± 125.26	n = 7	Siemens ADVIA Centaur
266.49 ± 14.46	39.97 ± 1.69	173.22 ± 4.19	95.12 ± 1.99	311.70 ± 21.99	n = 5	Siemens Immulite 2000
274.97 ± 5.67	41.10 ± 0.96	197.85 ± 15.65	107.56 ± 6.87	327.02 ± 25.08	n = 6	Mean of Above Means
<Reagents>						
280.15 ± 6.69	42.14 ± 1.05	208.27 ± 3.02	114.74 ± 0.76	378.94 ± 43.16	n = 4	Abbott
274.06 ± 10.96	40.79 ± 2.12	204.23 ± 13.16	107.59 ± 5.19	320.73 ± 30.83	n = 11	Beckman Coulter
324.32 ± 8.44	51.24 ± 1.81	244.91 ± 8.84	134.41 ± 3.04	426.39 ± 9.33	n = 3	Roche Elecsys/Modular E/e601/e411
400.93 ± 58.44	60.69 ± 3.21	325.58 ± 28.30	189.30 ± 7.84	511.38 ± 111.55	n = 8	Siemens ADVIA/ADVIA Centaur
256.85 ± 19.67	40.26 ± 1.48	177.59 ± 4.66	97.57 ± 4.18	317.39 ± 25.34	n = 4	Siemens Immulite-Insulin lot# > 400
299.20 ± 51.69	46.04 ± 8.26	224.07 ± 50.60	122.57 ± 30.98	385.00 ± 77.01	n = 5	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free Estriol (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
1.01 ± 0.57	0.07 ± 0.05	2.40 ± 2.00	0.13 ± 0.14	1.94 ± 1.43	n = 3	All Methods & Instruments
0.60	0.00	0.80	0.00	0.80	n = 3	Median value, All Methods & Instruments
						<Instruments>
0.6	< 0.1	1.8	< 0.1	1.5	n = 1	Beckman Coulter UniCel DxI 800
1.8	< 0.1	5.1	< 0.0	3.8	n = 1	LC/MS/MS

Statistical Summary (Mean and Standard Deviation)

