

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
1.42 \pm 0.27	11.24 \pm 1.37	10.51 \pm 1.28	13.06 \pm 1.61	23.25 \pm 2.49	n = 156	All Methods & Instruments
1.40	11.10	10.50	12.90	23.00	n = 156	Median value, All Methods & Instruments
						<Instruments>
1.43 \pm 0.15	9.24 \pm 0.45	8.74 \pm 0.47	11.01 \pm 0.46	19.60 \pm 1.26	n = 4	Abbott Architect
2.31 \pm 0.65	11.30 \pm 1.40	10.80 \pm 1.07	13.70 \pm 1.16	24.89 \pm 1.67	n = 5	Abbott AxSym
1.49 \pm 0.23	10.71 \pm 0.97	10.05 \pm 0.65	12.32 \pm 1.02	22.95 \pm 1.92	n = 6	Beckman Coulter ACCESS
1.62 \pm 0.28	11.15 \pm 0.71	10.12 \pm 0.79	12.19 \pm 0.81	21.48 \pm 1.34	n = 19	Beckman Coulter UniCel DxI 800
1.63 \pm 0.16	10.84 \pm 0.57	10.46 \pm 0.90	12.67 \pm 0.89	23.37 \pm 1.92	n = 4	LC/MS/MS
1.11 \pm 0.05	10.49 \pm 0.92	9.60 \pm 0.85	12.03 \pm 0.90	19.84 \pm 1.39	n = 11	Ortho Vitros Eci/ECiQ
1.24 \pm 0.09	9.87 \pm 0.47	9.20 \pm 0.40	12.05 \pm 0.57	22.46 \pm 0.81	n = 7	Roche cobas e601
1.28 \pm 0.11	9.93 \pm 0.39	9.33 \pm 0.28	12.19 \pm 0.41	22.27 \pm 0.66	n = 5	Roche Elecsys
1.20 \pm 0.10	9.87 \pm 0.43	9.20 \pm 0.36	12.02 \pm 0.54	22.50 \pm 0.71	n = 10	Roche MODULAR E
1.39 \pm 0.21	11.67 \pm 1.12	10.88 \pm 0.82	13.33 \pm 1.03	23.69 \pm 1.70	n = 48	Siemens ADVIA Centaur
1.62 \pm 0.29	13.47 \pm 0.80	12.08 \pm 0.67	16.10 \pm 1.55	25.91 \pm 1.02	n = 4	Siemens Immulite 1000
1.50 \pm 0.21	12.33 \pm 1.13	12.00 \pm 1.22	15.59 \pm 1.24	26.37 \pm 1.82	n = 21	Siemens Immulite 2000
1.75 \pm 0.29	13.11 \pm 1.04	12.83 \pm 0.84	15.64 \pm 1.21	26.55 \pm 1.97	n = 4	Siemens Immulite 2500
1.45 \pm 0.23	10.98 \pm 1.28	10.31 \pm 1.27	12.94 \pm 1.60	23.22 \pm 2.29	n = 13	Mean of Above Means
						<Reagents>
1.85 \pm 0.63	10.26 \pm 1.48	9.85 \pm 1.35	12.50 \pm 1.70	22.84 \pm 3.41	n = 9	Abbott
1.61 \pm 0.28	11.11 \pm 0.76	10.09 \pm 0.72	12.20 \pm 0.82	21.77 \pm 1.50	n = 27	Beckman Coulter
1.63 \pm 0.16	10.84 \pm 0.57	10.46 \pm 0.90	12.67 \pm 0.89	23.37 \pm 1.92	n = 4	In-House
1.12 \pm 0.08	10.62 \pm 0.99	9.74 \pm 0.98	12.13 \pm 0.90	19.89 \pm 1.76	n = 12	Ortho Clinical Diagnostics
1.23 \pm 0.10	9.88 \pm 0.44	9.23 \pm 0.36	12.08 \pm 0.52	22.42 \pm 0.74	n = 22	Roche Elecsys/Modular E/e601/e411
1.39 \pm 0.20	11.67 \pm 1.12	10.84 \pm 0.81	13.32 \pm 1.01	23.67 \pm 1.64	n = 49	Siemens ADVIA/ADVIA Centaur
1.55 \pm 0.26	12.62 \pm 1.21	12.12 \pm 1.14	15.67 \pm 1.31	26.33 \pm 1.74	n = 29	Siemens Immulite
1.49 \pm 0.25	10.92 \pm 0.86	10.21 \pm 0.82	12.41 \pm 0.42	22.82 \pm 1.77	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D2 (ng/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
