

Statistical Summary (Mean and Standard Deviation)

Cortisol (µg/dL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
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3.51 ± 0.40	9.38 ± 1.13	16.71 ± 1.97	24.48 ± 2.82	8.24 ± 1.07	n = 155	All Methods & Instruments
3.50	9.40	16.60	24.40	8.10	n = 155	Median value, All Methods & Instruments
<Instruments>						
3.72 ± 0.24	7.94 ± 0.52	13.58 ± 0.78	20.70 ± 0.99	7.41 ± 0.55	n = 5	Abbott Architect i System
3.40 ± 0.41	9.06 ± 0.66	17.50 ± 1.63	24.62 ± 1.28	9.15 ± 0.88	n = 5	Abbott AxSym
3.76 ± 0.32	9.46 ± 0.88	16.58 ± 1.36	24.42 ± 1.80	8.28 ± 0.54	n = 6	Beckman Coulter ACCESS
3.61 ± 0.54	9.21 ± 0.70	15.90 ± 1.27	22.98 ± 1.49	7.56 ± 0.54	n = 19	Beckman Coulter UniCel DxI 800
4.02 ± 0.15	9.03 ± 0.34	16.40 ± 0.46	24.17 ± 1.04	9.06 ± 0.10	n = 3	LC/MS/MS
2.80 ± 0.18	8.87 ± 0.51	14.82 ± 1.04	20.72 ± 1.50	7.37 ± 0.54	n = 9	Ortho Vitros Eci/ECiQ
3.10 ± 0.27	8.21 ± 0.37	15.19 ± 0.24	22.63 ± 0.14	7.53 ± 0.28	n = 7	Roche cobas e601
3.43 ± 0.26	8.68 ± 0.47	15.84 ± 0.82	23.00 ± 1.07	8.21 ± 0.54	n = 5	Roche Elecsys
3.21 ± 0.17	8.09 ± 0.29	15.04 ± 0.69	22.63 ± 0.90	7.56 ± 0.21	n = 10	Roche MODULAR E
3.57 ± 0.27	9.61 ± 0.73	17.05 ± 1.09	25.23 ± 1.47	8.28 ± 0.57	n = 47	Siemens ADVIA Centaur
3.96 ± 0.34	11.63 ± 0.72	19.26 ± 1.37	29.42 ± 1.91	10.93 ± 0.99	n = 4	Siemens Immulite 1000
3.64 ± 0.28	10.79 ± 0.88	19.45 ± 1.47	28.42 ± 1.88	9.89 ± 0.70	n = 21	Siemens Immulite 2000
3.50 ± 0.08	10.84 ± 0.85	19.52 ± 0.61	27.27 ± 0.09	10.38 ± 0.34	n = 4	Siemens Immulite 2500
3.45 ± 0.19	8.09 ± 0.29	14.31 ± 0.44	19.98 ± 0.50	7.50 ± 0.27	n = 3	Tosoh Bioscience
2.39 ± 1.49	7.20 ± 3.93	12.61 ± 6.84	17.84 ± 9.52	6.09 ± 3.77	n = 3	Reagent Not Listed
3.50 ± 0.37	9.01 ± 1.18	16.14 ± 2.12	23.52 ± 3.14	8.25 ± 1.28	n = 15	Mean of Above Means
<Reagents>						
3.60 ± 0.39	8.47 ± 0.82	15.42 ± 2.47	22.55 ± 2.44	8.26 ± 1.16	n = 10	Abbott
3.63 ± 0.50	9.27 ± 0.71	16.10 ± 1.28	23.36 ± 1.63	7.67 ± 0.62	n = 27	Beckman Coulter
4.02 ± 0.15	9.03 ± 0.34	16.40 ± 0.46	24.17 ± 1.04	9.06 ± 0.10	n = 3	In-House
2.87 ± 0.23	8.98 ± 0.51	15.13 ± 1.14	21.17 ± 1.67	7.53 ± 0.60	n = 11	Ortho Clinical Diagnostics
3.22 ± 0.23	8.25 ± 0.43	15.30 ± 0.80	22.71 ± 0.83	7.64 ± 0.39	n = 22	Roche Elecsys/Modular E/e601/e411
3.57 ± 0.26	9.62 ± 0.72	17.07 ± 1.08	25.24 ± 1.45	8.28 ± 0.56	n = 48	Siemens ADVIA/ADVIA Centaur
3.64 ± 0.30	10.92 ± 0.90	19.44 ± 1.35	28.31 ± 1.79	10.08 ± 0.82	n = 29	Siemens Immulite
3.45 ± 0.19	8.09 ± 0.29	14.31 ± 0.44	19.98 ± 0.50	7.50 ± 0.27	n = 3	Tosoh ST AIA
3.53 ± 0.30	8.95 ± 0.79	15.86 ± 1.26	23.21 ± 2.35	8.09 ± 0.79	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D2 (ng/mL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
2.53 ± 1.97 2.50	5.50 ± 1.31 5.60	9.90 ± 1.13 9.90	19.06 ± 2.97 19.00	68.22 ± 7.91 66.20	n = 14 n = 14	All Methods & Instruments Median value, All Methods & Instruments
2.53 ± 1.97	5.50 ± 1.31	9.90 ± 1.13	19.06 ± 2.97	68.22 ± 7.91	n = 14	<Instruments> LC/MS/MS
2.53 ± 1.97	5.50 ± 1.31	9.90 ± 1.13	19.06 ± 2.97	68.22 ± 7.91	n = 14	<Reagents> In-House

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D3 (ng/mL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
10.42 ± 1.37 10.00	20.26 ± 1.80 20.00	24.43 ± 2.11 24.00	38.91 ± 2.18 39.00	37.26 ± 3.69 36.50	n = 15 n = 15	All Methods & Instruments Median value, All Methods & Instruments
10.28 ± 1.27	20.32 ± 1.89	24.62 ± 2.05	39.03 ± 3.16	37.24 ± 3.66	n = 14	<Instruments> LC/MS/MS
10.28 ± 1.27	20.32 ± 1.89	24.62 ± 2.05	39.03 ± 3.16	37.24 ± 3.66	n = 14	<Reagents> In-House

Statistical Summary (Mean and Standard Deviation)

Dehydroepiandrosterone sulfate (DHEA-S, µg/dL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
26.01 ± 5.50	163.76 ± 19.25	177.53 ± 24.05	228.74 ± 20.01	324.48 ± 28.81	n = 75	All Methods & Instruments
25.20	162.60	174.00	228.80	323.00	n = 75	Median value, All Methods & Instruments
27.0	134.0	137.0	159.0	208.0		[---] Results of LC_MS_MS measurement*
						<Instruments>
30.50 ± 2.45	160.40 ± 13.63	177.89 ± 8.41	230.34 ± 6.46	325.53 ± 26.40	n = 4	Beckman Coulter UniCel DxI 800
40.91 ± 3.95	213.86 ± 30.24	232.37 ± 38.29	261.98 ± 37.46	365.46 ± 44.63	n = 4	Roche cobas e601
34.19 ± 3.43	193.43 ± 10.24	217.45 ± 12.67	236.81 ± 15.82	342.78 ± 23.22	n = 4	Roche Elecsys
37.80 ± 1.35	194.49 ± 7.30	219.92 ± 3.11	242.71 ± 6.41	347.50 ± 12.36	n = 3	Roche MODULAR E
24.75 ± 5.02	150.84 ± 13.57	170.08 ± 17.61	234.41 ± 26.18	324.93 ± 30.87	n = 5	Siemens Immulite 1000
23.68 ± 2.67	160.77 ± 11.18	171.89 ± 15.15	224.46 ± 15.23	316.19 ± 20.37	n = 43	Siemens Immulite 2000
25.84 ± 3.55	163.75 ± 15.09	177.01 ± 2.88	234.26 ± 21.88	344.39 ± 12.50	n = 5	Siemens Immulite 2500
30.86 ± 6.88	175.36 ± 23.73	193.99 ± 27.67	235.17 ± 8.69	337.59 ± 16.61	n = 7	Mean of Above Means
						<Reagents>
30.67 ± 2.15	160.71 ± 11.73	175.07 ± 1.71	229.70 ± 5.79	323.17 ± 23.54	n = 5	Beckman Coulter
30.85 ± 3.47	123.38 ± 19.57	136.72 ± 21.21	168.06 ± 20.39	215.39 ± 10.32	n = 3	In-House
37.67 ± 4.05	197.38 ± 17.20	222.17 ± 21.51	244.97 ± 22.88	347.77 ± 24.37	n = 11	Roche Elecsys/Modular E/e601/e411
23.91 ± 3.12	160.40 ± 11.85	172.81 ± 15.18	226.27 ± 17.01	320.19 ± 23.02	n = 53	Siemens Immulite
30.77 ± 5.17	160.51 ± 27.80	175.44 ± 32.14	222.14 ± 29.25	310.77 ± 50.40	n = 4	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analyses of the specimens (CV% < 6%) at Bioanalytical Core Laboratory, Georgetown University, Washington, DC.

Reference:

- Guo T, Chan M, Soldin SJ. Steroid Profiles Using Liquid Chromatography-Tandem Mass Spectrometry With Atmospheric Pressure Photoionization Source. Arch Pathol Lab Med 2004;128;469-75.
- Guo T, Taylor RL, Singh RJ, Soldin SJ. Simultaneous determination of 12 steroids by isotope dilution liquid chromatography-photospray ionization tandem mass spectrometry. Clinica Chimica Acta 2006;372;76-82.

Statistical Summary (Mean and Standard Deviation)