Estradiol (pg/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
26.2 ± 8.85	71.6 ± 12.75	118.7 ± 15.96	34.0 ± 8.59	143.1 ± 15.81	n = 79	All Methods & Instruments
26.0	71.0	116.0	34.0	143.0	n = 79	Median value, All Methods & Instruments
						<Instruments>
37.2 ± 3.48	81.5 ± 1.86	110.8 ± 3.96	45.7 ± 3.90	131.2 ± 6.48	n = 6	Abbott Architect i System
18.1 ± 9.09	66.8 ± 9.82	120.4 ± 15.64	30.0 ± 11.64	148.1 ± 17.02	n = 6	Beckman Coulter ACCESS
29.9 ± 10.97	83.8 ± 8.77	125.1 ± 6.08	39.7 ± 5.97	157.7 ± 29.39	n = 3	Beckman Coulter UniCel DxI 600
29.2 ± 9.55	65.7 ± 9.53	114.6 ± 17.63	29.4 ± 6.32	149.4 ± 15.16	n = 5	Beckman Coulter UniCel DxI 800
34.7 ± 1.37	73.8 ± 2.36	109.8 ± 3.23	36.4 ± 1.02	132.2 ± 4.11	n = 3	Roche cobas e411
34.4 ± 3.21	73.8 ± 2.11	107.9 ± 2.72	35.3 ± 3.62	132.4 ± 3.79	n = 4	Roche cobas e601
24.7 ± 3.84	80.4 ± 4.12	116.2 ± 4.44	39.1 ± 3.77	142.7 ± 6.89	n = 18	Siemens ADVIA Centaur
18.8 ± 5.56	64.1 ± 4.37	119.6 ± 5.59	31.7 ± 3.99	150.2 ± 11.18	n = 7	Siemens Dimension Vista
25.7 ± 6.93	59.7 ± 8.24	146.0 ± 9.84	27.2 ± 5.30	154.1 ± 8.90	n = 11	Siemens Immulite 2000
89.2 ± 5.10	77.2 ± 21.49	278.1 ± 12.98	31.0 ± 7.48	272.0 ± 14.29	n = 3	Tosoh Bioscience
28.3 ± 6.96	72.8 ± 8.51	115.7 ± 6.62	34.1 ± 5.65	144.6 ± 10.45	n = 10	Mean of Above Means
						<Reagents>
37.2 ± 3.48	81.5 ± 1.86	110.8 ± 3.96	45.7 ± 3.90	131.2 ± 6.48	n = 6	Abbott
24.5 ± 11.04	70.1 ± 12.20	119.8 ± 15.36	31.9 ± 9.71	149.0 ± 18.82	n = 14	Beckman Coulter
11.9 ± 10.57	55.6 ± 39.09	85.4 ± 57.77	24.5 ± 17.06	93.9 ± 63.29	n = 3	In-House
13.8 ± 1.54	39.7 ± 2.26	97.6 ± 2.56	19.3 ± 1.37	113.3 ± 1.37	n = 3	Ortho Clinical Diagnostics
33.0 ± 3.26	72.5 ± 3.17	107.3 ± 3.10	34.5 ± 3.28	130.1 ± 4.87	n = 10	Roche Elecsys/Modular E/e601/e411
25.2 ± 3.45	82.6 ± 5.79	116.3 ± 4.07	40.4 ± 4.59	144.4 ± 10.21	n = 12	Siemens ADVIA Centaur Enhanced Estr
24.2 ± 4.66	78.5 ± 3.40	115.7 ± 5.41	38.3 ± 3.20	142.1 ± 4.06	n = 7	Siemens ADVIA/ADVIA Centaur
19.9 ± 5.44	65.3 ± 2.78	121.0 ± 4.77	32.5 ± 2.93	152.7 ± 9.99	n = 6	Siemens Dimension LOCI
27.1 ± 7.14	60.9 ± 7.88	148.3 ± 10.41	28.1 ± 5.44	157.4 ± 12.49	n = 13	Siemens Immulite
24.1 ± 8.07	68.9 ± 12.96	112.7 ± 15.16	32.9 ± 8.05	137.7 ± 18.77	n = 9	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Testosterone (ng/dL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
123.8 ± 39.50	374.7 ± 66.79	85.2 ± 22.00	559.3 ± 94.32	171.1 ± 32.18	n = 67	All Methods & Instruments
124.0	357.4	84.0	535.0	164.0	n = 67	Median value, All Methods & Instruments
<Instruments>						
175.8 ± 1.59	398.6 ± 17.48	89.9 ± 0.76	639.5 ± 33.07	211.1 ± 10.77	n = 5	Abbott Architect i System
120.1 ± 7.48	337.7 ± 17.16	82.9 ± 3.10	511.5 ± 19.41	163.2 ± 8.17	n = 9	Beckman Coulter ACCESS
117.6 ± 12.88	320.9 ± 20.00	80.5 ± 3.39	453.6 ± 25.71	152.7 ± 4.51	n = 7	Beckman Coulter UniCel DxI 600
112.5 ± 12.82	302.8 ± 16.37	74.3 ± 5.89	451.8 ± 24.12	149.3 ± 14.76	n = 6	Beckman Coulter UniCel DxI 800
142.8 ± 6.01	412.3 ± 3.57	88.9 ± 4.91	636.8 ± 7.30	212.9 ± 3.57	n = 4	Roche cobas e601
153.9 ± 10.62	466.0 ± 65.30	107.9 ± 15.30	649.0 ± 93.32	186.0 ± 18.88	n = 16	Siemens ADVIA Centaur
66.6 ± 16.71	361.6 ± 37.26	83.7 ± 36.47	518.5 ± 32.12	161.6 ± 34.39	n = 8	Siemens Immulite 2000
83.4 ± 8.71	340.8 ± 18.24	56.9 ± 4.55	567.7 ± 44.70	126.0 ± 4.09	n = 5	Tosoh Bioscience
121.9 ± 35.53	362.9 ± 52.57	83.4 ± 12.75	553.7 ± 84.93	169.2 ± 30.68	n = 8	Mean of Above Means
<Reagents>						
175.8 ± 1.59	398.6 ± 17.48	89.9 ± 0.76	639.5 ± 33.07	211.1 ± 10.77	n = 5	Abbott
117.4 ± 11.00	322.2 ± 23.23	80.1 ± 4.56	480.2 ± 43.81	156.5 ± 10.24	n = 22	Beckman Coulter
139.5 ± 6.85	408.2 ± 10.46	85.8 ± 1.80	621.0 ± 26.87	207.0 ± 9.59	n = 6	Roche Elecsys/Modular E/e601/e411
153.9 ± 10.62	466.0 ± 65.30	107.9 ± 15.30	649.0 ± 93.32	186.0 ± 18.88	n = 16	Siemens ADVIA/ADVIA Centaur
65.2 ± 11.54	376.1 ± 54.05	74.6 ± 28.66	525.4 ± 49.57	152.5 ± 19.87	n = 8	Siemens Immulite
82.5 ± 9.53	337.0 ± 22.59	58.4 ± 4.66	566.0 ± 30.68	123.9 ± 4.08	n = 3	Tosoh ST AIA
123.4 ± 42.35	382.7 ± 50.33	82.6 ± 15.39	583.7 ± 67.69	173.5 ± 34.21	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Progesterone (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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8.46 ± 2.04	4.06 ± 0.49	6.57 ± 0.81	11.96 ± 1.80	17.48 ± 2.76	n = 77	All Methods & Instruments
8.50	4.00	6.51	11.90	18.00	n = 77	Median value, All Methods & Instruments
<Instruments>						
16.60 ± 0.74	4.66 ± 0.11	7.40 ± 0.13	13.46 ± 0.23	18.84 ± 0.49	n = 5	Abbott Architect i System
8.23 ± 0.23	4.51 ± 0.14	6.98 ± 0.27	12.74 ± 0.46	16.65 ± 1.17	n = 6	Beckman Coulter ACCESS
8.90 ± 0.82	5.14 ± 0.65	7.30 ± 0.90	15.09 ± 1.47	19.29 ± 1.99	n = 3	Beckman Coulter UniCel DxI 600
8.72 ± 0.39	4.72 ± 0.27	7.50 ± 0.35	13.75 ± 1.09	17.79 ± 0.92	n = 5	Beckman Coulter UniCel DxI 800
11.86 ± 0.28	4.17 ± 0.15	6.97 ± 0.25	13.75 ± 0.53	20.43 ± 0.57	n = 4	Roche cobas e411
11.03 ± 0.48	3.92 ± 0.14	6.49 ± 0.11	13.47 ± 0.25	19.40 ± 0.96	n = 3	Roche cobas e601
8.65 ± 0.66	3.99 ± 0.32	6.58 ± 0.51	11.23 ± 0.85	18.99 ± 0.92	n = 19	Siemens ADVIA Centaur
8.87 ± 0.23	3.59 ± 0.05	6.03 ± 0.14	11.31 ± 0.40	16.16 ± 0.35	n = 4	Siemens Dimension Vista
7.51 ± 0.37	4.18 ± 0.24	6.28 ± 0.15	10.60 ± 1.00	15.25 ± 0.36	n = 3	Siemens Immulite 1000
6.31 ± 0.34	3.70 ± 0.12	5.53 ± 0.40	9.83 ± 0.54	13.14 ± 0.41	n = 11	Siemens Immulite 2000
6.83 ± 1.12	3.63 ± 0.57	6.02 ± 0.86	12.35 ± 1.04	18.06 ± 1.71	n = 3	Tosoh Bioscience
8.65 ± 1.83	4.17 ± 0.51	6.66 ± 0.66	12.55 ± 1.62	17.87 ± 2.04	n = 11	Mean of Above Means
<Reagents>						
16.60 ± 0.74	4.66 ± 0.11	7.40 ± 0.13	13.46 ± 0.23	18.84 ± 0.49	n = 5	Abbott
8.46 ± 0.48	4.65 ± 0.35	7.22 ± 0.51	13.46 ± 1.24	17.56 ± 1.55	n = 14	Beckman Coulter
5.04 ± 0.10	3.40 ± 0.09	5.43 ± 0.14	9.68 ± 0.24	12.45 ± 0.19	n = 3	Ortho Clinical Diagnostics
11.33 ± 0.55	4.01 ± 0.17	6.67 ± 0.27	13.61 ± 0.36	19.76 ± 0.85	n = 10	Roche Elecsys/Modular E/e601/e411
8.67 ± 0.63	3.99 ± 0.30	6.56 ± 0.49	11.24 ± 0.82	19.01 ± 0.86	n = 20	Siemens ADVIA/ADVIA Centaur
8.87 ± 0.23	3.59 ± 0.05	6.03 ± 0.14	11.31 ± 0.40	16.16 ± 0.35	n = 4	Siemens Dimension LOCI
6.49 ± 0.58	3.76 ± 0.19	5.69 ± 0.49	9.90 ± 0.55	13.40 ± 1.05	n = 14	Siemens Immulite Progesterone (LKPW
8.77 ± 3.17	3.99 ± 0.49	6.43 ± 0.76	11.82 ± 1.76	16.95 ± 2.86	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