3.03 ± 1.48	6.24 ± 1.47	8.28 ± 1.51	11.43 ± 2.15	16.15 ± 2.85	n = 14	All Methods & Instruments
4.00	6.20	8.20	11.40	16.30	n = 14	Median value, All Methods & Instruments
						<Instruments>
3.03 ± 1.48	6.24 ± 1.47	8.28 ± 1.51	11.43 ± 2.15	16.15 ± 2.85	n = 14	LC/MS/MS
						<Reagents>
3.03 ± 1.48	6.24 ± 1.47	8.28 ± 1.51	11.43 ± 2.15	16.15 ± 2.85	n = 14	In-House

Statistical Summary (Mean and Standard Deviation)

25-OH Vitamin D3 (ng/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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9.29 ± 1.23	18.57 ± 2.23	20.23 ± 2.60	26.84 ± 3.91	30.74 ± 4.25	n = 15	All Methods & Instruments
9.10	18.80	20.30	26.50	29.70	n = 15	Median value, All Methods & Instruments
						<Instruments>
9.20 ± 1.31	18.68 ± 2.32	20.33 ± 2.72	27.24 ± 3.75	30.94 ± 4.42	n = 14	LC/MS/MS
						<Reagents>
9.20 ± 1.31	18.68 ± 2.32	20.33 ± 2.72	27.24 ± 3.75	30.94 ± 4.42	n = 14	In-House

Statistical Summary (Mean and Standard Deviation)

Dehydroepiandrosterone sulfate (DHEA-S, µg/dL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
29.35 ± 6.23	219.58 ± 30.90	79.41 ± 13.03	324.46 ± 33.72	147.64 ± 19.41	n = 76	All Methods & Instruments
29.00	215.00	77.00	325.00	147.00	n = 76	Median value, All Methods & Instruments
39.2; 40.0	177.0; 189.0	73.0; 64.0	237.0; 235.0	125.0; 104.0	n = 2	[---] Results of LC_MS_MS measurement*
<Instruments>						
33.61 ± 3.42	211.78 ± 14.09	79.31 ± 5.46	320.94 ± 20.62	151.98 ± 9.95	n = 4	Beckman Coulter UniCel DxI 800
43.23 ± 2.56	280.51 ± 5.95	108.25 ± 2.50	362.82 ± 5.30	171.46 ± 6.96	n = 4	Roche cobas e601
40.16 ± 3.73	256.77 ± 6.62	101.89 ± 5.91	344.50 ± 13.14	166.42 ± 8.72	n = 4	Roche Elecsys
42.26 ± 2.03	276.75 ± 11.75	107.54 ± 2.34	350.44 ± 11.22	176.22 ± 7.50	n = 3	Roche MODULAR E
26.82 ± 1.32	212.68 ± 10.44	81.54 ± 13.97	344.67 ± 40.91	145.03 ± 8.92	n = 5	Siemens Immulite 1000
26.31 ± 3.28	213.22 ± 22.84	75.11 ± 8.00	318.41 ± 27.44	143.09 ± 15.37	n = 42	Siemens Immulite 2000
30.02 ± 0.04	224.15 ± 22.63	76.68 ± 5.06	334.66 ± 24.32	154.31 ± 18.40	n = 6	Siemens Immulite 2500
34.58 ± 7.50	237.73 ± 31.92	89.47 ± 15.70	339.70 ± 15.87	158.05 ± 13.36	n = 7	Mean of Above Means
<Reagents>						
32.55 ± 2.90	207.42 ± 15.05	77.78 ± 5.52	311.54 ± 26.09	147.51 ± 12.48	n = 5	Beckman Coulter
35.30 ± 5.39	175.63 ± 15.98	73.02 ± 9.94	237.74 ± 16.96	118.86 ± 8.00	n = 4	In-House