Estradiol (pg/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
39.6 ± 20.51	140.6 ± 25.81	153.8 ± 42.64	73.8 ± 12.07	112.2 ± 47.78	n = 160	All Methods & Instruments
42.0	140.0	153.0	74.0	102.0	n = 160	Median value, All Methods & Instruments
						<Instruments>
44.6 ± 2.91	122.9 ± 3.52	116.8 ± 6.30	84.0 ± 1.65	77.8 ± 2.11	n = 4	Abbott Architect i System
32.4 ± 9.84	121.1 ± 9.77	104.0 ± 2.43	57.9 ± 4.83	63.9 ± 5.47	n = 6	Abbott AxSym
50.6 ± 8.26	168.3 ± 13.51	212.1 ± 14.34	78.1 ± 5.01	196.8 ± 10.55	n = 9	Beckman Coulter ACCESS
51.7 ± 5.51	160.0 ± 19.81	216.5 ± 22.29	76.1 ± 9.92	197.7 ± 14.79	n = 13	Beckman Coulter UniCel DxI 800
16.2 ± 2.36	72.2 ± 13.16	71.2 ± 14.15	51.5 ± 11.73	66.1 ± 22.50	n = 3	Gamma Counter
29.6 ± 3.91	113.4 ± 11.25	113.4 ± 20.07	58.9 ± 5.32	63.9 ± 8.09	n = 4	LC/MS/MS
19.1 ± 3.87	142.2 ± 19.58	166.3 ± 16.95	81.5 ± 10.04	110.7 ± 12.51	n = 9	Ortho Vitros ECi/ECiQ
52.0 ± 1.92	142.4 ± 3.57	140.0 ± 2.53	79.5 ± 1.07	82.7 ± 3.83	n = 6	Roche cobas e601
43.1 ± 9.38	135.5 ± 6.50	132.1 ± 8.03	70.1 ± 5.98	76.4 ± 4.25	n = 5	Roche Elecsys
53.3 ± 3.84	143.7 ± 3.93	139.5 ± 5.44	76.8 ± 2.23	83.2 ± 2.08	n = 8	Roche MODULAR E
60.6 ± 25.10	116.1 ± 12.39	119.3 ± 25.99	75.9 ± 18.32	116.7 ± 50.78	n = 36	Siemens ADVIA Centaur
66.0 ± 5.48	131.7 ± 6.85	129.0 ± 3.61	82.5 ± 2.74	115.5 ± 2.74	n = 3	Siemens ADVIA Centaur CP
22.7 ± 3.33	169.9 ± 10.02	184.7 ± 15.47	68.9 ± 6.34	103.1 ± 9.35	n = 13	Siemens Immulite 1000
22.6 ± 3.59	151.6 ± 14.10	167.9 ± 15.25	72.9 ± 9.60	106.9 ± 13.17	n = 27	Siemens Immulite 2000
23.9 ± 4.64	168.9 ± 9.05	180.9 ± 13.33	71.8 ± 8.31	121.2 ± 12.47	n = 5	Siemens Immulite 2500
65.2 ± 4.11	131.0 ± 7.21	198.0 ± 5.41	93.7 ± 5.97	219.4 ± 8.43	n = 3	Tosoh Bioscience
40.9 ± 18.13	139.2 ± 22.80	149.0 ± 42.70	74.5 ± 10.12	102.9 ± 43.66	n = 16	Mean of Above Means
						<Reagents>
38.3 ± 9.82	121.0 ± 6.02	110.5 ± 10.52	67.3 ± 15.34	69.6 ± 8.65	n = 10	Abbott
52.3 ± 7.24	164.0 ± 16.82	214.8 ± 18.26	77.4 ± 7.96	196.2 ± 13.09	n = 24	Beckman Coulter
29.6 ± 3.91	113.4 ± 11.25	113.4 ± 20.07	58.9 ± 5.32	63.9 ± 8.09	n = 4	In-House
19.1 ± 3.87	142.2 ± 19.58	166.3 ± 16.95	81.5 ± 10.04	110.7 ± 12.51	n = 9	Ortho Clinical Diagnostics
51.0 ± 4.90	140.5 ± 6.89	137.3 ± 6.86	76.1 ± 4.19	82.2 ± 4.08	n = 19	Roche Elecsys/Modular E/e601/e411
52.4 ± 8.06	113.4 ± 13.15	104.5 ± 13.61	66.6 ± 7.68	89.6 ± 13.98	n = 21	Siemens ADVIA Centaur estradiol-6 I
78.5 ± 25.81	121.4 ± 11.05	140.4 ± 21.59	91.6 ± 17.52	162.7 ± 39.10	n = 18	Siemens ADVIA/ADVIA Centaur
22.7 ± 3.46	159.7 ± 15.98	174.1 ± 17.20	71.4 ± 8.61	107.1 ± 12.87	n = 45	Siemens Immulite
65.2 ± 4.11	131.0 ± 7.21	198.0 ± 5.41	93.7 ± 5.97	219.4 ± 8.43	n = 3	Tosoh ST AIA
45.1 ± 19.90	132.9 ± 19.12	149.3 ± 40.44	75.7 ± 11.54	116.8 ± 56.41	n = 9	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free Estriol (ng/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
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0.30 ± 0.00	0.09 ± 0.08	1.38 ± 0.60	0.10 ± 0.00	2.15 ± 1.11	n = 22	All Methods & Instruments
0.30	0.10	1.20	0.10	2.00	n = 22	Median value, All Methods & Instruments
<Instruments>						
0.30 ± 0.00	0.06 ± 0.06	0.96 ± 0.06	0.10 ± 0.00	1.50 ± 0.10	n = 5	Beckman Coulter UniCel DxI 800
0.76 ± 0.10	0.07 ± 0.05	2.27 ± 0.05	0.07 ± 0.05	4.36 ± 0.47	n = 3	LC/MS/MS
0.25 ± 0.06	0.09 ± 0.06	1.53 ± 0.11	0.09 ± 0.06	2.21 ± 0.19	n = 6	Siemens Immulite 2000
0.41 ± 0.25	0.07 ± 0.01	1.57 ± 0.59	0.09 ± 0.01	2.59 ± 1.33	n = 3	Mean of Above Means
<Reagents>						
0.30 ± 0.00	0.07 ± 0.05	1.00 ± 0.07	0.10 ± 0.00	1.56 ± 0.11	n = 9	Beckman Coulter
0.76 ± 0.10	0.07 ± 0.05	2.27 ± 0.05	0.07 ± 0.05	4.36 ± 0.47	n = 3	In-House
0.26 ± 0.06	0.12 ± 0.09	1.53 ± 0.12	0.12 ± 0.09	2.21 ± 0.19	n = 7	Siemens Immulite
0.41 ± 0.24	0.09 ± 0.02	1.58 ± 0.58	0.10 ± 0.02	2.61 ± 1.31	n = 3	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T-3 (pg/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
1.81 ± 0.32	6.70 ± 1.28	7.30 ± 1.46	7.21 ± 1.53	8.20 ± 1.87	n = 113	All Methods & Instruments
1.80	6.90	7.50	7.00	7.60	n = 113	Median value, All Methods & Instruments
1.2	8.4	7.5	8.4	10.4		[---] Results of LC_MS_MS measurement*
						<Instruments>
1.29 ± 0.24	6.21 ± 0.33	7.28 ± 0.49	7.82 ± 0.70	9.33 ± 0.71	n = 8	Abbott Architect i System
1.98 ± 0.24	6.63 ± 0.34	6.93 ± 0.32	7.71 ± 0.37	8.30 ± 0.55	n = 3	Beckman Coulter ACCESS
1.90 ± 0.22	5.84 ± 0.42	6.27 ± 0.37	6.63 ± 0.47	7.12 ± 0.40	n = 14	Beckman Coulter UniCel DxI 800
1.34 ± 0.26	14.50 ± 0.84	14.08 ± 0.93	14.52 ± 0.85	14.17 ± 0.74	n = 5	Ortho Vitros ECI/ECIQ
1.80 ± 0.15	7.66 ± 0.68	8.87 ± 0.23	9.66 ± 0.23	10.80 ± 0.23	n = 5	Roche cobas e601
1.78 ± 0.08	7.97 ± 0.29	8.74 ± 0.42	9.81 ± 0.28	10.79 ± 0.47	n = 7	Roche MODULAR E
1.89 ± 0.10	6.96 ± 0.19	7.53 ± 0.20	6.85 ± 0.20	7.60 ± 0.19	n = 40	Siemens ADVIA Centaur
0.73 ± 0.16	9.28 ± 0.23	10.42 ± 0.04	9.78 ± 0.21	11.12 ± 0.29	n = 5	Siemens Dimension Vista
2.05 ± 0.22	4.33 ± 0.40	4.99 ± 0.33	5.46 ± 0.33	6.54 ± 0.64	n = 10	Siemens Immulite 2000
2.07 ± 0.27	4.38 ± 0.37	4.93 ± 0.27	5.24 ± 0.19	6.65 ± 0.53	n = 4	Siemens Immulite 2500
1.77 ± 0.36	6.65 ± 1.79	7.59 ± 2.33	7.94 ± 2.34	9.03 ± 2.40	n = 10	Mean of Above Means
						<Reagents>
1.30 ± 0.26	6.37 ± 0.47	7.39 ± 0.59	7.78 ± 0.54	9.23 ± 0.68	n = 11	Abbott
1.92 ± 0.23	5.94 ± 0.50	6.33 ± 0.42	6.75 ± 0.59	7.18 ± 0.45	n = 16	Beckman Coulter
1.33 ± 0.23	14.56 ± 0.35	14.18 ± 0.81	14.54 ± 0.65	14.25 ± 0.62	n = 6	Ortho Clinical Diagnostics
1.79 ± 0.15	7.96 ± 0.39	8.86 ± 0.39	9.80 ± 0.29	10.83 ± 0.51	n = 13	Roche Elecsys/Modular E/e601/e411
1.89 ± 0.11	6.95 ± 0.20	7.52 ± 0.22	6.84 ± 0.21	7.58 ± 0.21	n = 42	Siemens ADVIA/ADVIA Centaur
0.73 ± 0.16	9.28 ± 0.23	10.42 ± 0.04	9.78 ± 0.21	11.12 ± 0.29	n = 5	Siemens Dimension LOCI
2.07 ± 0.23	4.34 ± 0.37	5.01 ± 0.35	5.42 ± 0.32	6.56 ± 0.59	n = 15	Siemens Immulite
1.63 ± 0.45	7.18 ± 2.46	8.15 ± 2.72	8.24 ± 2.63	9.33 ± 2.64	n = 7	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analyses of the specimens (CV% < 6%) at Bioanalytical Core Laboratory, Georgetown University, Washington, DC.

Reference:

Soukhovaa N, Soldin OP, Soldin SJ. Isotope dilution tandem mass spectrometric method for T4/T3. Clinica Chimica Acta 2004;343:185-90.

Gu J, Soldin OP, Soldin SJ. Simultaneous quantification of free triiodothyronine and free thyroxine by isotope dilution tandem mass spectrometry. Clin Biochem 2007;40:1386-91.

Statistical Summary (Mean and Standard Deviation)