17-hydroxyprogesterone (ng/dL)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
41.85 ± 6.08 37.00	104.75 ± 10.51 90.00	95.22 ± 27.42 70.00	68.98 ± 29.97 47.00	79.98 ± 29.89 56.00	n = 3 n = 3	All Methods & Instruments Median value, All Methods & Instruments
50.0 < 40.0 37.0	110.0 90.0 111.0	130.0 70.0 90.0	110.0 47.0 58.0	120.0 56.0 71.0	n = 1 n = 1 n = 1	<Instruments> Gold Standard Diagnostics, Thunderbolt LC-MS/MS LC-MS/MS

Dehydroepiandrosterone (DHEA, ng/dL)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
67.6 ± 26.74 62.0	214.1 ± 76.12 170.0	378.4 ± 67.05 350.0	202.4 ± 43.57 166.0	562.2 ± 105.25 510.0	n = 7 n = 7	All Methods & Instruments Median value, All Methods & Instruments
68.6 ± 33.85	201.2 ± 89.92	352.8 ± 28.04	183.2 ± 38.21	517.4 ± 32.12	n = 5	<Instruments> LC/MS/MS
68.6 ± 33.85	201.2 ± 89.92	352.8 ± 28.04	183.2 ± 38.21	517.4 ± 32.12	n = 5	<Reagents> In-House

Statistical Summary (Mean and Standard Deviation)

Dehydroepiandrosterone sulfate (DHEA-S, µg/dL)