42.09 ± 3.14	271.56 ± 13.97	106.81 ± 3.55	353.90 ± 12.96	171.18 ± 8.57	n = 11	Roche Elecsys/Modular E/e601/e411
26.80 ± 3.11	214.35 ± 21.87	75.62 ± 8.11	321.97 ± 28.54	144.46 ± 15.47	n = 53	Siemens Immulite
34.08 ± 5.90	214.33 ± 36.27	80.46 ± 13.18	311.05 ± 44.11	145.72 ± 19.71	n = 4	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analysis 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: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
31.5 ± 15.74	121.4 ± 45.18	157.6 ± 52.10	176.2 ± 22.05	152.6 ± 18.59	n = 161	All Methods & Instruments
29.0	124.0	154.0	175.0	154.0	n = 161	Median value, All Methods & Instruments
<Instruments>						
45.8 ± 4.97	86.8 ± 2.11	115.8 ± 3.61	146.3 ± 3.15	134.1 ± 3.69	n = 4	Abbott Architect
25.5 ± 5.63	68.5 ± 7.60	98.7 ± 8.72	150.9 ± 14.20	139.0 ± 16.02	n = 6	Abbott AxSym
28.4 ± 13.46	202.8 ± 17.19	245.7 ± 18.37	186.1 ± 13.44	164.6 ± 9.22	n = 9	Beckman Coulter ACCESS
24.6 ± 6.44	199.8 ± 10.21	231.8 ± 15.81	172.7 ± 10.16	144.4 ± 13.81	n = 13	Beckman Coulter UniCel DxI 800
13.6 ± 4.66	50.3 ± 19.03	61.7 ± 16.66	117.2 ± 13.80	105.3 ± 16.75	n = 4	Gamma Counter
30.7 ± 6.09	70.6 ± 9.54	116.9 ± 10.33	185.8 ± 12.15	163.3 ± 7.07	n = 4	LC/MS/MS
11.9 ± 3.21	125.3 ± 15.00	152.2 ± 13.48	142.4 ± 13.30	117.7 ± 8.12	n = 9	Ortho Vitros ECi/ECiQ
48.2 ± 5.39	94.3 ± 6.37	134.4 ± 6.91	175.5 ± 6.64	154.9 ± 8.03	n = 6	Roche cobas e601
37.4 ± 7.18	83.5 ± 5.13	116.9 ± 6.34	155.8 ± 7.64	140.3 ± 9.63	n = 5	Roche Elecsys
48.1 ± 4.23	95.9 ± 5.11	131.8 ± 5.92	169.1 ± 8.95	153.8 ± 8.36	n = 8	Roche MODULAR E
48.4 ± 13.21	104.8 ± 28.69	129.3 ± 26.76	179.8 ± 16.58	163.3 ± 13.15	n = 38	Siemens ADVIA Centaur
52.9 ± 6.58	89.8 ± 7.82	119.3 ± 6.93	186.0 ± 12.65	172.6 ± 18.23	n = 3	Siemens ADVIA Centaur CP
20.5 ± 1.18	137.9 ± 17.83	191.5 ± 42.13	190.7 ± 13.83	154.2 ± 4.68	n = 12	Siemens Immulite 1000
21.3 ± 2.50	136.3 ± 12.78	184.8 ± 16.28	192.8 ± 19.34	154.4 ± 15.26	n = 26	Siemens Immulite 2000
20.4 ± 0.55	147.1 ± 9.35	186.1 ± 16.78	186.8 ± 11.91	155.1 ± 11.36	n = 6	Siemens Immulite 2500
31.5 ± 14.65	107.6 ± 42.92	144.0 ± 49.65	172.2 ± 20.78	150.5 ± 16.26	n = 15	Mean of Above Means
<Reagents>						
33.0 ± 12.23	76.6 ± 11.51	106.8 ± 11.81	144.9 ± 3.46	134.5 ± 8.15	n = 10	Abbott
26.3 ± 8.46	200.7 ± 14.44	239.4 ± 19.15	179.0 ± 14.31	154.8 ± 15.87	n = 24	Beckman Coulter
30.7 ± 6.09	70.6 ± 9.54	116.9 ± 10.33	185.8 ± 12.15	163.3 ± 7.07	n = 4	In-House
11.9 ± 3.21	125.3 ± 15.00	152.2 ± 13.48	142.4 ± 13.30	117.7 ± 8.12	n = 9	Ortho Clinical Diagnostics