Folic Acid (ng/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
1.82 ± 0.57	1.89 ± 0.65	2.78 ± 0.75	6.91 ± 0.85	5.26 ± 0.81	n = 227	All Methods & Instruments
1.80	1.80	2.70	6.80	5.20	n = 227	Median value, All Methods & Instruments
						<Instruments>
1.86 ± 0.38	2.59 ± 0.47	3.79 ± 0.38	8.24 ± 0.64	6.49 ± 0.51	n = 12	Abbott AxSym
1.66 ± 0.14	1.78 ± 0.12	2.80 ± 0.26	7.21 ± 0.59	5.43 ± 0.40	n = 20	Beckman Coulter ACCESS
1.83 ± 0.05	1.93 ± 0.05	2.83 ± 0.05	6.93 ± 0.14	5.23 ± 0.14	n = 3	Beckman Coulter UniCel DxI 600
1.60 ± 0.16	1.73 ± 0.24	2.69 ± 0.30	6.62 ± 0.39	5.04 ± 0.37	n = 21	Beckman Coulter UniCel DxI 800
1.24 ± 0.19	1.83 ± 0.26	2.64 ± 0.38	6.68 ± 0.83	4.99 ± 0.61	n = 19	Ortho Vitros ECi/ECiQ
2.91 ± 0.44	2.84 ± 0.47	3.13 ± 0.42	6.86 ± 0.71	5.85 ± 0.82	n = 3	Roche cobas e411
2.77 ± 0.26	3.17 ± 0.36	3.88 ± 0.32	7.12 ± 0.45	5.91 ± 0.40	n = 13	Roche cobas e601
2.77 ± 0.77	2.96 ± 0.84	3.61 ± 0.57	7.55 ± 0.99	5.95 ± 0.27	n = 3	Roche Elecsys
2.91 ± 0.45	3.50 ± 0.36	4.14 ± 0.34	7.13 ± 0.42	6.06 ± 0.33	n = 17	Roche MODULAR E
1.99 ± 0.21	1.57 ± 0.21	2.31 ± 0.26	6.51 ± 0.63	4.80 ± 0.47	n = 63	Siemens ADVIA Centaur
2.08 ± 0.04	1.48 ± 0.04	2.45 ± 0.19	8.34 ± 0.32	5.48 ± 0.21	n = 4	Siemens ADVIA Centaur CP
0.66 ± 0.20	0.65 ± 0.21	1.37 ± 0.34	2.74 ± 0.25	2.22 ± 0.23	n = 13	Siemens Dimension Vista
1.95 ± 0.16	2.59 ± 0.14	3.93 ± 0.21	8.98 ± 0.21	6.95 ± 0.06	n = 5	Siemens Immulite 1000
1.39 ± 0.21	1.77 ± 0.23	2.80 ± 0.30	6.73 ± 0.50	5.12 ± 0.32	n = 20	Siemens Immulite 2000
1.32 ± 0.15	2.61 ± 0.27	2.80 ± 0.33	7.09 ± 1.11	5.47 ± 0.90	n = 4	Tosoh Bioscience
1.92 ± 0.68	2.21 ± 0.77	3.03 ± 0.73	7.14 ± 0.65	5.57 ± 0.60	n = 15	Mean of Above Means
						<Reagents>
1.84 ± 0.34	2.52 ± 0.48	3.78 ± 0.38	8.29 ± 0.68	6.48 ± 0.59	n = 14	Abbott
1.64 ± 0.16	1.78 ± 0.18	2.76 ± 0.27	6.88 ± 0.56	5.22 ± 0.42	n = 44	Beckman Coulter
1.24 ± 0.19	1.84 ± 0.24	2.62 ± 0.38	6.63 ± 0.80	4.97 ± 0.57	n = 21	Ortho Clinical Diagnostics
2.83 ± 0.40	3.28 ± 0.45	3.94 ± 0.44	7.11 ± 0.50	6.00 ± 0.38	n = 35	Roche Elecsys/Modular E/e601/e411
2.00 ± 0.21	1.56 ± 0.20	2.33 ± 0.26	6.60 ± 0.74	4.85 ± 0.49	n = 66	Siemens ADVIA/ADVIA Centaur
0.66 ± 0.20	0.65 ± 0.21	1.37 ± 0.34	2.74 ± 0.25	2.22 ± 0.23	n = 13	Siemens Dimension LOCI
1.51 ± 0.32	1.94 ± 0.42	3.00 ± 0.50	7.10 ± 0.98	5.38 ± 0.72	n = 27	Siemens Immulite
1.32 ± 0.15	2.61 ± 0.27	2.80 ± 0.33	7.09 ± 1.11	5.47 ± 0.90	n = 4	Tosoh AIA
1.59 ± 0.57	2.03 ± 0.75	2.85 ± 0.76	6.92 ± 0.25	5.42 ± 0.57	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Follitropin (FSH, mIU/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
8.96 ± 0.82	6.67 ± 1.44	23.64 ± 3.83	8.95 ± 1.38	26.14 ± 3.60	n = 189	All Methods & Instruments
8.90	6.80	24.30	9.20	25.90	n = 189	Median value, All Methods & Instruments
						<Instruments>
7.61 ± 0.48	5.72 ± 0.17	21.16 ± 1.06	8.04 ± 0.44	25.62 ± 1.26	n = 6	Abbott Architect i System
8.55 ± 0.30	6.27 ± 0.14	23.18 ± 0.64	8.71 ± 0.39	28.16 ± 1.32	n = 8	Abbott AxSym
10.16 ± 0.65	7.14 ± 0.34	26.13 ± 1.61	9.95 ± 0.63	30.50 ± 2.71	n = 9	Beckman Coulter ACCESS
9.72 ± 0.58	7.05 ± 0.40	25.97 ± 1.21	9.66 ± 0.57	31.43 ± 1.80	n = 20	Beckman Coulter UniCel DxI 800
9.48 ± 0.56	5.21 ± 0.34	19.10 ± 1.31	7.46 ± 0.43	22.67 ± 1.49	n = 8	Ortho Vitros ECI/ECIQ
8.18 ± 0.41	6.62 ± 0.35	24.02 ± 1.23	9.05 ± 0.46	27.81 ± 1.28	n = 10	Roche cobas e601
8.62 ± 0.60	6.93 ± 0.41	25.19 ± 1.54	9.43 ± 0.48	29.02 ± 1.61	n = 6	Roche Elecsys
8.12 ± 0.28	6.57 ± 0.22	23.69 ± 0.74	9.00 ± 0.28	27.72 ± 0.77	n = 9	Roche MODULAR E
8.72 ± 0.48	8.08 ± 0.58	25.98 ± 1.56	9.82 ± 0.63	25.70 ± 1.50	n = 50	Siemens ADVIA Centaur
8.00 ± 0.11	7.98 ± 0.20	26.89 ± 1.26	10.25 ± 0.30	26.65 ± 1.08	n = 4	Siemens ADVIA Centaur CP
9.50 ± 0.68	4.93 ± 0.22	18.90 ± 0.78	7.23 ± 0.31	23.12 ± 0.63	n = 12	Siemens Immulite 1000
9.14 ± 0.60	4.92 ± 0.29	18.72 ± 1.19	7.23 ± 0.40	22.58 ± 1.51	n = 28	Siemens Immulite 2000
8.77 ± 0.57	4.53 ± 0.11	18.01 ± 0.71	6.74 ± 0.41	21.37 ± 0.30	n = 5	Siemens Immulite 2500
10.95 ± 0.38	7.97 ± 0.27	30.07 ± 1.11	11.18 ± 0.47	36.54 ± 1.59	n = 4	Tosoh Bioscience
9.12 ± 0.27	5.24 ± 0.18	19.72 ± 2.32	7.49 ± 0.77	23.73 ± 2.90	n = 4	Reagent Not Listed
8.91 ± 0.85	6.34 ± 1.26	23.09 ± 3.81	8.74 ± 1.38	26.46 ± 3.76	n = 15	Mean of Above Means
						<Reagents>
8.21 ± 0.62	6.04 ± 0.34	22.44 ± 1.32	8.45 ± 0.54	27.01 ± 1.86	n = 14	Abbott
9.81 ± 0.62	7.08 ± 0.37	26.05 ± 1.31	9.76 ± 0.58	31.11 ± 2.09	n = 31	Beckman Coulter
9.39 ± 0.49	5.19 ± 0.28	19.00 ± 1.09	7.36 ± 0.36	22.54 ± 1.10	n = 11	Ortho Clinical Diagnostics
8.30 ± 0.49	6.71 ± 0.37	24.26 ± 1.35	9.12 ± 0.45	28.10 ± 1.30	n = 26	Roche Elecsys/Modular E/e601/e411
8.67 ± 0.51	8.08 ± 0.55	26.05 ± 1.56	9.86 ± 0.62	25.78 ± 1.50	n = 54	Siemens ADVIA/ADVIA Centaur
9.19 ± 0.65	4.88 ± 0.30	18.69 ± 1.09	7.18 ± 0.40	22.67 ± 1.32	n = 45	Siemens Immulite
11.08 ± 0.41	8.03 ± 0.34	30.34 ± 1.34	11.35 ± 0.54	36.79 ± 2.00	n = 3	Tosoh ST AIA
9.12 ± 0.92	6.59 ± 1.29	23.79 ± 4.11	8.99 ± 1.46	27.19 ± 4.64	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T4 (ng/dL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
0.40 ± 0.06	2.71 ± 0.57	3.42 ± 0.65	3.11 ± 0.55	3.64 ± 0.60	n = 256	All Methods & Instruments
0.40	2.70	3.40	3.10	3.60	n = 256	Median value, All Methods & Instruments
0.3	5.1	5.2	6.4	6.1		[---] Results of LC_MS_MS measurement*
<Instruments>						
0.45 ± 0.06	1.92 ± 0.09	2.51 ± 0.18	2.54 ± 0.13	3.06 ± 0.23	n = 13	Abbott Architect i System
0.43 ± 0.05	1.87 ± 0.07	2.47 ± 0.09	2.21 ± 0.06	2.66 ± 0.07	n = 8	Abbott AxSym
0.38 ± 0.06	2.80 ± 0.12	3.52 ± 0.14	3.07 ± 0.12	3.53 ± 0.20	n = 20	Beckman Coulter ACCESS
0.40 ± 0.00	2.81 ± 0.17	3.57 ± 0.15	3.02 ± 0.16	3.53 ± 0.22	n = 18	Beckman Coulter UniCel DxI 800
0.38 ± 0.05	4.72 ± 0.23	5.49 ± 0.28	5.03 ± 0.26	5.43 ± 0.18	n = 13	Ortho Vitros Eci/ECiQ
0.43 ± 0.05	2.60 ± 0.00	3.34 ± 0.10	3.23 ± 0.05	3.83 ± 0.05	n = 3	Roche cobas e411
0.40 ± 0.00	2.68 ± 0.14	3.41 ± 0.15	3.33 ± 0.09	3.95 ± 0.15	n = 12	Roche cobas e601
0.43 ± 0.05	2.80 ± 0.00	3.47 ± 0.05	3.37 ± 0.05	3.96 ± 0.10	n = 3	Roche Elecsys
0.42 ± 0.05	2.70 ± 0.00	3.44 ± 0.07	3.32 ± 0.08	3.94 ± 0.08	n = 18	Roche MODULAR E
0.40 ± 0.05	2.47 ± 0.13	3.07 ± 0.17	2.89 ± 0.14	3.35 ± 0.18	n = 63	Siemens ADVIA Centaur
0.30 ± 0.00	2.36 ± 0.11	3.11 ± 0.10	2.74 ± 0.10	3.29 ± 0.12	n = 7	Siemens Dimension EXL
0.37 ± 0.14	3.85 ± 0.44	4.40 ± 0.38	4.17 ± 0.43	4.59 ± 0.51	n = 13	Siemens Dimension RxL
0.40 ± 0.00	2.26 ± 0.10	3.04 ± 0.13	2.67 ± 0.06	3.22 ± 0.11	n = 15	Siemens Dimension Vista
0.33 ± 0.15	3.61 ± 0.14	4.26 ± 0.08	4.14 ± 0.32	4.36 ± 0.34	n = 6	Siemens Dimension Xpand
0.44 ± 0.06	3.44 ± 0.21	4.13 ± 0.22	3.76 ± 0.14	4.15 ± 0.18	n = 5	Siemens Immulite 1000
0.40 ± 0.04	3.27 ± 0.15	4.09 ± 0.18	3.59 ± 0.11	4.11 ± 0.17	n = 18	Siemens Immulite 2000
0.48 ± 0.13	3.55 ± 0.12	4.18 ± 0.13	3.70 ± 0.08	4.20 ± 0.18	n = 4	Siemens Immulite 2500
0.30 ± 0.00	3.64 ± 0.11	4.45 ± 0.18	4.11 ± 0.13	4.62 ± 0.16	n = 5	Tosoh Bioscience
0.37 ± 0.05	4.75 ± 0.27	5.62 ± 0.24	5.12 ± 0.24	5.54 ± 0.10	n = 3	Reagent Not Listed
0.40 ± 0.05	2.99 ± 0.80	3.69 ± 0.81	3.41 ± 0.76	3.91 ± 0.71	n = 19	Mean of Above Means
<Reagents>						
0.44 ± 0.06	1.90 ± 0.08	2.49 ± 0.14	2.41 ± 0.20	2.89 ± 0.28	n = 21	Abbott
0.39 ± 0.05	2.80 ± 0.14	3.54 ± 0.15	3.05 ± 0.13	3.52 ± 0.21	n = 40	Beckman Coulter
0.37 ± 0.05	4.73 ± 0.24	5.52 ± 0.28	5.05 ± 0.25	5.45 ± 0.17	n = 16	Ortho Clinical Diagnostics
0.42 ± 0.04	2.71 ± 0.10	3.43 ± 0.09	3.32 ± 0.09	3.93 ± 0.11	n = 35	Roche Elecsys/Modular E/e601/e411
0.40 ± 0.05	2.48 ± 0.13	3.08 ± 0.17	2.90 ± 0.14	3.36 ± 0.18	n = 65	Siemens ADVIA/ADVIA Centaur
0.35 ± 0.14	3.74 ± 0.39	4.32 ± 0.29	4.15 ± 0.44	4.46 ± 0.51	n = 20	Siemens Dimension
0.37 ± 0.05	2.29 ± 0.12	3.07 ± 0.12	2.69 ± 0.08	3.24 ± 0.12	n = 21	Siemens Dimension LOCI
0.41 ± 0.05	3.34 ± 0.20	4.12 ± 0.19	3.64 ± 0.13	4.13 ± 0.17	n = 27	Siemens Immulite
0.30 ± 0.00	3.60 ± 0.08	4.38 ± 0.13	4.07 ± 0.09	4.57 ± 0.09	n = 4	Tosoh ST AIA
0.39 ± 0.04	3.00 ± 0.84	3.71 ± 0.87	3.41 ± 0.81	3.90 ± 0.77	n = 9	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analyses of the specimens (CV% < 6%) at Bioanalytical Core Laboratory, Georgetown University, Washington, DC.

Reference:

Soukhovaa N, Soldin OP, Soldin SJ. Isotope dilution tandem mass spectrometric method for T4/T3. Clinica Chimica Acta 2004;343:185-90.

Gu J, Soldin OP, Soldin SJ. Simultaneous quantification of free triiodothyronine and free thyroxine by isotope dilution tandem mass spectrometry. Clin Biochem 2007;40:1386-91.

Statistical Summary (Mean and Standard Deviation)