Specimen: E36 -----	Specimen: E37 -----	Specimen: E38 -----	Specimen: E39 -----	Specimen: E40 -----	Number -----	Instrument or Reagent System -----
42.78 ± 7.97 42.80	216.70 ± 22.16 219.80	120.26 ± 14.50 121.40	222.35 ± 29.32 226.00	116.72 ± 14.90 116.10	n = 36 n = 36	All Methods & Instruments Median value, All Methods & Instruments
<Instruments>						
44.60 ± 2.38	217.67 ± 8.27	129.17 ± 6.52	239.44 ± 9.35	128.63 ± 1.41	n = 5	Abbott Architect i System
47.89 ± 1.83	228.69 ± 11.15	130.80 ± 8.41	248.52 ± 15.91	121.00 ± 6.00	n = 4	Beckman Coulter ACCESS
49.47 ± 3.45	235.80 ± 5.89	123.09 ± 2.16	250.62 ± 13.21	124.90 ± 13.26	n = 3	Beckman Coulter UniCel DxI 800
33.74 ± 3.68	175.50 ± 6.37	102.34 ± 4.30	189.91 ± 6.10	97.25 ± 6.08	n = 4	Siemens ADVIA Centaur
37.43 ± 4.91	207.77 ± 16.24	114.35 ± 9.25	202.50 ± 10.29	108.36 ± 6.82	n = 12	Siemens Immulite 2000
42.92 ± 6.71	215.86 ± 21.23	120.92 ± 11.17	227.77 ± 27.87	116.99 ± 12.49	n = 5	Mean of Above Means
<Reagents>						
44.60 ± 2.38	217.67 ± 8.27	129.17 ± 6.52	239.44 ± 9.35	128.63 ± 1.41	n = 5	Abbott
48.42 ± 3.07	229.58 ± 10.12	126.36 ± 9.38	244.73 ± 15.27	120.71 ± 9.43	n = 9	Beckman Coulter
55.41 ± 3.05	238.72 ± 9.03	140.08 ± 7.22	254.60 ± 9.81	141.85 ± 6.10	n = 3	Roche Elecsys/Modular E/e601/e411
32.36 ± 3.87	174.32 ± 8.06	102.31 ± 5.20	189.11 ± 7.21	95.09 ± 5.87	n = 3	Siemens ADVIA/ADVIA Centaur
37.28 ± 4.11	207.77 ± 17.36	112.74 ± 9.01	199.78 ± 10.39	108.41 ± 7.35	n = 15	Siemens Immulite
43.59 ± 8.84	216.26 ± 22.63	122.56 ± 14.29	226.91 ± 29.01	119.14 ± 17.42	n = 5	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Lutropin (LH, mIU/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
5.77 ± 1.16	11.52 ± 1.69	196.65 ± 17.16	5.50 ± 0.73	163.10 ± 20.02	n = 90	All Methods & Instruments
5.50	11.20	200.00	5.40	161.60	n = 90	Median value, All Methods & Instruments
<Instruments>						
5.16 ± 0.25	10.12 ± 0.36	165.70 ± 8.95	4.79 ± 0.21	128.25 ± 8.17	n = 7	Abbott Architect i System
4.79 ± 0.32	10.27 ± 0.52	200.46 ± 13.24	5.23 ± 0.26	151.27 ± 6.84	n = 6	Beckman Coulter ACCESS
4.50 ± 0.58	9.40 ± 0.74	184.10 ± 7.44	4.85 ± 0.39	145.47 ± 11.44	n = 5	Beckman Coulter UniCel DxI 600
4.57 ± 0.25	9.91 ± 0.40	190.23 ± 3.23	5.03 ± 0.29	144.92 ± 4.42	n = 6	Beckman Coulter UniCel DxI 800
5.93 ± 0.08	12.70 ± 0.20	200.00 ± 0.00	5.36 ± 0.25	200.00 ± 0.00	n = 5	Ortho Vitros 5600
7.09 ± 0.11	13.18 ± 0.27	200.00 ± 0.00	7.12 ± 0.21	161.67 ± 5.39	n = 4	Roche cobas e411
7.05 ± 0.16	13.05 ± 0.22	200.00 ± 0.00	6.88 ± 0.18	161.75 ± 0.66	n = 5	Roche cobas e601
5.07 ± 0.30	10.61 ± 0.59	208.01 ± 16.28	5.18 ± 0.25	170.76 ± 10.90	n = 19	Siemens ADVIA Centaur
6.80 ± 0.22	13.51 ± 0.21	150.00 ± 0.00	5.93 ± 0.11	150.00 ± 0.00	n = 7	Siemens Dimension Vista
6.39 ± 0.92	12.01 ± 1.70	149.13 ± 92.98	5.54 ± 0.82	179.31 ± 20.39	n = 3	Siemens Immulite 1000
7.45 ± 0.50	13.13 ± 0.62	200.00 ± 0.00	5.92 ± 0.39	181.79 ± 11.61	n = 11	Siemens Immulite 2000
5.74 ± 0.36	11.16 ± 0.56	212.78 ± 15.54	5.37 ± 0.41	166.58 ± 12.00	n = 5	Tosoh Bioscience
5.86 ± 1.12	11.60 ± 1.60	191.55 ± 20.78	5.48 ± 0.67	161.14 ± 19.02	n = 12	Mean of Above Means
<Reagents>						
5.16 ± 0.25	10.12 ± 0.36	165.70 ± 8.95	4.79 ± 0.21	128.25 ± 8.17	n = 7	Abbott
4.64 ± 0.39	9.92 ± 0.62	190.54 ± 9.35	5.06 ± 0.32	147.58 ± 7.54	n = 17	Beckman Coulter
5.90 ± 0.09	12.72 ± 0.19	200.00 ± 0.00	5.33 ± 0.24	200.00 ± 0.00	n = 6	Ortho Clinical Diagnostics
7.08 ± 0.17	13.14 ± 0.27	200.00 ± 0.00	7.02 ± 0.21	162.86 ± 4.16	n = 11	Roche Elecsys/Modular E/e601/e411
5.06 ± 0.29	10.66 ± 0.61	207.38 ± 15.86	5.20 ± 0.28	170.24 ± 10.78	n = 20	Siemens ADVIA/ADVIA Centaur
6.83 ± 0.26	13.71 ± 0.53	150.00 ± 0.00	5.91 ± 0.13	150.00 ± 0.00	n = 5	Siemens Dimension LOCI
7.31 ± 0.60	13.10 ± 0.66	200.00 ± 0.01	5.90 ± 0.44	182.05 ± 13.15	n = 14	Siemens Immulite
5.67 ± 0.32	10.98 ± 0.49	208.68 ± 15.87	5.30 ± 0.36	167.08 ± 12.03	n = 3	Tosoh AIA
5.94 ± 1.04	11.80 ± 1.60	194.05 ± 18.92	5.44 ± 0.58	163.30 ± 21.27	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Follitropin (FSH, mIU/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
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21.20 ± 2.38	6.97 ± 0.88	82.03 ± 14.75	17.38 ± 2.85	88.06 ± 16.78	n = 90	All Methods & Instruments
20.60	6.80	79.00	17.00	85.40	n = 90	Median value, All Methods & Instruments
<Instruments>						
19.65 ± 0.34	6.29 ± 0.23	72.67 ± 4.07	15.24 ± 0.62	79.44 ± 4.37	n = 7	Abbott Architect i System
20.17 ± 1.16	7.24 ± 0.60	76.99 ± 5.44	15.36 ± 0.91	78.67 ± 0.59	n = 6	Beckman Coulter ACCESS
20.21 ± 3.10	6.78 ± 0.62	71.14 ± 6.60	16.74 ± 3.26	74.97 ± 5.62	n = 5	Beckman Coulter UniCel DxI 600
21.25 ± 1.79	7.32 ± 0.26	75.78 ± 3.19	15.75 ± 0.52	80.45 ± 4.68	n = 6	Beckman Coulter UniCel DxI 800
21.14 ± 0.88	5.93 ± 0.64	71.70 ± 3.79	15.14 ± 0.65	76.94 ± 4.87	n = 5	Ortho Vitros 5600
20.54 ± 0.98	7.00 ± 0.24	82.86 ± 2.77	17.49 ± 0.77	89.36 ± 3.69	n = 4	Roche cobas e411
19.58 ± 0.66	6.68 ± 0.25	80.62 ± 2.38	16.85 ± 0.62	87.03 ± 2.85	n = 5	Roche cobas e601
24.95 ± 1.27	8.15 ± 0.39	112.64 ± 8.43	22.37 ± 1.26	121.90 ± 9.85	n = 20	Siemens ADVIA Centaur
19.25 ± 0.40	6.39 ± 0.21	76.30 ± 1.11	15.31 ± 0.30	79.53 ± 0.91	n = 6	Siemens Dimension Vista
19.96 ± 1.00	6.03 ± 0.31	77.89 ± 1.51	17.34 ± 0.88	82.88 ± 0.96	n = 3	Siemens Immulite 1000
20.67 ± 0.94	6.30 ± 0.17	80.96 ± 5.10	17.39 ± 0.64	88.14 ± 3.85	n = 11	Siemens Immulite 2000
21.19 ± 1.16	7.62 ± 0.55	74.62 ± 3.61	16.28 ± 1.14	80.14 ± 3.51	n = 5	Tosoh Bioscience