44.9 ± 7.45	92.2 ± 8.04	129.1 ± 9.56	167.8 ± 11.30	150.4 ± 10.53	n = 19	Roche Elecsys/Modular E/e601/e411
53.1 ± 18.81	127.2 ± 19.82	148.7 ± 20.23	177.1 ± 16.72	161.7 ± 15.14	n = 21	Siemens ADVIA/ADVIA Centaur
46.6 ± 5.75	83.1 ± 5.68	110.8 ± 10.55	183.6 ± 15.48	165.1 ± 11.25	n = 20	Siemens ADVIA:Centaur Estradiol 6 I
20.0 ± 0.00	138.5 ± 13.63	186.4 ± 18.68	190.9 ± 17.45	154.4 ± 13.69	n = 44	Siemens Immulite
33.4 ± 14.25	108.6 ± 39.02	141.3 ± 39.35	173.5 ± 18.00	153.2 ± 14.13	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free Estriol (ng/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
0.10 ± 0.07	2.20 ± 1.38	2.26 ± 1.45	0.10 ± 0.00	0.12 ± 0.08	n = 23	All Methods & Instruments
0.10	1.80	1.90	0.10	0.10	n = 23	Median value, All Methods & Instruments
						<Instruments>
0.06 ± 0.06	1.32 ± 0.08	1.34 ± 0.06	0.10 ± 0.00	0.10 ± 0.00	n = 5	Beckman Coulter UniCel DxI 800
0.10 ± 0.00	3.44 ± 0.84	3.61 ± 0.52	0.10 ± 0.00	0.10 ± 0.00	n = 3	LC/MS/MS
0.18 ± 0.11	2.69 ± 1.25	2.73 ± 1.30	0.18 ± 0.11	0.18 ± 0.11	n = 7	Siemens Immulite 2000
0.11 ± 0.05	2.53 ± 0.96	2.60 ± 1.03	0.12 ± 0.04	0.12 ± 0.04	n = 3	Mean of Above Means
						<Reagents>
0.07 ± 0.05	1.34 ± 0.09	1.35 ± 0.07	0.10 ± 0.00	0.10 ± 0.00	n = 9	Beckman Coulter
0.10 ± 0.00	3.44 ± 0.84	3.61 ± 0.52	0.10 ± 0.00	0.10 ± 0.00	n = 3	In-House
0.20 ± 0.10	3.10 ± 1.37	3.21 ± 1.47	0.20 ± 0.10	0.20 ± 0.10	n = 7	Siemens Immulite
0.32 ± 0.49	2.41 ± 2.45	2.44 ± 2.49	0.15 ± 0.19	0.15 ± 0.19	n = 3	Reagent Not Listed
0.17 ± 0.10	2.64 ± 0.86	2.71 ± 0.93	0.14 ± 0.05	0.14 ± 0.05	n = 4	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T-3 (pg/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
1.23 ± 0.29	5.00 ± 0.86	3.58 ± 0.50	3.90 ± 0.50	5.12 ± 0.83	n = 113	All Methods & Instruments
1.20	5.30	3.80	3.90	5.00	n = 113	Median value, All Methods & Instruments
0.3	2.6	3.0	3.5	3.9	n = 3	[---] Results of LC_MS_MS measurement*
<Instruments>						
1.16 ± 0.18	4.73 ± 0.22	3.26 ± 0.13	4.02 ± 0.20	5.73 ± 0.20	n = 7	Abbott Architect
1.38 ± 0.24	4.62 ± 0.41	3.26 ± 0.39	3.99 ± 0.52	4.96 ± 0.56	n = 3	Beckman Coulter ACCESS
1.35 ± 0.22	4.18 ± 0.27	3.11 ± 0.27	3.57 ± 0.23	4.34 ± 0.32	n = 14	Beckman Coulter UniCel DxI 800
0.60 ± 0.00	10.32 ± 0.70	6.51 ± 0.41	8.02 ± 0.27	9.15 ± 0.49	n = 7	Ortho Vitros Eci/ECiQ
1.30 ± 0.08	5.93 ± 0.25	4.00 ± 0.15	5.00 ± 0.17	6.63 ± 0.09	n = 4	Roche cobas e601
1.27 ± 0.09	5.88 ± 0.20	4.01 ± 0.11	4.97 ± 0.16	6.63 ± 0.20	n = 4	Roche Elecsys