Intact human Choriogonadotropin (intact hCG, mIU/mL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
5.3 ± 0.58	41.5 ± 1.95	47.1 ± 2.63	1.1 ± 0.66	38.8 ± 2.32	n = 64	All Methods & Instruments
5.0	41.0	47.0	1.0	39.0	n = 64	Median value, All Methods & Instruments
<Instruments>						
5.5 ± 2.30	41.1 ± 2.04	43.0 ± 1.65	2.1 ± 3.89	42.4 ± 1.90	n = 4	Roche Elecsys
5.6 ± 0.55	43.0 ± 2.41	48.6 ± 1.69	2.1 ± 1.38	39.5 ± 2.33	n = 5	Siemens Dimension EXL
5.4 ± 0.57	41.4 ± 1.88	47.4 ± 2.19	1.0 ± 0.52	38.7 ± 1.89	n = 38	Siemens Dimension RxL
5.0 ± 0.00	41.3 ± 0.51	52.7 ± 0.51	2.1 ± 2.05	51.8 ± 1.54	n = 3	Siemens Dimension Vista
5.0 ± 0.00	40.7 ± 1.15	45.9 ± 1.17	1.3 ± 0.64	37.4 ± 1.52	n = 11	Siemens Dimension Xpand
5.3 ± 0.30	41.3 ± 0.67	47.4 ± 3.37	1.8 ± 0.53	40.8 ± 4.63	n = 5	Mean of Above Means
<Reagents>						
5.5 ± 1.81	42.1 ± 2.60	43.5 ± 1.80	1.0 ± 0.75	43.1 ± 2.15	n = 5	Roche Elecsys/Modular E/e601/e411
5.3 ± 0.54	41.3 ± 1.86	47.2 ± 2.10	1.1 ± 0.67	38.5 ± 1.95	n = 54	Siemens Dimension
5.0 ± 0.00	41.3 ± 0.51	52.7 ± 0.51	2.1 ± 2.05	51.8 ± 1.54	n = 3	Siemens Dimension LOCI
5.3 ± 0.22	41.5 ± 0.40	47.7 ± 4.17	1.4 ± 0.55	44.2 ± 6.10	n = 3	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Intact Parathyrin (PTH, pg/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
4.13 ± 2.72	14.64 ± 4.82	128.40 ± 32.08	58.04 ± 14.60	196.03 ± 45.72	n = 163	All Methods & Instruments
4.00	15.00	133.90	56.80	201.60	n = 163	Median value, All Methods & Instruments
						<Instruments>
2.50 ± 1.77	31.58 ± 2.50	287.28 ± 16.64	135.14 ± 7.17	438.18 ± 37.69	n = 5	Abbott Architect i System
0.67 ± 0.45	11.58 ± 1.04	101.10 ± 6.28	47.78 ± 3.53	159.93 ± 12.22	n = 8	Beckman Coulter ACCESS
1.00 ± 0.00	10.48 ± 1.03	98.77 ± 6.32	46.57 ± 2.53	156.84 ± 12.81	n = 14	Beckman Coulter UniCel DxI 800
6.06 ± 0.60	14.80 ± 0.49	99.93 ± 3.08	47.57 ± 2.14	154.16 ± 4.72	n = 10	Roche cobas e601
6.85 ± 1.62	17.10 ± 2.59	112.46 ± 13.44	54.39 ± 6.81	171.27 ± 20.08	n = 13	Roche Elecsys
5.72 ± 0.92	14.27 ± 0.98	99.98 ± 5.15	47.24 ± 2.04	153.84 ± 8.60	n = 10	Roche MODULAR E
3.06 ± 1.22	13.88 ± 2.89	143.85 ± 14.52	60.57 ± 7.81	215.04 ± 23.48	n = 42	Siemens ADVIA Centaur
4.05 ± 1.19	12.84 ± 4.62	121.90 ± 19.68	54.22 ± 9.76	190.97 ± 26.23	n = 14	Siemens Immulite 1000
4.85 ± 2.44	20.22 ± 5.17	159.20 ± 10.20	75.61 ± 6.45	241.69 ± 17.19	n = 33	Siemens Immulite 2000
8.82 ± 3.88	39.80 ± 5.18	169.83 ± 8.32	88.84 ± 4.51	250.99 ± 15.92	n = 5	Siemens Immulite 2500
1.05 ± 0.12	9.00 ± 0.40	79.36 ± 3.18	36.63 ± 1.52	119.16 ± 1.68	n = 4	Tosoh Bioscience
3.98 ± 2.72	13.64 ± 3.43	116.41 ± 30.24	53.37 ± 13.63	178.83 ± 43.07	n = 11	Mean of Above Means
						<Reagents>
2.50 ± 1.77	31.58 ± 2.50	287.28 ± 16.64	135.14 ± 7.17	438.18 ± 37.69	n = 5	Abbott
0.82 ± 0.38	10.88 ± 1.12	100.03 ± 6.68	46.92 ± 2.95	158.43 ± 12.29	n = 23	Beckman Coulter
6.18 ± 1.11	15.08 ± 1.69	102.88 ± 9.27	49.10 ± 5.17	158.21 ± 14.57	n = 34	Roche Elecsys/Modular E/e601/e411
3.05 ± 1.18	13.91 ± 2.85	143.91 ± 14.17	60.81 ± 7.87	215.19 ± 23.04	n = 43	Siemens ADVIA/ADVIA Centaur
4.88 ± 2.75	20.11 ± 6.50	157.77 ± 13.22	74.72 ± 9.60	239.15 ± 19.85	n = 44	Siemens Immulite
5.00 ± 0.00	9.15 ± 5.24	106.60 ± 10.70	45.78 ± 6.74	169.43 ± 7.80	n = 7	Siemens Immulite Turbo
1.08 ± 0.15	9.04 ± 0.47	79.55 ± 3.91	36.94 ± 1.72	119.67 ± 1.76	n = 3	Tosoh ST AIA
3.35 ± 2.09	13.97 ± 6.32	113.71 ± 29.96	51.07 ± 12.51	175.26 ± 43.09	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Insulin ($\mu\text{U/mL}$)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
23.82 $\pm$ 21.90 29.90	152.31 $\pm$ 95.27 172.20	79.95 $\pm$ 53.35 91.70	52.45 $\pm$ 29.29 55.20	72.04 $\pm$ 42.39 81.70	n = 99 n = 99	All Methods & Instruments Median value, All Methods & Instruments
<Instruments>						
33.43 $\pm$ 1.41	185.03 $\pm$ 3.74	97.78 $\pm$ 0.21	58.55 $\pm$ 0.94	83.76 $\pm$ 0.81	n = 5	Abbott Architect i System
30.02 $\pm$ 2.28	177.01 $\pm$ 14.59	96.51 $\pm$ 5.02	57.54 $\pm$ 3.37	82.64 $\pm$ 3.28	n = 8	Beckman Coulter UniCel DxI 800
40.63 $\pm$ 1.71	213.18 $\pm$ 26.06	112.31 $\pm$ 18.44	71.52 $\pm$ 9.54	100.03 $\pm$ 11.32	n = 4	Roche cobas e601
41.98 $\pm$ 1.56	227.85 $\pm$ 4.16	122.24 $\pm$ 4.28	78.40 $\pm$ 2.41	107.69 $\pm$ 3.79	n = 6	Roche Elecsys
39.90 $\pm$ 0.85	218.83 $\pm$ 7.67	116.91 $\pm$ 3.78	73.78 $\pm$ 2.28	102.12 $\pm$ 3.73	n = 6	Roche MODULAR E
47.28 $\pm$ 2.41	271.26 $\pm$ 11.68	149.04 $\pm$ 6.84	89.99 $\pm$ 4.20	126.10 $\pm$ 5.93	n = 17	Siemens ADVIA Centaur
2.43 $\pm$ 0.69	57.32 $\pm$ 6.22	28.06 $\pm$ 3.49	24.88 $\pm$ 2.99	32.83 $\pm$ 2.81	n = 8	Siemens Immulite 1000
2.69 $\pm$ 1.57	64.93 $\pm$ 12.44	30.96 $\pm$ 5.86	26.13 $\pm$ 3.52	33.26 $\pm$ 4.76	n = 32	Siemens Immulite 2000
3.39 $\pm$ 1.36	62.11 $\pm$ 13.24	30.59 $\pm$ 8.21	25.83 $\pm$ 3.38	31.47 $\pm$ 3.11	n = 5	Siemens Immulite 2500
51.91 $\pm$ 3.59	238.62 $\pm$ 6.23	130.53 $\pm$ 4.50	79.63 $\pm$ 4.78	109.32 $\pm$ 4.20	n = 4	Tosoh Bioscience
30.99 $\pm$ 19.74	178.14 $\pm$ 82.12	94.98 $\pm$ 46.06	60.18 $\pm$ 25.44	83.54 $\pm$ 36.50	n = 10	Mean of Above Means
<Reagents>						
33.43 $\pm$ 1.41	185.03 $\pm$ 3.74	97.78 $\pm$ 0.21	58.55 $\pm$ 0.94	83.76 $\pm$ 0.81	n = 5	Abbott
31.30 $\pm$ 3.09	183.04 $\pm$ 16.93	99.45 $\pm$ 6.51	59.15 $\pm$ 4.03	85.02 $\pm$ 5.14	n = 11	Beckman Coulter
40.76 $\pm$ 1.68	224.07 $\pm$ 6.53	119.37 $\pm$ 3.93	75.77 $\pm$ 3.06	104.83 $\pm$ 4.29	n = 16	Roche Elecsys/Modular E/e601/e411
47.28 $\pm$ 2.41	271.26 $\pm$ 11.68	149.04 $\pm$ 6.84	89.99 $\pm$ 4.20	126.10 $\pm$ 5.93	n = 17	Siemens ADVIA/ADVIA Centaur
2.62 $\pm$ 1.30	62.60 $\pm$ 11.42	30.33 $\pm$ 5.84	25.85 $\pm$ 3.41	32.83 $\pm$ 4.14	n = 45	Siemens Immulite
51.91 $\pm$ 3.59	238.62 $\pm$ 6.23	130.53 $\pm$ 4.50	79.63 $\pm$ 4.78	109.32 $\pm$ 4.20	n = 4	Tosoh ST AIA
37.47 $\pm$ 14.64	205.47 $\pm$ 61.26	110.50 $\pm$ 35.06	67.22 $\pm$ 20.66	94.62 $\pm$ 28.24	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Lutropin (LH, mIU/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
-----	-----	-----	-----	-----	-----	-----
6.49 ± 0.96	26.08 ± 3.48	177.91 ± 20.33	28.03 ± 3.57	12.94 ± 1.95	n = 188	All Methods & Instruments
6.40	26.30	179.00	28.10	12.70	n = 188	Median value, All Methods & Instruments
<Instruments>						
4.34 ± 0.24	18.28 ± 0.86	130.81 ± 3.06	19.76 ± 0.68	11.87 ± 0.49	n = 6	Abbott Architect i System
5.42 ± 0.24	23.62 ± 1.55	173.37 ± 18.63	26.76 ± 1.77	13.62 ± 0.60	n = 8	Abbott AxSym
5.76 ± 0.17	22.42 ± 0.94	156.08 ± 6.32	23.05 ± 1.43	10.50 ± 0.23	n = 9	Beckman Coulter ACCESS
5.59 ± 0.32	21.55 ± 0.81	151.86 ± 7.88	22.81 ± 1.13	10.41 ± 0.66	n = 20	Beckman Coulter UniCel DxI 800
8.06 ± 0.38	32.11 ± 1.09	200.00 ± 0.00	33.42 ± 1.16	11.63 ± 0.46	n = 8	Ortho Vitros ECI/ECIQ
6.64 ± 0.10	25.34 ± 0.83	160.83 ± 5.99	27.52 ± 0.92	13.59 ± 0.39	n = 10	Roche cobas e601
6.93 ± 0.12	26.27 ± 0.43	168.02 ± 1.46	28.97 ± 0.50	14.26 ± 0.22	n = 6	Roche Elecsys
6.92 ± 0.12	26.42 ± 0.70	167.27 ± 6.25	28.50 ± 0.95	14.09 ± 0.39	n = 9	Roche MODULAR E
6.12 ± 0.34	26.18 ± 1.54	186.14 ± 10.56	28.24 ± 1.55	12.44 ± 0.60	n = 49	Siemens ADVIA Centaur
5.92 ± 0.28	26.09 ± 1.37	175.94 ± 7.89	28.06 ± 0.34	12.32 ± 0.13	n = 4	Siemens ADVIA Centaur CP
7.76 ± 0.41	29.29 ± 0.85	200.00 ± 0.00	31.60 ± 2.14	15.96 ± 0.95	n = 12	Siemens Immulite 1000
7.38 ± 0.66	28.76 ± 2.52	192.63 ± 9.73	29.84 ± 2.55	15.25 ± 1.22	n = 28	Siemens Immulite 2000
7.50 ± 0.30	29.87 ± 2.02	181.57 ± 9.42	30.86 ± 0.80	14.82 ± 0.73	n = 5	Siemens Immulite 2500
6.34 ± 0.45	27.26 ± 1.48	179.71 ± 6.00	29.78 ± 1.60	12.29 ± 0.74	n = 4	Tosoh Bioscience
7.53 ± 0.43	29.88 ± 1.95	193.67 ± 17.09	32.18 ± 0.96	12.54 ± 3.04	n = 4	Reagent Not Listed
6.60 ± 1.03	26.47 ± 3.51	175.94 ± 18.76	28.54 ± 3.50	13.02 ± 1.69	n = 15	Mean of Above Means
<Reagents>						
4.89 ± 0.66	21.36 ± 3.17	153.54 ± 26.92	23.76 ± 4.14	12.92 ± 1.12	n = 14	Abbott
5.67 ± 0.31	21.75 ± 0.98	153.62 ± 8.08	22.76 ± 1.20	10.46 ± 0.49	n = 31	Beckman Coulter
7.95 ± 0.38	31.74 ± 1.20	200.00 ± 0.00	33.14 ± 1.08	11.56 ± 0.47	n = 11	Ortho Clinical Diagnostics
6.81 ± 0.20	26.06 ± 0.86	164.68 ± 5.89	28.26 ± 1.10	13.94 ± 0.48	n = 26	Roche Elecsys/Modular E/e601/e411
6.10 ± 0.34	26.17 ± 1.52	185.27 ± 10.80	28.23 ± 1.47	12.42 ± 0.57	n = 53	Siemens ADVIA/ADVIA Centaur
7.51 ± 0.57	29.12 ± 1.97	193.16 ± 10.32	30.45 ± 2.43	15.39 ± 1.17	n = 45	Siemens Immulite
6.35 ± 0.54	27.15 ± 1.74	177.53 ± 5.63	29.30 ± 1.64	12.35 ± 0.91	n = 3	Tosoh ST AIA
6.47 ± 1.04	26.21 ± 3.68	175.46 ± 19.07	28.12 ± 3.58	12.64 ± 1.52	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Prolactin (µg/L)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
2.55 ± 0.19	4.40 ± 0.54	4.52 ± 0.60	7.54 ± 1.01	10.67 ± 1.46	n = 173	All Methods & Instruments
2.60	4.40	4.50	7.40	10.40	n = 173	Median value, All Methods & Instruments
<Instruments>						
3.00 ± 0.26	5.89 ± 0.50	5.99 ± 0.28	10.26 ± 0.67	14.63 ± 0.79	n = 5	Abbott Architect i System
3.10 ± 0.31	5.21 ± 0.40	5.31 ± 0.52	9.08 ± 0.60	12.83 ± 0.90	n = 6	Abbott AxSym
2.54 ± 0.13	4.45 ± 0.10	4.53 ± 0.17	7.50 ± 0.16	10.62 ± 0.26	n = 8	Beckman Coulter ACCESS
2.39 ± 0.21	4.31 ± 0.25	4.50 ± 0.35	7.40 ± 0.32	10.61 ± 0.43	n = 20	Beckman Coulter UniCel DxI 800
4.12 ± 0.74	6.66 ± 0.54	5.92 ± 0.53	10.24 ± 0.55	12.47 ± 0.65	n = 8	Ortho Vitros ECI/ECiQ
2.59 ± 0.10	4.75 ± 0.12	4.87 ± 0.20	8.36 ± 0.24	12.43 ± 0.43	n = 9	Roche cobas e601
2.62 ± 0.09	4.67 ± 0.20	4.88 ± 0.17	8.56 ± 0.32	12.58 ± 0.35	n = 7	Roche Elecsys
2.63 ± 0.11	4.78 ± 0.18	4.95 ± 0.15	8.59 ± 0.33	12.64 ± 0.44	n = 7	Roche MODULAR E
2.55 ± 0.15	4.48 ± 0.24	4.48 ± 0.27	7.32 ± 0.26	10.13 ± 0.56	n = 52	Siemens ADVIA Centaur
2.62 ± 0.15	4.37 ± 0.16	4.51 ± 0.11	7.27 ± 0.33	9.98 ± 0.37	n = 4	Siemens ADVIA Centaur CP
2.64 ± 0.13	3.89 ± 0.16	3.94 ± 0.31	7.22 ± 0.07	9.91 ± 0.93	n = 9	Siemens Immulite 1000
2.50 ± 0.16	3.71 ± 0.21	3.76 ± 0.25	6.41 ± 0.42	9.25 ± 0.53	n = 23	Siemens Immulite 2000
2.30 ± 0.08	3.62 ± 0.31	3.78 ± 0.27	6.13 ± 0.49	8.88 ± 0.56	n = 4	Siemens Immulite 2500
2.60 ± 0.09	4.93 ± 0.32	5.05 ± 0.45	8.69 ± 0.52	12.24 ± 0.88	n = 3	Tosoh Bioscience
4.25 ± 0.46	6.42 ± 0.41	5.66 ± 0.47	9.73 ± 0.51	12.08 ± 0.50	n = 3	Reagent Not Listed
2.58 ± 0.16	4.70 ± 0.86	4.79 ± 0.72	8.15 ± 1.33	11.41 ± 1.66	n = 15	Mean of Above Means
<Reagents>						
3.05 ± 0.29	5.53 ± 0.59	5.66 ± 0.56	9.64 ± 0.90	13.60 ± 1.27	n = 11	Abbott
2.43 ± 0.19	4.35 ± 0.22	4.50 ± 0.29	7.42 ± 0.29	10.66 ± 0.40	n = 30	Beckman Coulter
4.17 ± 0.67	6.59 ± 0.52	5.85 ± 0.53	10.11 ± 0.59	12.35 ± 0.63	n = 11	Ortho Clinical Diagnostics
2.61 ± 0.11	4.73 ± 0.17	4.91 ± 0.17	8.50 ± 0.34	12.56 ± 0.44	n = 23	Roche Elecsys/Modular E/e601/e411
2.56 ± 0.15	4.47 ± 0.23	4.49 ± 0.26	7.32 ± 0.27	10.12 ± 0.55	n = 56	Siemens ADVIA/ADVIA Centaur
2.51 ± 0.18	3.75 ± 0.24	3.80 ± 0.27	6.55 ± 0.53	9.31 ± 0.68	n = 36	Siemens Immulite
2.60 ± 0.09	4.93 ± 0.32	5.05 ± 0.45	8.69 ± 0.52	12.24 ± 0.88	n = 3	Tosoh ST AIA
2.55 ± 0.07	4.81 ± 0.84	4.90 ± 0.70	8.31 ± 1.30	11.59 ± 1.55	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Progesterone (ng/mL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
10.76 ± 1.81	21.14 ± 2.90	16.86 ± 2.17	4.27 ± 0.58	3.56 ± 0.45	n = 152	All Methods & Instruments
10.40	21.70	17.30	4.30	3.60	n = 152	Median value, All Methods & Instruments
<Instruments>						
12.21 ± 0.27	20.62 ± 0.64	16.44 ± 0.72	4.22 ± 0.04	3.53 ± 0.09	n = 4	Abbott Architect i System
10.94 ± 0.32	19.97 ± 0.71	16.44 ± 1.03	4.55 ± 0.22	3.70 ± 0.24	n = 4	Abbott AxSym
12.88 ± 0.51	22.58 ± 0.86	18.28 ± 0.80	5.19 ± 0.28	4.21 ± 0.20	n = 8	Beckman Coulter ACCESS
13.10 ± 1.50	23.46 ± 2.34	19.00 ± 1.61	5.39 ± 0.31	4.37 ± 0.50	n = 14	Beckman Coulter UniCel DxI 800
11.30 ± 0.55	17.96 ± 1.09	14.79 ± 0.81	3.85 ± 0.19	3.25 ± 0.36	n = 3	LC/MS/MS
8.31 ± 0.71	15.12 ± 0.81	12.79 ± 0.57	4.28 ± 0.32	3.39 ± 0.26	n = 6	Ortho Vitros ECi/ECiQ
12.79 ± 0.42	22.23 ± 0.49	17.75 ± 0.47	3.58 ± 0.22	3.01 ± 0.14	n = 7	Roche cobas e601
12.75 ± 0.90	23.80 ± 0.72	18.65 ± 0.90	3.83 ± 0.14	3.10 ± 0.09	n = 3	Roche Elecsys
12.52 ± 0.56	21.67 ± 0.80	17.35 ± 0.85	3.59 ± 0.20	2.90 ± 0.16	n = 10	Roche MODULAR E
9.77 ± 0.61	22.73 ± 1.19	17.71 ± 1.01	4.24 ± 0.28	3.52 ± 0.25	n = 39	Siemens ADVIA Centaur
9.90 ± 0.18	23.47 ± 0.14	18.14 ± 0.10	4.28 ± 0.15	3.77 ± 0.14	n = 3	Siemens ADVIA Centaur CP
10.43 ± 0.96	18.58 ± 1.26	14.39 ± 1.21	4.64 ± 0.48	3.85 ± 0.24	n = 10	Siemens Immulite 1000
9.66 ± 0.94	17.78 ± 1.85	14.61 ± 1.18	4.04 ± 0.34	3.53 ± 0.29	n = 25	Siemens Immulite 2000
9.40 ± 0.99	19.14 ± 1.01	15.67 ± 2.01	4.26 ± 0.11	3.51 ± 0.24	n = 5	Siemens Immulite 2500
11.18 ± 1.66	20.84 ± 2.66	16.70 ± 1.90	4.23 ± 0.50	3.52 ± 0.41	n = 14	Mean of Above Means
<Reagents>						
11.58 ± 0.80	20.32 ± 0.64	16.47 ± 0.90	4.35 ± 0.23	3.59 ± 0.19	n = 8	Abbott
12.89 ± 0.80	22.99 ± 1.71	18.59 ± 1.34	5.33 ± 0.31	4.26 ± 0.40	n = 24	Beckman Coulter
11.30 ± 0.55	17.96 ± 1.09	14.79 ± 0.81	3.85 ± 0.19	3.25 ± 0.36	n = 3	In-House
8.21 ± 0.68	14.95 ± 0.85	12.66 ± 0.61	4.21 ± 0.34	3.34 ± 0.27	n = 7	Ortho Clinical Diagnostics
12.70 ± 0.62	22.15 ± 1.22	17.69 ± 0.93	3.62 ± 0.22	2.98 ± 0.17	n = 21	Roche Elecsys/Modular E/e601/e411
9.78 ± 0.58	22.80 ± 1.15	17.74 ± 0.97	4.25 ± 0.27	3.54 ± 0.26	n = 42	Siemens ADVIA/ADVIA Centaur
9.82 ± 1.01	18.20 ± 1.68	14.65 ± 1.35	4.19 ± 0.41	3.61 ± 0.31	n = 40	Siemens Immulite
10.96 ± 1.70	20.09 ± 2.98	16.19 ± 2.12	4.16 ± 0.40	3.47 ± 0.35	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Qualitative hCG report:

[AB1] Abbott		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		1	0	0	3	0
Indeterminant		2	0	0	0	0
Positive		0	3	3	0	3
[AD1] American Diagnostics		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		2	0	0	2	0
Indeterminant		0	0	0	0	0
Positive		0	2	2	0	2
[BC1] Beckman Coulter		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		20	1	0	36	0
Indeterminant		12	0	0	0	0
Positive		4	35	36	0	36
[CD1] Cardinal Health		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		4	0	0	6	0
Indeterminant		0	0	0	0	0
Positive		2	6	6	0	6
[CM1] CEN-MED Elite Plus hCG One Step		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		8	0	0	9	0
Indeterminant		0	0	0	0	0
Positive		1	9	9	0	9
[FI1] Fisher		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		40	0	0	51	0
Indeterminant		6	0	0	0	0
Positive		5	51	51	0	51
[GZ1] Genzyme		Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative		11	0	0	11	0
Indeterminant		0	0	0	0	0
Positive		0	11	11	0	11

Statistical Summary (Mean and Standard Deviation)

[IM1] Inverness Medical	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	5	0	0	6	0
Indeterminant	0	0	0	0	0
Positive	1	6	6	0	6
[JJ1] Ortho Clinical Diagnostics	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	0	0	0	1	0
Indeterminant	1	0	0	0	0
Positive	0	1	1	0	1
[PM1] Polymedco	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	2	0	0	5	0
Indeterminant	1	0	0	0	0
Positive	2	5	5	0	5
[QQ2] Quidel QuickVue One-Step hCG Combo	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	20	0	0	25	0
Indeterminant	1	0	0	0	0
Positive	4	25	25	0	25
[QQ1] Quidel QuickVue± One-Step hCG Combo	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	8	0	0	19	0
Indeterminant	5	0	0	0	0
Positive	6	19	19	0	19
[R03] Roche Elecsys/Modular E/e601/e411	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	3	0	0	3	0
Indeterminant	0	0	0	0	0
Positive	0	3	3	0	3
[R02] Roche Hitachi and Modular D/P	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
Negative	2	0	0	2	0
Indeterminant	0	0	0	0	0
Positive	0	2	2	0	2

Statistical Summary (Mean and Standard Deviation)

[R01]	Roche Integra and MIRA	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	1	0	0	1	0
	Indeterminant	0	0	0	0	0
	Positive	0	1	1	0	1
[BY1]	Siemens ADVIA/ADVIA Centaur	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	4	0	0	20	0
	Indeterminant	13	0	0	0	0
	Positive	3	20	20	0	20
[DA5]	Siemens Dimension	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	3	0	0	5	0
	Indeterminant	2	0	0	0	0
	Positive	0	5	5	0	5
[DA6]	Siemens Dimension LOCI	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	2	0	0	4	0
	Indeterminant	2	0	0	0	0
	Positive	0	4	4	0	4
[DP5]	Siemens Immulite	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	2	0	0	7	0
	Indeterminant	2	0	0	0	0
	Positive	3	7	7	0	7
[SB1]	Stanbio	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	7	0	0	14	0
	Indeterminant	0	0	0	0	0
	Positive	7	14	14	0	14
[ZZZ]	Reagent Not Listed	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	3	0	0	5	0
	Indeterminant	1	0	0	0	0
	Positive	1	5	5	0	5
[---]	All Methods & Instruments	Specimen:E56	Specimen:E57	Specimen:E58	Specimen:E59	Specimen:E60
	Negative	148	1	0	235	0
	Indeterminant	48	0	0	0	0
	Positive	39	234	235	0	235

Statistical Summary (Mean and Standard Deviation)

Triiodothyronine (T3, ng/dL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
52.7 ± 12.88	194.0 ± 29.91	215.2 ± 32.89	222.8 ± 24.90	253.5 ± 27.18	n = 194	All Methods & Instruments
51.0	200.0	220.0	225.0	254.0	n = 194	Median value, All Methods & Instruments
30.0	108.0	144.0	185.0	202.0		[---] Results of LC_MS_MS measurement*
						<Instruments>
44.2 ± 7.49	158.1 ± 6.63	183.9 ± 10.31	205.8 ± 11.53	239.3 ± 13.95	n = 10	Abbott Architect i System
61.6 ± 5.91	173.8 ± 10.79	183.2 ± 11.94	207.7 ± 11.42	236.9 ± 16.30	n = 9	Abbott AxSym
56.0 ± 7.98	155.3 ± 7.31	171.2 ± 7.46	180.3 ± 5.81	201.4 ± 7.10	n = 12	Beckman Coulter ACCESS
50.9 ± 7.19	149.8 ± 10.94	163.5 ± 9.75	176.3 ± 11.24	196.0 ± 14.23	n = 19	Beckman Coulter UniCel DxI 800
56.7 ± 2.73	196.0 ± 6.00	209.6 ± 8.75	240.0 ± 5.18	263.3 ± 10.39	n = 6	Ortho Vitros Eci/ECiQ
80.1 ± 6.82	205.5 ± 9.56	224.0 ± 12.63	226.5 ± 9.45	259.1 ± 8.16	n = 9	Roche cobas e601
79.5 ± 5.00	211.2 ± 8.60	228.0 ± 10.09	233.6 ± 7.70	259.9 ± 13.02	n = 14	Roche MODULAR E
48.6 ± 5.04	211.7 ± 13.74	237.3 ± 12.85	228.7 ± 12.96	262.5 ± 13.03	n = 53	Siemens ADVIA Centaur
54.5 ± 1.86	222.8 ± 8.59	255.9 ± 10.97	237.4 ± 8.43	272.9 ± 3.72	n = 3	Siemens ADVIA Centaur CP
50.9 ± 13.47	176.9 ± 19.66	202.0 ± 18.44	230.1 ± 21.34	269.9 ± 23.06	n = 8	Siemens Dimension RxL
45.7 ± 6.58	173.0 ± 12.10	195.0 ± 8.10	220.1 ± 9.30	248.6 ± 5.84	n = 11	Siemens Dimension Vista
41.8 ± 2.11	222.4 ± 17.21	256.3 ± 17.95	258.6 ± 10.30	291.4 ± 23.68	n = 7	Siemens Immulite 1000
42.3 ± 3.50	211.3 ± 16.81	234.7 ± 13.24	242.7 ± 18.58	268.3 ± 14.33	n = 15	Siemens Immulite 2000
46.0 ± 5.41	218.9 ± 6.08	250.0 ± 7.27	249.0 ± 3.58	275.5 ± 18.97	n = 3	Siemens Immulite 2500
53.2 ± 3.60	182.5 ± 12.26	209.1 ± 5.68	214.5 ± 5.83	239.9 ± 7.31	n = 5	Tosoh Bioscience
61.3 ± 3.37	194.1 ± 6.08	219.3 ± 21.20	238.4 ± 12.55	259.4 ± 13.82	n = 3	Reagent Not Listed
52.2 ± 9.46	192.4 ± 26.04	214.4 ± 30.43	227.1 ± 21.31	257.0 ± 21.79	n = 16	Mean of Above Means
						<Reagents>
52.9 ± 11.60	164.9 ± 11.69	183.6 ± 11.08	206.6 ± 11.51	238.1 ± 15.07	n = 19	Abbott
53.4 ± 7.96	153.1 ± 10.77	167.2 ± 10.15	178.7 ± 9.96	199.1 ± 12.54	n = 33	Beckman Coulter
58.0 ± 3.65	195.4 ± 6.03	211.2 ± 12.77	238.8 ± 7.92	262.5 ± 11.29	n = 9	Ortho Clinical Diagnostics
80.1 ± 5.60	210.5 ± 9.65	228.0 ± 11.01	230.9 ± 9.36	260.5 ± 12.01	n = 26	Roche Elecsys/Modular E/e601/e411
48.9 ± 5.14	212.4 ± 13.88	238.3 ± 13.59	229.2 ± 12.95	263.2 ± 13.01	n = 56	Siemens ADVIA/ADVIA Centaur
46.9 ± 9.73	173.1 ± 14.66	197.2 ± 14.06	223.6 ± 16.74	257.3 ± 19.35	n = 15	Siemens Dimension
53.9 ± 16.16	180.4 ± 18.36	200.0 ± 9.95	221.5 ± 9.94	254.1 ± 15.57	n = 3	Siemens Dimension LOCI
42.5 ± 3.63	215.6 ± 16.08	241.5 ± 15.07	249.0 ± 16.64	274.0 ± 19.54	n = 25	Siemens Immulite
53.4 ± 4.26	185.9 ± 11.75	210.8 ± 5.10	216.1 ± 4.59	242.3 ± 5.96	n = 4	Tosoh ST AIA
51.7 ± 4.71	188.3 ± 22.78	209.1 ± 24.81	224.3 ± 17.24	256.5 ± 12.66	n = 9	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analyses of the specimens (CV% < 6%) at Bioanalytical Core Laboratory, Georgetown University, Washington, DC.