20.33 ± 0.72	6.77 ± 0.67	76.42 ± 3.96	16.26 ± 1.01	81.26 ± 4.74	n = 12	Mean of Above Means
<Reagents>						
19.65 ± 0.34	6.29 ± 0.23	72.67 ± 4.07	15.24 ± 0.62	79.44 ± 4.37	n = 7	Abbott
20.47 ± 1.99	7.17 ± 0.57	75.04 ± 5.72	15.75 ± 1.18	78.90 ± 4.95	n = 17	Beckman Coulter
20.95 ± 0.87	5.90 ± 0.54	71.06 ± 3.59	15.24 ± 0.62	76.56 ± 4.26	n = 6	Ortho Clinical Diagnostics
20.05 ± 0.76	6.85 ± 0.25	82.33 ± 2.72	17.21 ± 0.64	88.34 ± 2.87	n = 12	Roche Elecsys/Modular E/e601/e411
24.87 ± 1.29	8.12 ± 0.45	112.36 ± 8.25	22.27 ± 1.33	121.27 ± 9.95	n = 21	Siemens ADVIA/ADVIA Centaur
19.35 ± 0.23	6.38 ± 0.24	76.02 ± 1.02	15.37 ± 0.31	79.88 ± 0.72	n = 5	Siemens Dimension LOCI
20.53 ± 1.00	6.27 ± 0.19	79.93 ± 4.30	17.38 ± 0.71	86.85 ± 4.18	n = 14	Siemens Immulite
20.97 ± 1.06	7.55 ± 0.27	73.84 ± 3.12	15.54 ± 0.73	78.22 ± 2.55	n = 3	Tosoh AIA
20.31 ± 0.63	6.76 ± 0.74	75.54 ± 3.92	15.84 ± 0.90	80.63 ± 4.39	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Prolactin (µg/L)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
2.19 ± 0.40	5.75 ± 0.55	16.75 ± 2.21	8.05 ± 0.82	30.80 ± 2.83	n = 82	All Methods & Instruments
2.20	5.70	16.60	8.10	30.70	n = 82	Median value, All Methods & Instruments
						<Instruments>
2.46 ± 0.11	6.42 ± 0.25	18.36 ± 1.17	9.06 ± 0.36	33.12 ± 1.39	n = 7	Abbott Architect i System
2.22 ± 0.16	6.17 ± 0.33	17.04 ± 1.13	8.75 ± 0.44	30.95 ± 2.09	n = 6	Beckman Coulter ACCESS
2.14 ± 0.29	5.56 ± 0.39	15.86 ± 0.76	8.60 ± 1.62	29.42 ± 1.24	n = 4	Beckman Coulter UniCel DxI 600
1.94 ± 0.11	5.61 ± 0.12	15.90 ± 0.46	7.88 ± 0.19	29.41 ± 0.89	n = 6	Beckman Coulter UniCel DxI 800
2.56 ± 0.59	6.27 ± 0.18	17.52 ± 0.70	8.50 ± 0.09	30.94 ± 1.57	n = 5	Ortho Vitros 5600
3.43 ± 0.05	8.58 ± 0.24	23.62 ± 0.94	12.16 ± 0.39	44.43 ± 1.49	n = 3	Roche cobas e411
3.13 ± 0.05	8.15 ± 0.54	22.47 ± 0.23	11.40 ± 0.18	43.33 ± 2.33	n = 3	Roche cobas e601
2.24 ± 0.08	5.61 ± 0.19	15.47 ± 0.79	7.54 ± 0.34	29.24 ± 0.90	n = 18	Siemens ADVIA Centaur
1.98 ± 0.07	5.71 ± 0.14	18.01 ± 0.33	8.26 ± 0.17	34.92 ± 0.38	n = 9	Siemens Dimension Vista
1.79 ± 0.12	4.98 ± 0.27	14.76 ± 0.84	7.27 ± 0.37	28.82 ± 1.75	n = 10	Siemens Immulite 2000
2.31 ± 0.49	6.09 ± 1.01	17.41 ± 2.66	8.61 ± 1.35	32.20 ± 4.98	n = 10	Mean of Above Means
						<Reagents>
2.46 ± 0.11	6.42 ± 0.25	18.36 ± 1.17	9.06 ± 0.36	33.12 ± 1.39	n = 7	Abbott
2.08 ± 0.23	5.79 ± 0.40	16.14 ± 0.76	8.20 ± 0.57	29.85 ± 1.50	n = 16	Beckman Coulter
2.76 ± 0.90	6.27 ± 0.18	17.53 ± 0.72	8.51 ± 0.09	31.88 ± 2.98	n = 6	Ortho Clinical Diagnostics
3.24 ± 0.14	8.32 ± 0.41	23.00 ± 0.63	11.69 ± 0.40	43.88 ± 1.73	n = 9	Roche Elecsys/Modular E/e601/e411
2.24 ± 0.08	5.61 ± 0.22	15.52 ± 0.84	7.55 ± 0.32	29.47 ± 1.18	n = 20	Siemens ADVIA/ADVIA Centaur
2.00 ± 0.05	5.72 ± 0.17	18.00 ± 0.28	8.24 ± 0.20	34.94 ± 0.25	n = 7	Siemens Dimension LOCI
1.79 ± 0.11	5.06 ± 0.32	15.04 ± 1.17	7.37 ± 0.41	29.19 ± 1.73	n = 12	Siemens Immulite
2.32 ± 0.47	5.84 ± 0.54	17.12 ± 2.08	8.16 ± 0.63	31.35 ± 2.47	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Intact Parathyrin (PTH, pg/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
2.85 ± 2.47	8.34 ± 5.27	2.86 ± 2.37	11.63 ± 6.46	178.96 ± 40.70	n = 82	All Methods & Instruments
3.00	7.80	2.70	11.60	179.00	n = 82	Median value, All Methods & Instruments
						<Instruments>
1.45 ± 2.75	5.40 ± 4.81	1.74 ± 2.54	7.80 ± 4.84	154.56 ± 18.35	n = 7	Beckman Coulter ACCESS
0.37 ± 0.55	6.89 ± 2.97	0.49 ± 0.48	9.88 ± 3.87	151.81 ± 10.52	n = 6	Beckman Coulter UniCel DxI 600
1.00 ± 0.00	4.52 ± 1.47	1.00 ± 0.00	7.43 ± 1.94	148.45 ± 6.00	n = 8	Beckman Coulter UniCel DxI 800
3.40 ± 0.00	9.92 ± 5.35	3.40 ± 0.00	13.83 ± 5.73	235.91 ± 17.70	n = 4	Ortho Vitros 5600
3.67 ± 0.64	10.63 ± 5.63	3.21 ± 0.62	14.94 ± 6.83	123.01 ± 7.96	n = 6	Roche cobas e601
2.44 ± 0.73	5.62 ± 1.50	2.28 ± 0.49	9.18 ± 3.60	119.45 ± 3.68	n = 3	Roche MODULAR E
3.45 ± 3.04	9.01 ± 5.72	3.50 ± 2.89	12.36 ± 7.49	198.96 ± 14.54	n = 24	Siemens ADVIA Centaur
4.00 ± 2.76	12.91 ± 3.48	4.11 ± 2.57	18.12 ± 5.16	205.55 ± 9.33	n = 4	Siemens ADVIA Centaur CP
4.44 ± 1.02	6.85 ± 4.05	4.44 ± 1.02	8.68 ± 4.39	189.00 ± 0.90	n = 3	Siemens Immulite 1000
3.00 ± 0.00	10.84 ± 6.45	3.00 ± 0.00	14.35 ± 6.34	232.27 ± 17.30	n = 7	Siemens Immulite 2000
1.00 ± 0.00	9.36 ± 1.11	1.00 ± 0.00	13.45 ± 1.37	164.52 ± 7.32	n = 3	Tosoh Bioscience
2.62 ± 1.45	8.34 ± 2.75	2.60 ± 1.39	11.72 ± 3.52	173.86 ± 41.50	n = 11	Mean of Above Means
						<Reagents>
0.61 ± 0.55	5.37 ± 3.24	0.77 ± 0.37	8.11 ± 3.68	150.73 ± 10.74	n = 21	Beckman Coulter
3.40 ± 0.00	11.37 ± 5.54	3.40 ± 0.00	15.37 ± 5.89	241.86 ± 19.51	n = 5	Ortho Clinical Diagnostics
3.43 ± 0.99	9.13 ± 5.07	3.03 ± 0.92	13.57 ± 6.50	122.37 ± 6.78	n = 10	Roche Elecsys/Modular E/e601/e411
3.53 ± 3.01	9.61 ± 5.62	3.59 ± 2.85	13.25 ± 7.52	200.67 ± 13.05	n = 28	Siemens ADVIA/ADVIA Centaur
3.00 ± 0.00	9.67 ± 6.68	3.00 ± 0.00	12.81 ± 7.22	227.05 ± 22.37	n = 8	Siemens Immulite
3.37 ± 0.20	9.36 ± 1.87	3.25 ± 0.28	13.07 ± 2.24	190.45 ± 50.03	n = 5	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D2 (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	n = 6	All Methods & Instruments
2.00	2.00	2.00	2.00	2.00	n = 6	Median value, All Methods & Instruments
						<Instruments>
2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	n = 6	LC/MS/MS
						<Reagents>
2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	2.26 ± 1.49	n = 6	In-House