Reference:

Soukhovaa N, Soldin OP, Soldin SJ. Isotope dilution tandem mass spectrometric method for T4/T3. Clinica Chimica Acta 2004;343:185-90.

Gu J, Soldin OP, Soldin SJ. Simultaneous quantification of free triiodothyronine and free thyroxine by isotope dilution tandem mass spectrometry. Clin Biochem 2007;40:1386-91.

Statistical Summary (Mean and Standard Deviation)

Thyroxin (T4, µg/dL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
2.09 ± 0.51	7.67 ± 0.72	10.33 ± 0.84	10.54 ± 1.01	13.30 ± 1.31	n = 238	All Methods & Instruments
2.00	7.60	10.30	10.40	13.30	n = 238	Median value, All Methods & Instruments
1.6	5.2	7.6	8.7	10.9		[---] Results of LC_MS_MS measurement*
						<Instruments>
2.73 ± 0.44	7.09 ± 0.67	9.77 ± 0.84	10.67 ± 0.80	13.69 ± 0.82	n = 11	Abbott Architect i System
2.34 ± 0.32	7.45 ± 0.37	10.44 ± 0.35	10.23 ± 0.49	13.73 ± 0.37	n = 10	Abbott AxSym
1.76 ± 0.14	8.14 ± 0.50	10.47 ± 0.60	10.53 ± 0.59	12.76 ± 0.73	n = 19	Beckman Coulter ACCESS
2.08 ± 0.26	7.29 ± 0.29	9.73 ± 0.37	10.19 ± 0.43	13.30 ± 0.80	n = 10	Beckman Coulter AU Chemistry System
1.67 ± 0.20	8.38 ± 0.48	10.75 ± 0.61	10.87 ± 0.70	13.05 ± 0.62	n = 22	Beckman Coulter UniCel DxI 800
2.00 ± 0.27	7.05 ± 0.36	10.90 ± 0.91	10.17 ± 0.42	13.90 ± 1.18	n = 3	Gamma Counter
2.03 ± 0.13	7.72 ± 0.46	10.63 ± 0.63	10.59 ± 0.67	13.62 ± 0.74	n = 13	Ortho Vitros Eci/ECiQ
2.75 ± 0.16	7.26 ± 0.34	9.79 ± 0.58	10.17 ± 0.73	12.97 ± 1.08	n = 9	Roche cobas e601
2.57 ± 0.36	7.28 ± 0.40	10.13 ± 0.61	10.27 ± 0.65	13.01 ± 0.91	n = 4	Roche MODULAR D/P
2.75 ± 0.13	7.25 ± 0.24	9.76 ± 0.30	10.18 ± 0.36	13.18 ± 0.53	n = 15	Roche MODULAR E
1.94 ± 0.35	7.22 ± 0.40	9.70 ± 0.55	9.61 ± 0.54	11.96 ± 0.69	n = 50	Siemens ADVIA Centaur
2.32 ± 0.66	8.44 ± 0.64	10.99 ± 0.60	11.90 ± 0.67	15.11 ± 0.86	n = 15	Siemens Dimension RxL
3.06 ± 0.92	9.69 ± 0.84	12.13 ± 0.54	13.12 ± 0.66	16.55 ± 0.78	n = 10	Siemens Dimension Vista
1.81 ± 0.44	8.48 ± 0.55	11.85 ± 1.05	11.94 ± 0.81	15.26 ± 1.04	n = 8	Siemens Immulite 1000
1.82 ± 0.25	7.76 ± 0.49	10.75 ± 0.40	11.08 ± 0.69	13.86 ± 0.81	n = 16	Siemens Immulite 2000
1.97 ± 0.05	8.00 ± 0.27	10.55 ± 0.19	11.07 ± 0.14	13.77 ± 1.04	n = 3	Siemens Immulite 2500
2.08 ± 0.13	7.94 ± 0.50	10.35 ± 0.41	11.02 ± 0.68	14.06 ± 0.80	n = 7	Tosoh Bioscience
2.13 ± 0.05	7.97 ± 0.23	10.93 ± 0.51	10.85 ± 0.45	13.88 ± 0.32	n = 3	Reagent Not Listed
2.17 ± 0.41	7.70 ± 0.57	10.47 ± 0.65	10.64 ± 0.65	13.60 ± 0.82	n = 18	Mean of Above Means
						<Reagents>
2.56 ± 0.46	7.26 ± 0.58	10.09 ± 0.80	10.41 ± 0.73	13.66 ± 0.67	n = 21	Abbott
1.72 ± 0.19	8.28 ± 0.50	10.64 ± 0.62	10.69 ± 0.66	12.93 ± 0.68	n = 43	Beckman Coulter
2.65 ± 0.46	7.38 ± 0.51	10.10 ± 0.73	10.49 ± 0.80	13.33 ± 1.06	n = 3	Microgenics CEDIA
2.08 ± 0.26	7.29 ± 0.29	9.73 ± 0.37	10.19 ± 0.43	13.30 ± 0.80	n = 10	Microgenics DRI
2.05 ± 0.13	7.78 ± 0.44	10.70 ± 0.62	10.65 ± 0.64	13.69 ± 0.65	n = 16	Ortho Clinical Diagnostics
2.78 ± 0.16	7.29 ± 0.26	9.83 ± 0.38	10.23 ± 0.43	13.25 ± 0.67	n = 28	Roche Elecsys/Modular E/e601/e411
1.94 ± 0.35	7.23 ± 0.40	9.72 ± 0.55	9.62 ± 0.54	11.98 ± 0.69	n = 51	Siemens ADVIA/ADVIA Centaur
2.46 ± 0.75	8.68 ± 0.86	11.31 ± 0.81	12.21 ± 0.82	15.50 ± 0.99	n = 25	Siemens Dimension
3.68 ± 0.32	10.11 ± 0.61	12.22 ± 0.41	13.73 ± 0.68	16.97 ± 0.86	n = 3	Siemens Dimension LOCI
1.83 ± 0.30	7.98 ± 0.57	10.86 ± 0.59	11.30 ± 0.75	14.19 ± 1.10	n = 27	Siemens Immulite
2.11 ± 0.13	8.15 ± 0.46	10.48 ± 0.36	11.36 ± 0.45	14.41 ± 0.60	n = 5	Tosoh ST AIA
2.26 ± 0.47	7.73 ± 0.60	10.41 ± 0.68	10.73 ± 0.84	13.71 ± 1.11	n = 11	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analyses of the specimens (CV% < 6%) at Bioanalytical Core Laboratory, Georgetown University, Washington, DC.

Reference:

Soukhovaa N, Soldin OP, Soldin SJ. Isotope dilution tandem mass spectrometric method for T4/T3. Clinica Chimica Acta 2004;343:185-90.

Gu J, Soldin OP, Soldin SJ. Simultaneous quantification of free triiodothyronine and free thyroxine by isotope dilution tandem mass spectrometry. Clin Biochem 2007;40:1386-91.

Statistical Summary (Mean and Standard Deviation)