25-OH Vitamin D3 (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
53.56 ± 8.16	65.10 ± 9.36	63.45 ± 2.71	50.76 ± 0.53	39.40 ± 3.93	n = 6	All Methods & Instruments
51.00	66.00	63.00	49.70	38.00	n = 6	Median value, All Methods & Instruments
						<Instruments>
53.56 ± 8.16	65.10 ± 9.36	63.45 ± 2.71	50.76 ± 0.53	39.40 ± 3.93	n = 6	LC/MS/MS
						<Reagents>
53.56 ± 8.16	65.10 ± 9.36	63.45 ± 2.71	50.76 ± 0.53	39.40 ± 3.93	n = 6	In-House

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D, Total (ng/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
39.18 ± 10.70	56.29 ± 8.93	55.94 ± 12.99	47.39 ± 15.85	45.36 ± 18.79	n = 98	All Methods & Instruments
37.00	55.30	53.60	43.70	40.60	n = 98	Median value, All Methods & Instruments
						<Instruments>
33.11 ± 1.13	54.05 ± 2.34	51.67 ± 2.54	42.94 ± 2.25	38.98 ± 2.43	n = 12	Abbott Architect i System
52.12 ± 3.42	59.67 ± 5.31	73.77 ± 5.04	73.72 ± 6.78	84.63 ± 7.86	n = 6	Beckman Coulter ACCESS
55.38 ± 3.89	65.27 ± 2.59	82.07 ± 3.83	82.84 ± 3.36	92.69 ± 4.89	n = 5	Beckman Coulter UniCel DxI 600
36.33 ± 3.50	51.87 ± 4.73	47.02 ± 4.59	41.80 ± 4.78	35.85 ± 3.87	n = 18	DiaSorin Liaison
28.61 ± 4.84	44.07 ± 4.90	43.58 ± 9.19	37.12 ± 6.67	32.69 ± 5.91	n = 4	Immunodiagnostic Systems-iSYS Immun
53.55 ± 8.22	65.12 ± 9.36	63.45 ± 2.75	50.78 ± 0.49	39.42 ± 3.90	n = 6	LC/MS/MS
62.39 ± 6.16	65.85 ± 4.16	69.69 ± 4.96	78.67 ± 4.91	74.95 ± 5.67	n = 8	Ortho Vitros 5600
31.02 ± 2.35	44.96 ± 2.69	40.96 ± 3.09	37.37 ± 3.73	29.66 ± 2.08	n = 5	Roche cobas e601
35.92 ± 3.79	56.38 ± 4.07	55.67 ± 4.74	40.91 ± 3.86	42.77 ± 5.27	n = 23	Siemens ADVIA Centaur
45.79 ± 3.80	69.52 ± 3.38	76.61 ± 3.77	72.90 ± 2.88	79.40 ± 4.71	n = 3	Tosoh Bioscience
43.08 ± 12.41	58.02 ± 9.17	60.30 ± 15.35	54.96 ± 19.81	53.56 ± 25.81	n = 10	Mean of Above Means
						<Reagents>
33.11 ± 1.13	54.05 ± 2.34	51.67 ± 2.54	42.94 ± 2.25	38.98 ± 2.43	n = 12	Abbott
54.32 ± 4.17	63.06 ± 5.44	79.47 ± 6.76	80.27 ± 7.91	89.69 ± 7.34	n = 13	Beckman Coulter
36.33 ± 3.50	51.87 ± 4.73	47.02 ± 4.59	41.80 ± 4.78	35.85 ± 3.87	n = 18	DiaSorin Liaison
30.36 ± 5.45	50.32 ± 3.92	50.87 ± 7.99	41.49 ± 5.67	43.42 ± 6.33	n = 3	Immunodiagnostic Systems Enzyme Imm
28.61 ± 4.84	44.07 ± 4.90	43.58 ± 9.19	37.12 ± 6.67	32.69 ± 5.91	n = 4	Immunodiagnostic Systems-iSYS chemi
50.30 ± 10.81	61.38 ± 12.60	59.93 ± 7.62	50.34 ± 1.14	40.55 ± 4.72	n = 7	In-House
62.39 ± 6.16	65.85 ± 4.16	69.69 ± 4.96	78.67 ± 4.91	74.95 ± 5.67	n = 8	Ortho Clinical Diagnostics
31.42 ± 2.20	45.81 ± 1.09	40.97 ± 2.69	37.92 ± 3.44	29.65 ± 1.85	n = 6	Roche Elecsys/Modular E/e601/e411
36.42 ± 3.92	56.97 ± 4.15	56.17 ± 4.94	41.41 ± 3.67	43.19 ± 5.19	n = 20	Siemens ADVIA Centaur - Vitamin D T
33.61 ± 1.24	53.35 ± 2.06	53.43 ± 2.65	37.28 ± 3.15	39.72 ± 5.18	n = 3	Siemens ADVIA/ADVIA Centaur
37.97 ± 11.09	54.57 ± 7.30	53.76 ± 10.86	40.55 ± 3.48	38.38 ± 4.86	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Intact human Choriogonadotropin (intact hCG, mIU/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
57.1 ± 3.00	1.0 ± 0.90	60.0 ± 5.75	1.0 ± 0.90	48.6 ± 4.34	n = 27	All Methods & Instruments
57.0	1.0	62.0	1.0	48.0	n = 27	Median value, All Methods & Instruments
<Instruments>						
54.2 ± 1.77	0.9 ± 0.72	50.8 ± 1.29	0.9 ± 0.72	43.3 ± 0.97	n = 6	Roche cobas e601
58.3 ± 2.16	1.0 ± 0.79	62.5 ± 2.45	1.0 ± 0.79	50.5 ± 2.39	n = 15	Siemens Dimension EXL
57.5 ± 3.63	1.4 ± 1.02	62.2 ± 3.23	1.4 ± 1.02	48.5 ± 3.63	n = 3	Siemens Dimension Xpand
56.8 ± 1.92	1.1 ± 0.27	59.1 ± 5.94	1.1 ± 0.27	47.7 ± 3.36	n = 3	Mean of Above Means
<Reagents>						
54.2 ± 1.77	0.9 ± 0.72	50.8 ± 1.29	0.9 ± 0.72	43.3 ± 0.97	n = 6	Roche Elecsys/Modular E/e601/e411
58.0 ± 2.53	1.0 ± 0.91	62.5 ± 2.50	1.0 ± 0.91	50.1 ± 2.71	n = 19	Siemens Dimension
56.1 ± 2.15	0.9 ± 0.08	56.6 ± 6.66	0.9 ± 0.08	46.7 ± 3.92	n = 2	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Total Beta hCG (mIU/mL)