Total Beta hCG (mIU/mL)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
6.7 ± 1.81	41.8 ± 5.03	52.6 ± 4.49	1.2 ± 0.76	54.0 ± 5.79	n = 244	All Methods & Instruments
7.0	42.0	53.0	1.0	55.0	n = 244	Median value, All Methods & Instruments
<Instruments>						
8.9 ± 0.99	36.9 ± 2.71	49.9 ± 3.40	1.0 ± 0.00	49.7 ± 3.22	n = 13	Abbott Architect i System
6.6 ± 0.55	48.0 ± 2.12	74.6 ± 2.83	0.7 ± 1.10	71.8 ± 3.38	n = 5	Abbott AxSym
6.6 ± 0.63	36.8 ± 1.70	53.8 ± 2.35	2.3 ± 2.11	57.2 ± 2.31	n = 35	Beckman Coulter ACCESS
6.0 ± 0.00	35.8 ± 1.89	55.5 ± 3.47	1.0 ± 0.00	56.9 ± 2.41	n = 5	Beckman Coulter UniCel DxI 600
6.0 ± 0.00	37.3 ± 1.57	53.8 ± 3.15	1.1 ± 0.45	56.5 ± 3.67	n = 20	Beckman Coulter UniCel DxI 800
6.7 ± 0.58	44.2 ± 2.54	50.6 ± 2.77	1.8 ± 1.57	49.7 ± 2.59	n = 20	Ortho Vitros ECi/ECiQ
4.7 ± 0.51	44.6 ± 1.02	64.0 ± 1.80	1.0 ± 0.00	63.5 ± 1.86	n = 3	Roche cobas e411
4.2 ± 0.47	40.2 ± 2.00	56.9 ± 2.15	1.7 ± 2.07	57.4 ± 2.64	n = 14	Roche cobas e601
4.0 ± 0.00	42.8 ± 1.08	61.6 ± 2.52	0.5 ± 0.57	62.4 ± 2.08	n = 6	Roche Elecsys
4.0 ± 0.00	39.8 ± 2.03	57.4 ± 2.98	0.9 ± 0.55	56.8 ± 2.43	n = 16	Roche MODULAR E
8.7 ± 1.02	45.1 ± 2.27	49.7 ± 2.41	2.1 ± 1.40	50.4 ± 2.45	n = 51	Siemens ADVIA Centaur
8.0 ± 0.64	43.4 ± 3.06	48.2 ± 0.80	2.0 ± 0.00	49.7 ± 2.04	n = 5	Siemens ADVIA Centaur CP
5.0 ± 0.00	40.7 ± 1.11	52.0 ± 1.04	1.0 ± 0.00	51.1 ± 1.15	n = 16	Siemens Dimension Vista
7.2 ± 1.02	45.5 ± 2.77	73.5 ± 4.27	1.0 ± 0.00	67.0 ± 5.31	n = 8	Siemens Immulite 1000
7.3 ± 0.92	52.4 ± 3.46	88.5 ± 4.47	1.0 ± 0.00	83.7 ± 4.52	n = 18	Siemens Immulite 2000
6.0 ± 0.00	44.3 ± 1.37	60.0 ± 0.90	1.3 ± 0.51	58.8 ± 2.36	n = 3	Tosoh Bioscience
7.0 ± 0.00	44.4 ± 1.02	50.4 ± 1.02	2.3 ± 0.51	50.0 ± 0.90	n = 3	Reagent Not Listed
6.3 ± 1.57	42.4 ± 4.33	56.1 ± 7.99	1.3 ± 0.58	56.6 ± 7.33	n = 17	Mean of Above Means
<Reagents>						
8.3 ± 1.44	40.0 ± 5.89	55.3 ± 11.64	0.9 ± 0.66	54.5 ± 10.43	n = 18	Abbott
6.3 ± 0.59	36.9 ± 1.72	53.9 ± 2.83	1.8 ± 1.76	57.0 ± 2.81	n = 60	Beckman Coulter
6.8 ± 0.54	44.2 ± 2.33	50.6 ± 2.56	1.8 ± 1.44	49.8 ± 2.40	n = 23	Ortho Clinical Diagnostics
4.0 ± 0.00	40.7 ± 2.48	58.1 ± 3.61	0.8 ± 0.53	58.1 ± 3.57	n = 38	Roche Elecsys/Modular E/e601/e411
8.6 ± 1.01	45.0 ± 2.35	49.5 ± 2.34	2.0 ± 1.27	50.3 ± 2.42	n = 56	Siemens ADVIA/ADVIA Centaur
5.5 ± 0.57	43.0 ± 1.76	51.6 ± 1.80	1.6 ± 1.64	47.0 ± 5.70	n = 4	Siemens Dimension
5.0 ± 0.00	40.6 ± 1.13	51.8 ± 1.08	1.0 ± 0.00	50.9 ± 1.20	n = 14	Siemens Dimension LOCI
7.3 ± 0.96	50.9 ± 5.17	84.5 ± 8.94	1.0 ± 0.00	79.4 ± 9.29	n = 26	Siemens Immulite
6.0 ± 0.00	44.3 ± 1.37	60.0 ± 0.90	1.3 ± 0.51	58.8 ± 2.36	n = 3	Tosoh ST AIA
6.4 ± 1.50	42.5 ± 3.58	53.6 ± 3.70	1.4 ± 0.48	53.3 ± 4.67	n = 9	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Testosterone (ng/dL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
230.96 ± 32.42	181.87 ± 35.56	51.39 ± 13.21	237.61 ± 30.63	320.54 ± 43.29	n = 141	All Methods & Instruments
230.00	173.00	52.90	234.50	320.00	n = 141	Median value, All Methods & Instruments
261.00, 264.00	151.00, 153.00	35.50, 36.80	229.00, 229.00	339.00, 342.00		[---] Results of LC_MS_MS measurement*
						<Instruments>
137.30 ± 84.96	93.44 ± 60.03	26.05 ± 2.70	128.91 ± 77.18	178.97 ±111.03	n = 3	Abbott AxSym
234.77 ± 11.67	163.82 ± 5.41	43.87 ± 4.14	221.88 ± 12.56	290.23 ± 21.43	n = 6	Beckman Coulter ACCESS
223.86 ± 13.74	162.47 ± 13.21	44.60 ± 2.74	215.53 ± 12.68	283.88 ± 18.03	n = 15	Beckman Coulter UniCel DxI 800
240.26 ± 17.05	172.81 ± 20.62	39.76 ± 8.81	258.66 ± 20.97	333.93 ± 36.17	n = 6	Gamma Counter
263.16 ± 20.77	153.83 ± 3.87	33.49 ± 1.81	231.79 ± 20.41	346.41 ± 36.23	n = 6	LC/MS/MS
199.58 ± 6.11	237.68 ± 21.99	57.03 ± 5.41	285.17 ± 10.33	368.55 ± 18.74	n = 4	Ortho Vitros ECi/ECiQ
265.79 ± 24.85	183.96 ± 33.66	48.03 ± 12.07	243.26 ± 49.41	352.95 ± 34.80	n = 6	Roche cobas e601
269.58 ± 26.30	191.52 ± 22.67	50.71 ± 10.17	262.53 ± 34.14	367.06 ± 17.54	n = 10	Roche Elecsys
272.13 ± 7.11	183.60 ± 40.61	49.90 ± 15.34	245.87 ± 48.14	356.80 ± 33.72	n = 8	Roche MODULAR E
214.51 ± 20.01	168.31 ± 17.08	58.25 ± 7.89	233.82 ± 18.09	319.22 ± 34.55	n = 36	Siemens ADVIA Centaur
219.07 ± 16.03	241.32 ± 22.78	63.68 ± 4.48	303.12 ± 76.94	365.56 ± 81.86	n = 6	Siemens Immulite 1000
227.80 ± 34.56	222.83 ± 22.95	57.85 ± 7.41	238.24 ± 29.32	299.32 ± 30.10	n = 22	Siemens Immulite 2000
217.76 ± 47.84	238.77 ± 40.09	69.25 ± 9.07	265.63 ± 26.04	323.42 ± 12.53	n = 3	Siemens Immulite 2500
209.66 ± 16.10	166.99 ± 7.31	31.10 ± 0.91	245.86 ± 11.05	297.06 ± 8.09	n = 3	Tosoh Bioscience
232.18 ± 29.76	185.29 ± 38.47	48.37 ± 12.80	247.45 ± 24.66	330.93 ± 35.16	n = 14	Mean of Above Means
						<Reagents>
137.30 ± 84.96	93.44 ± 60.03	26.05 ± 2.70	128.91 ± 77.18	178.97 ±111.03	n = 3	Abbott
228.53 ± 14.56	163.67 ± 11.26	43.97 ± 4.55	217.95 ± 13.61	286.37 ± 19.57	n = 23	Beckman Coulter
261.26 ± 19.54	154.09 ± 9.70	34.00 ± 2.13	235.86 ± 20.88	351.56 ± 32.50	n = 7	In-House
201.48 ± 6.45	233.17 ± 20.66	57.15 ± 4.62	283.88 ± 9.10	364.15 ± 16.25	n = 5	Ortho Clinical Diagnostics
271.61 ± 22.47	183.91 ± 31.00	48.19 ± 11.76	248.48 ± 42.14	357.99 ± 27.09	n = 24	Roche Elecsys/Modular E/e601/e411
214.81 ± 19.75	168.23 ± 16.61	58.24 ± 7.70	233.83 ± 17.73	319.70 ± 33.76	n = 37	Siemens ADVIA/ADVIA Centaur
241.27 ± 18.97	177.59 ± 13.02	37.38 ± 7.32	252.67 ± 16.82	333.88 ± 36.14	n = 5	Siemens Coat-A-Count
225.37 ± 35.24	226.37 ± 25.14	60.03 ± 8.09	245.59 ± 35.37	307.28 ± 34.61	n = 31	Siemens Immulite
209.66 ± 16.10	166.99 ± 7.31	31.10 ± 0.91	245.86 ± 11.05	297.06 ± 8.09	n = 3	Tosoh ST AIA
226.28 ± 32.66	175.81 ± 36.99	43.98 ± 13.16	243.38 ± 15.72	325.96 ± 33.77	n = 9	Mean of Above Means

*The analyses on these specimens were performed in duplicate measurement using the HPLC-tandem mass spectrometry reference method at Clinical Chemistry Branch (CCB), Division of Laboratory Sciences (DLS), Centers for Disease Control and Prevention, Atlanta, Georgia.

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
3.64 $\pm$ 0.48	4.21 $\pm$ 0.51	2.83 $\pm$ 0.31	1.91 $\pm$ 0.23	1.65 $\pm$ 0.18	n = 296	All Methods & Instruments
3.70	4.20	2.90	1.90	1.60	n = 296	Median value, All Methods & Instruments
<Instruments>						
3.18 $\pm$ 0.17	3.53 $\pm$ 0.20	2.43 $\pm$ 0.16	1.64 $\pm$ 0.10	1.43 $\pm$ 0.10	n = 13	Abbott Architect i System
3.73 $\pm$ 0.49	3.97 $\pm$ 0.33	2.68 $\pm$ 0.18	1.89 $\pm$ 0.11	1.60 $\pm$ 0.08	n = 9	Abbott AxSym
3.19 $\pm$ 0.22	3.84 $\pm$ 0.30	2.62 $\pm$ 0.23	1.77 $\pm$ 0.13	1.52 $\pm$ 0.13	n = 26	Beckman Coulter ACCESS
3.16 $\pm$ 0.26	3.88 $\pm$ 0.29	2.62 $\pm$ 0.16	1.75 $\pm$ 0.10	1.52 $\pm$ 0.11	n = 21	Beckman Coulter UniCel DxI 800
5.04 $\pm$ 0.19	5.44 $\pm$ 0.14	3.59 $\pm$ 0.12	2.01 $\pm$ 0.09	1.66 $\pm$ 0.06	n = 16	Ortho Vitros Eci/EciQ
3.87 $\pm$ 0.14	4.75 $\pm$ 0.19	3.14 $\pm$ 0.10	2.27 $\pm$ 0.05	1.90 $\pm$ 0.09	n = 3	Roche cobas e411
3.72 $\pm$ 0.13	4.50 $\pm$ 0.14	2.98 $\pm$ 0.10	2.19 $\pm$ 0.06	1.83 $\pm$ 0.06	n = 15	Roche cobas e601
3.68 $\pm$ 0.04	4.48 $\pm$ 0.04	2.95 $\pm$ 0.06	2.20 $\pm$ 0.09	1.85 $\pm$ 0.08	n = 5	Roche Elecsys
3.77 $\pm$ 0.12	4.60 $\pm$ 0.13	3.03 $\pm$ 0.09	2.21 $\pm$ 0.05	1.87 $\pm$ 0.07	n = 21	Roche MODULAR E
3.76 $\pm$ 0.25	4.31 $\pm$ 0.25	2.93 $\pm$ 0.16	1.95 $\pm$ 0.13	1.69 $\pm$ 0.12	n = 63	Siemens ADVIA Centaur
3.68 $\pm$ 0.16	4.46 $\pm$ 0.19	2.99 $\pm$ 0.14	2.19 $\pm$ 0.11	1.89 $\pm$ 0.10	n = 9	Siemens Dimension EXL
3.21 $\pm$ 0.26	3.58 $\pm$ 0.28	2.52 $\pm$ 0.22	1.64 $\pm$ 0.12	1.45 $\pm$ 0.12	n = 21	Siemens Dimension RxL
3.49 $\pm$ 0.18	4.33 $\pm$ 0.26	2.88 $\pm$ 0.17	2.07 $\pm$ 0.11	1.78 $\pm$ 0.10	n = 15	Siemens Dimension Vista
3.19 $\pm$ 0.15	3.50 $\pm$ 0.00	2.47 $\pm$ 0.06	1.58 $\pm$ 0.07	1.36 $\pm$ 0.06	n = 7	Siemens Dimension Xpand
4.29 $\pm$ 0.35	4.41 $\pm$ 0.31	2.87 $\pm$ 0.17	1.91 $\pm$ 0.20	1.66 $\pm$ 0.16	n = 10	Siemens Immulite 1000
4.02 $\pm$ 0.22	4.23 $\pm$ 0.23	2.76 $\pm$ 0.24	1.85 $\pm$ 0.14	1.60 $\pm$ 0.12	n = 21	Siemens Immulite 2000
3.85 $\pm$ 0.12	3.91 $\pm$ 0.24	2.68 $\pm$ 0.13	1.73 $\pm$ 0.09	1.50 $\pm$ 0.08	n = 4	Siemens Immulite 2500
4.31 $\pm$ 0.38	4.65 $\pm$ 0.42	3.28 $\pm$ 0.26	2.03 $\pm$ 0.20	1.80 $\pm$ 0.09	n = 6	Tosoh Bioscience
4.97 $\pm$ 0.14	5.33 $\pm$ 0.14	3.50 $\pm$ 0.09	1.90 $\pm$ 0.00	1.60 $\pm$ 0.00	n = 3	Reagent Not Listed
3.72 $\pm$ 0.50	4.27 $\pm$ 0.53	2.86 $\pm$ 0.32	1.94 $\pm$ 0.23	1.66 $\pm$ 0.18	n = 19	Mean of Above Means
<Reagents>						
3.33 $\pm$ 0.37	3.68 $\pm$ 0.30	2.53 $\pm$ 0.21	1.74 $\pm$ 0.16	1.50 $\pm$ 0.13	n = 22	Abbott
3.17 $\pm$ 0.24	3.85 $\pm$ 0.29	2.62 $\pm$ 0.20	1.76 $\pm$ 0.11	1.52 $\pm$ 0.12	n = 49	Beckman Coulter
5.03 $\pm$ 0.18	5.42 $\pm$ 0.14	3.58 $\pm$ 0.12	1.99 $\pm$ 0.09	1.65 $\pm$ 0.06	n = 19	Ortho Clinical Diagnostics
3.75 $\pm$ 0.13	4.56 $\pm$ 0.16	3.01 $\pm$ 0.11	2.21 $\pm$ 0.06	1.86 $\pm$ 0.07	n = 42	Roche Elecsys/Modular E/e601/e411
3.66 $\pm$ 0.24	4.22 $\pm$ 0.27	2.91 $\pm$ 0.17	2.02 $\pm$ 0.11	1.76 $\pm$ 0.11	n = 33	Siemens ADVIA/ADVIA Centaur
3.21 $\pm$ 0.24	3.56 $\pm$ 0.28	2.50 $\pm$ 0.21	1.63 $\pm$ 0.12	1.42 $\pm$ 0.13	n = 29	Siemens Dimension
3.57 $\pm$ 0.21	4.38 $\pm$ 0.25	2.92 $\pm$ 0.17	2.12 $\pm$ 0.13	1.82 $\pm$ 0.12	n = 23	Siemens Dimension LOCI
4.06 $\pm$ 0.28	4.25 $\pm$ 0.29	2.79 $\pm$ 0.22	1.85 $\pm$ 0.16	1.60 $\pm$ 0.14	n = 35	Siemens Immulite
3.87 $\pm$ 0.22	4.41 $\pm$ 0.21	2.97 $\pm$ 0.15	1.88 $\pm$ 0.10	1.64 $\pm$ 0.09	n = 31	Siemens TSH-3
4.21 $\pm$ 0.32	4.53 $\pm$ 0.34	3.21 $\pm$ 0.23	1.97 $\pm$ 0.16	1.78 $\pm$ 0.08	n = 5	Tosoh AIA
3.70 $\pm$ 0.47	4.24 $\pm$ 0.47	2.88 $\pm$ 0.30	1.92 $\pm$ 0.18	1.66 $\pm$ 0.15	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T Uptake (Unit)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
1.060 ± 0.119	0.751 ± 0.169	0.728 ± 0.122	0.857 ± 0.041	0.832 ± 0.039	n = 24	All Methods & Instruments
1.100	0.840	0.800	0.870	0.830	n = 24	Median value, All Methods & Instruments
<Instruments>						
0.897 ± 0.020	0.571 ± 0.029	0.610 ± 0.023	0.812 ± 0.018	0.845 ± 0.015	n = 6	Abbott AxSym
1.135 ± 0.022	0.857 ± 0.042	0.797 ± 0.051	0.871 ± 0.040	0.800 ± 0.058	n = 4	Roche cobas e601
1.152 ± 0.013	0.880 ± 0.019	0.825 ± 0.015	0.882 ± 0.013	0.826 ± 0.036	n = 7	Roche MODULAR E
0.992 ± 0.015	1.887 ± 0.104	1.900 ± 0.126	1.582 ± 0.105	1.490 ± 0.064	n = 3	Siemens ADVIA Centaur
1.048 ± 0.117	0.966 ± 0.499	0.933 ± 0.495	0.968 ± 0.301	0.926 ± 0.274	n = 4	Mean of Above Means
<Reagents>						
0.897 ± 0.020	0.580 ± 0.044	0.618 ± 0.035	0.819 ± 0.029	0.851 ± 0.022	n = 7	Abbott
1.144 ± 0.020	0.871 ± 0.029	0.820 ± 0.017	0.880 ± 0.021	0.815 ± 0.044	n = 12	Roche Elecsys/Modular E/e601/e411
0.992 ± 0.015	1.887 ± 0.104	1.900 ± 0.126	1.582 ± 0.105	1.490 ± 0.064	n = 3	Siemens ADVIA/ADVIA Centaur
1.007 ± 0.112	1.063 ± 0.612	1.056 ± 0.613	1.056 ± 0.377	1.017 ± 0.337	n = 3	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T3-Uptake (%)