Specimen: E36	Specimen: E37	Specimen: E38	Specimen: E39	Specimen: E40	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
59.0 ± 6.29	1.1 ± 0.76	47.4 ± 10.76	1.0 ± 0.76	45.1 ± 8.19	n = 139	All Methods & Instruments
60.3	1.0	49.1	1.0	47.9	n = 139	Median value, All Methods & Instruments
<Instruments>						
48.1 ± 1.94	2.4 ± 2.07	37.8 ± 0.55	2.4 ± 2.07	38.0 ± 1.99	n = 11	Abbott Architect i System
56.6 ± 2.73	0.4 ± 0.32	38.8 ± 1.32	0.4 ± 0.32	41.4 ± 1.82	n = 19	Beckman Coulter ACCESS
56.8 ± 3.07	1.4 ± 2.19	39.2 ± 2.08	1.4 ± 2.19	42.0 ± 1.80	n = 7	Beckman Coulter UniCel DxI 600
56.7 ± 2.53	1.2 ± 1.90	39.5 ± 1.29	1.3 ± 1.89	41.5 ± 1.70	n = 8	Beckman Coulter UniCel DxI 800
63.2 ± 2.40	2.3 ± 0.40	58.4 ± 2.24	2.3 ± 0.40	51.0 ± 1.91	n = 9	Ortho Vitros 5600
66.3 ± 2.33	1.5 ± 1.58	55.1 ± 1.94	1.5 ± 1.58	54.5 ± 2.33	n = 5	Roche cobas e411
62.4 ± 0.52	0.2 ± 0.40	51.2 ± 1.13	0.2 ± 0.40	49.7 ± 0.97	n = 4	Roche cobas e601
59.8 ± 0.77	1.0 ± 0.71	49.9 ± 1.28	1.0 ± 0.71	48.1 ± 0.81	n = 4	Roche MODULAR E
53.1 ± 3.48	2.0 ± 0.00	38.0 ± 1.67	2.0 ± 0.00	35.2 ± 2.07	n = 19	Siemens ADVIA Centaur
62.7 ± 1.30	1.0 ± 0.00	54.2 ± 1.18	1.0 ± 0.00	49.6 ± 1.03	n = 32	Siemens Dimension Vista
88.0 ± 2.74	1.0 ± 0.00	73.9 ± 2.87	1.0 ± 0.00	74.0 ± 4.45	n = 8	Siemens Immulite 2000
66.3 ± 2.68	0.7 ± 0.61	56.7 ± 1.38	0.7 ± 0.61	54.0 ± 0.86	n = 4	Tosoh Bioscience
59.7 ± 5.89	1.2 ± 0.70	48.5 ± 10.76	1.2 ± 0.70	46.6 ± 7.94	n = 12	Mean of Above Means
<Reagents>						
48.3 ± 2.51	2.6 ± 2.16	37.9 ± 0.52	2.6 ± 2.16	38.2 ± 2.12	n = 12	Abbott
56.9 ± 2.91	0.4 ± 0.37	39.1 ± 1.94	0.4 ± 0.39	41.5 ± 1.99	n = 24	Beckman Coulter
56.4 ± 2.41	0.5 ± 0.20	39.0 ± 1.00	0.5 ± 0.19	41.2 ± 0.46	n = 9	Beckman Coulter IFCC Standardized
63.2 ± 2.18	2.3 ± 0.38	58.5 ± 2.06	2.3 ± 0.38	51.2 ± 1.82	n = 11	Ortho Clinical Diagnostics
62.6 ± 3.46	0.6 ± 0.69	51.8 ± 2.69	0.6 ± 0.69	50.6 ± 3.43	n = 15	Roche Elecsys/Modular E/e601/e411
53.5 ± 3.69	2.0 ± 0.00	38.0 ± 1.73	2.0 ± 0.00	35.0 ± 2.11	n = 21	Siemens ADVIA/ADVIA Centaur
63.7 ± 1.37	1.0 ± 0.00	55.7 ± 0.51	1.0 ± 0.00	50.3 ± 1.37	n = 3	Siemens Dimension
62.5 ± 1.32	1.0 ± 0.00	54.0 ± 1.10	1.0 ± 0.00	49.6 ± 1.02	n = 30	Siemens Dimension LOCI
86.6 ± 3.62	1.0 ± 0.00	72.6 ± 3.71	1.0 ± 0.00	72.7 ± 4.71	n = 10	Siemens Immulite
65.3 ± 2.46	0.9 ± 0.77	56.2 ± 0.31	0.9 ± 0.77	53.7 ± 0.51	n = 3	Tosoh AIA
59.9 ± 6.30	1.2 ± 0.78	49.7 ± 11.48	1.2 ± 0.77	46.9 ± 8.70	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Qualitative hCG report:

[AB1] Abbott		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	4	0	4	0
	Indeterminant	0	0	0	0	0
	Positive	4	0	4	0	4
[AR1] Alere hCG Combo Cassette		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	5	0	5	0
	Indeterminant	0	0	0	0	0
	Positive	5	0	5	0	5
[BC1] Beckman Coulter		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	18	0	18	0
	Indeterminant	0	0	0	0	0
	Positive	18	0	18	0	18
[CD1] Cardinal Health		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	14	0	14	0
	Indeterminant	0	0	0	0	0
	Positive	14	0	14	0	14
[CM1] CEN-MED Elite Plus hCG One Step		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	7	0	7	0
	Indeterminant	0	0	0	0	0
	Positive	7	0	7	0	7
[FI1] Fisher		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	27	0	27	0
	Indeterminant	0	0	0	0	0
	Positive	27	0	27	0	27
[JJ1] Ortho Clinical Diagnostics		Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
-----		-----	-----	-----	-----	-----
	Negative	0	2	0	2	0
	Indeterminant	0	0	0	0	0
	Positive	3	1	3	1	3

Statistical Summary (Mean and Standard Deviation)

[PM1]	Polymedco	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	3	0	3	0
	Indeterminant	0	0	0	0	0
	Positive	3	0	3	0	3
[QQ2]	Quidel QuickVue One-Step hCG Combo	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	12	0	12	0
	Indeterminant	0	0	0	0	0
	Positive	12	0	12	0	12
[QQ1]	Quidel QuickVue± One-Step hCG Combo	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	10	0	10	0
	Indeterminant	0	0	0	0	0
	Positive	10	0	10	0	10
[RO3]	Roche Elecsys/Modular E/e601/e411	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	4	0	4	0
	Indeterminant	0	0	0	0	0
	Positive	4	0	4	0	4
[GZ1]	Sekisui Diagnostics (Genzyme)	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	5	0	5	0
	Indeterminant	0	0	0	0	0
	Positive	5	0	5	0	5
[BY1]	Siemens ADVIA/ADVIA Centaur	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	8	0	8	0
	Indeterminant	0	0	0	0	0
	Positive	8	0	8	0	8
[DA5]	Siemens Dimension	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
	Negative	0	1	0	1	0
	Indeterminant	0	0	0	0	0
	Positive	1	0	1	0	1

Statistical Summary (Mean and Standard Deviation)

[DA6] Siemens Dimension LOCI	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
Negative	0	3	0	3	0
Indeterminant	0	0	0	0	0
Positive	3	0	3	0	3
[SB1] Stanbio	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
Negative	0	3	0	3	0
Indeterminant	0	0	0	0	0
Positive	3	0	3	0	3
[TR1] TrueMedix	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
Negative	0	3	0	3	0
Indeterminant	0	0	0	0	0
Positive	3	0	3	0	3
[---] All Methods & Instruments	Specimen:E36	Specimen:E37	Specimen:E38	Specimen:E39	Specimen:E40
Negative	0	129	0	129	0
Indeterminant	0	0	0	0	0
Positive	130	1	130	1	130