Specimen: E56	Specimen: E57	Specimen: E58	Specimen: E59	Specimen: E60	Number	Instrument or Reagent System
30.86 ± 3.95	47.53 ± 8.64	47.55 ± 8.29	42.87 ± 5.90	42.65 ± 5.11	n = 148	All Methods & Instruments
30.50	46.60	46.90	43.00	43.00	n = 148	Median value, All Methods & Instruments
<Instruments>						
28.75 ± 0.91	41.47 ± 1.07	40.83 ± 0.86	36.42 ± 1.16	35.55 ± 0.71	n = 6	Abbott Architect i System
32.69 ± 1.56	44.95 ± 1.74	42.14 ± 1.40	35.90 ± 2.08	33.68 ± 0.36	n = 6	Abbott AxSym
38.24 ± 1.23	47.63 ± 1.76	48.73 ± 2.00	43.77 ± 2.07	44.14 ± 1.47	n = 14	Beckman Coulter ACCESS
26.80 ± 0.62	47.82 ± 3.42	48.43 ± 2.89	44.97 ± 2.85	43.81 ± 1.97	n = 10	Beckman Coulter AU Chemistry System
38.12 ± 2.21	47.73 ± 2.07	47.41 ± 3.11	43.54 ± 1.78	43.82 ± 2.38	n = 13	Beckman Coulter UniCel DxI 800
29.70 ± 1.08	64.65 ± 0.41	62.60 ± 0.81	53.46 ± 1.58	51.16 ± 1.53	n = 6	Ortho Vitros Eci/ECiQ
26.25 ± 1.18	49.27 ± 0.68	49.24 ± 1.38	46.40 ± 1.28	45.46 ± 1.35	n = 3	Roche MODULAR D/P
31.20 ± 1.70	38.36 ± 1.75	39.30 ± 1.45	38.10 ± 1.76	39.36 ± 2.07	n = 5	Roche MODULAR E
31.09 ± 1.92	58.51 ± 3.61	57.95 ± 3.54	48.96 ± 3.01	47.35 ± 2.56	n = 35	Siemens ADVIA Centaur
29.86 ± 1.53	41.80 ± 1.58	42.50 ± 1.46	39.38 ± 0.70	40.32 ± 1.01	n = 10	Siemens Dimension RxL
30.00 ± 2.12	40.64 ± 1.69	42.20 ± 1.78	39.49 ± 0.83	42.36 ± 1.09	n = 5	Siemens Dimension Vista
28.05 ± 1.43	40.68 ± 1.54	41.16 ± 1.72	38.79 ± 1.34	37.73 ± 1.12	n = 6	Siemens Immulite 1000
29.63 ± 0.89	37.89 ± 1.27	37.58 ± 1.20	35.63 ± 1.31	36.16 ± 1.21	n = 13	Siemens Immulite 2000
28.93 ± 0.77	38.51 ± 1.70	38.53 ± 1.61	36.66 ± 1.61	37.13 ± 1.22	n = 3	Siemens Immulite 2500
25.83 ± 0.59	45.71 ± 0.69	45.78 ± 0.99	42.55 ± 0.82	43.03 ± 0.97	n = 5	Tosoh Bioscience
29.60 ± 2.94	44.12 ± 5.91	44.35 ± 6.04	41.05 ± 5.10	41.30 ± 4.88	n = 15	Mean of Above Means
<Reagents>						
30.62 ± 2.47	43.07 ± 2.37	41.31 ± 1.02	36.20 ± 1.70	34.79 ± 1.35	n = 12	Abbott
38.09 ± 1.67	47.67 ± 1.95	48.09 ± 2.58	43.62 ± 1.85	43.95 ± 1.89	n = 28	Beckman Coulter
26.58 ± 0.68	49.51 ± 0.67	50.00 ± 0.00	46.41 ± 0.89	44.95 ± 1.32	n = 10	Microgenics CEDIA
27.30 ± 0.55	42.57 ± 0.41	43.89 ± 0.37	40.67 ± 0.42	41.42 ± 0.41	n = 3	Microgenics DRI
29.68 ± 0.97	64.63 ± 0.46	62.39 ± 0.88	53.35 ± 1.45	51.03 ± 1.40	n = 7	Ortho Clinical Diagnostics
31.42 ± 0.82	38.45 ± 1.47	39.65 ± 1.45	38.33 ± 1.34	39.87 ± 1.72	n = 6	Roche Elecsys/Modular E/e601/e411
31.09 ± 1.92	58.51 ± 3.61	57.95 ± 3.54	48.96 ± 3.01	47.35 ± 2.56	n = 35	Siemens ADVIA/ADVIA Centaur
29.88 ± 2.36	41.41 ± 2.01	42.68 ± 1.92	39.40 ± 0.86	41.13 ± 1.93	n = 18	Siemens Dimension
29.19 ± 1.24	38.62 ± 1.83	38.49 ± 2.01	36.48 ± 1.93	36.72 ± 1.35	n = 22	Siemens Immulite
25.87 ± 0.68	45.89 ± 0.83	45.49 ± 0.87	42.73 ± 0.89	43.25 ± 0.96	n = 4	Tosoh ST AIA
29.35 ± 2.47	45.63 ± 7.67	45.91 ± 7.34	42.13 ± 5.47	42.38 ± 4.68	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Vitamin B12 (pg/mL)

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
376.2 ± 41.39 375.0	305.0 ± 38.90 306.0	302.3 ± 37.07 303.0	456.0 ± 58.25 455.0	453.2 ± 54.74 452.0	n = 230 n = 230	All Methods & Instruments Median value, All Methods & Instruments
<Instruments>						
389.7 ± 25.09	336.7 ± 24.27	332.4 ± 22.78	481.3 ± 22.44	473.6 ± 26.18	n = 13	Abbott AxSym
343.3 ± 26.86	302.4 ± 24.96	298.1 ± 22.63	428.5 ± 29.72	431.2 ± 37.72	n = 21	Beckman Coulter ACCESS
326.4 ± 36.09	265.9 ± 17.16	275.2 ± 11.28	407.1 ± 15.26	410.5 ± 15.50	n = 3	Beckman Coulter UniCel DxI 600
312.4 ± 25.26	273.5 ± 26.82	268.4 ± 24.45	388.9 ± 42.08	382.9 ± 27.60	n = 21	Beckman Coulter UniCel DxI 800
377.8 ± 13.37	334.8 ± 17.52	331.6 ± 9.64	467.5 ± 28.41	467.7 ± 26.77	n = 19	Ortho Vitros ECI/ECIQ
432.0 ± 13.34	297.8 ± 13.65	296.0 ± 14.12	521.7 ± 11.45	512.3 ± 11.78	n = 4	Roche cobas e411
410.7 ± 16.14	343.1 ± 14.14	337.4 ± 14.68	509.4 ± 21.21	504.5 ± 22.82	n = 13	Roche cobas e601
440.0 ± 5.96	318.6 ± 21.42	305.0 ± 38.30	521.8 ± 14.31	515.9 ± 10.59	n = 4	Roche Elecsys
409.9 ± 10.47	342.6 ± 9.93	336.9 ± 11.77	504.5 ± 16.58	492.4 ± 14.23	n = 18	Roche MODULAR E
373.9 ± 27.52	287.5 ± 22.67	291.6 ± 25.80	429.5 ± 33.71	427.2 ± 33.15	n = 63	Siemens ADVIA Centaur
376.9 ± 22.09	312.2 ± 18.47	316.3 ± 22.24	461.7 ± 18.79	461.1 ± 25.90	n = 4	Siemens ADVIA Centaur CP
401.6 ± 26.07	233.4 ± 42.75	242.2 ± 40.93	387.4 ± 29.04	407.2 ± 23.23	n = 14	Siemens Dimension Vista
389.7 ± 24.19	323.9 ± 22.54	310.0 ± 5.03	564.8 ± 27.80	542.2 ± 31.40	n = 5	Siemens Immulite 1000
342.6 ± 18.20	296.4 ± 20.12	283.2 ± 15.72	502.1 ± 24.68	491.5 ± 32.41	n = 19	Siemens Immulite 2000
446.5 ± 10.97	448.4 ± 15.22	432.7 ± 13.99	612.8 ± 31.01	580.9 ± 24.83	n = 4	Tosoh Bioscience
386.0 ± 41.44	308.5 ± 33.93	304.0 ± 30.57	477.2 ± 64.24	472.7 ± 55.12	n = 15	Mean of Above Means
<Reagents>						
389.7 ± 25.09	336.7 ± 24.27	332.4 ± 22.78	481.3 ± 22.44	473.6 ± 26.18	n = 13	Abbott
327.3 ± 31.07	286.4 ± 29.18	282.1 ± 26.98	410.3 ± 39.54	405.8 ± 39.89	n = 45	Beckman Coulter
375.8 ± 16.93	334.4 ± 16.29	331.1 ± 9.20	466.4 ± 28.08	465.5 ± 27.51	n = 21	Ortho Clinical Diagnostics
414.5 ± 16.51	337.4 ± 18.94	332.0 ± 20.03	509.2 ± 18.12	499.7 ± 17.71	n = 38	Roche Elecsys/Modular E/e601/e411
374.2 ± 27.19	289.2 ± 23.54	293.2 ± 26.40	431.9 ± 34.15	429.5 ± 34.03	n = 67	Siemens ADVIA/ADVIA Centaur
403.3 ± 27.12	229.4 ± 35.74	237.3 ± 36.60	387.3 ± 28.75	407.2 ± 23.21	n = 13	Siemens Dimension LOCI
357.8 ± 34.46	303.7 ± 26.20	290.2 ± 19.12	519.0 ± 41.27	511.1 ± 50.64	n = 27	Siemens Immulite
446.5 ± 10.97	448.4 ± 15.22	432.7 ± 13.99	612.8 ± 31.01	580.9 ± 24.83	n = 4	Tosoh AIA
385.8 ± 34.88	313.3 ± 51.95	309.1 ± 47.70	471.3 ± 66.99	467.3 ± 56.80	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E56 -----	Specimen: E57 -----	Specimen: E58 -----	Specimen: E59 -----	Specimen: E60 -----	Number -----	Instrument or Reagent System -----
14.13 ± 2.79	27.40 ± 5.35	35.30 ± 4.78	41.82 ± 7.41	61.85 ± 9.00	n = 78	All Methods & Instruments
14.00	26.70	35.00	41.00	64.00	n = 78	Median value, All Methods & Instruments
<Instruments>						
16.73 ± 1.35	37.51 ± 4.05	42.77 ± 3.86	46.93 ± 5.17	68.06 ± 8.97	n = 5	Automated microplate processor
14.14 ± 0.26	31.18 ± 0.24	35.38 ± 1.13	40.69 ± 1.38	53.03 ± 0.86	n = 3	BioRad PhD System
14.75 ± 2.19	25.51 ± 2.88	34.08 ± 3.64	38.70 ± 4.37	61.84 ± 6.49	n = 40	DiaSorin Liaison
10.49 ± 1.47	25.03 ± 2.87	34.16 ± 2.15	57.33 ± 3.19	103.51 ± 5.64	n = 12	LC/MS/MS
14.79 ± 2.43	34.02 ± 4.44	38.85 ± 6.02	43.17 ± 5.07	62.31 ± 11.08	n = 14	Reagent Not Listed
14.46 ± 1.98	30.60 ± 5.34	36.66 ± 3.51	44.33 ± 6.50	61.66 ± 5.68	n = 5	Mean of Above Means
<Reagents>						
14.75 ± 2.19	25.51 ± 2.88	34.08 ± 3.64	38.70 ± 4.37	61.84 ± 6.49	n = 40	DiaSorin Liaison
15.27 ± 1.85	34.11 ± 3.97	39.45 ± 4.99	43.73 ± 4.89	61.89 ± 10.42	n = 22	Immuno Diagnostic Systems Enzyme Im
10.49 ± 1.47	25.03 ± 2.87	34.16 ± 2.15	57.33 ± 3.19	103.51 ± 5.64	n = 12	In-House
13.73 ± 2.33	27.75 ± 4.54	35.61 ± 2.73	45.98 ± 8.62	73.53 ± 21.32	n = 3	Mean of Above Means