1.24 ± 0.13	5.74 ± 0.17	3.94 ± 0.17	4.90 ± 0.00	6.51 ± 0.25	n = 7	Roche MODULAR E
1.21 ± 0.16	5.33 ± 0.12	3.82 ± 0.13	3.89 ± 0.13	5.02 ± 0.17	n = 40	Siemens ADVIA Centaur
0.50 ± 0.00	6.25 ± 0.06	4.07 ± 0.09	4.67 ± 0.09	6.63 ± 0.09	n = 4	Siemens Dimension Vista
1.62 ± 0.27	3.58 ± 0.32	2.79 ± 0.14	3.46 ± 0.22	4.60 ± 0.24	n = 11	Siemens Immulite 2000
1.73 ± 0.24	3.61 ± 0.20	2.95 ± 0.22	3.46 ± 0.23	4.75 ± 0.19	n = 4	Siemens Immulite 2500
1.26 ± 0.33	5.03 ± 1.07	3.54 ± 0.54	4.18 ± 0.68	5.71 ± 1.23	n = 11	Mean of Above Means
<Reagents>						
1.16 ± 0.16	4.70 ± 0.21	3.24 ± 0.14	3.99 ± 0.19	5.60 ± 0.31	n = 10	Abbott
1.36 ± 0.23	4.22 ± 0.32	3.13 ± 0.30	3.58 ± 0.22	4.36 ± 0.33	n = 16	Beckman Coulter
0.60 ± 0.00	10.32 ± 0.70	6.51 ± 0.41	8.02 ± 0.27	9.15 ± 0.49	n = 7	Ortho Clinical Diagnostics
1.26 ± 0.10	5.80 ± 0.20	3.98 ± 0.16	4.91 ± 0.05	6.56 ± 0.21	n = 14	Roche Elecsys/Modular E/e601/e411
1.20 ± 0.16	5.32 ± 0.13	3.82 ± 0.12	3.89 ± 0.13	5.01 ± 0.17	n = 42	Siemens ADVIA/ADVIA Centaur
0.50 ± 0.00	6.25 ± 0.06	4.07 ± 0.09	4.67 ± 0.09	6.63 ± 0.09	n = 4	Siemens Dimension LOCI
1.63 ± 0.27	3.56 ± 0.30	2.81 ± 0.21	3.44 ± 0.25	4.62 ± 0.25	n = 16	Siemens Immulite
1.13 ± 0.40	5.03 ± 1.11	3.52 ± 0.55	4.05 ± 0.59	5.75 ± 1.45	n = 7	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analysis 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: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
1.13 ± 0.40	1.32 ± 0.42	2.89 ± 0.65	4.13 ± 0.66	5.62 ± 0.64	n = 224	All Methods & Instruments
1.10	1.30	2.80	4.00	5.50	n = 224	Median value, All Methods & Instruments
<Instruments>						
1.18 ± 0.24	1.84 ± 0.26	3.72 ± 0.30	4.68 ± 0.34	6.97 ± 0.64	n = 12	Abbott AxSym
0.93 ± 0.15	1.38 ± 0.16	2.91 ± 0.20	4.25 ± 0.27	5.79 ± 0.32	n = 20	Beckman Coulter ACCESS
0.97 ± 0.14	1.40 ± 0.09	2.77 ± 0.23	3.85 ± 0.27	5.41 ± 0.52	n = 3	Beckman Coulter UniCel DxI 600
0.98 ± 0.19	1.37 ± 0.21	2.77 ± 0.18	3.91 ± 0.23	5.36 ± 0.37	n = 22	Beckman Coulter UniCel DxI 800
0.76 ± 0.18	1.43 ± 0.20	2.57 ± 0.29	3.70 ± 0.35	5.14 ± 0.40	n = 21	Ortho Vitros ECi/ECiQ
2.28 ± 0.39	3.07 ± 0.42	4.06 ± 0.40	5.21 ± 0.18	6.04 ± 0.32	n = 13	Roche cobas e601
2.27 ± 0.77	2.26 ± 0.65	3.89 ± 0.67	5.21 ± 0.70	6.22 ± 0.81	n = 4	Roche Elecsys
2.37 ± 0.59	3.31 ± 0.60	4.24 ± 0.45	5.42 ± 0.47	6.29 ± 0.34	n = 16	Roche MODULAR E
1.26 ± 0.23	1.06 ± 0.22	2.54 ± 0.31	3.86 ± 0.33	5.34 ± 0.47	n = 67	Siemens ADVIA Centaur
1.74 ± 0.61	1.57 ± 0.75	2.90 ± 0.49	4.37 ± 0.54	6.34 ± 0.88	n = 4	Siemens ADVIA Centaur CP
0.50 ± 0.00	0.56 ± 0.06	1.33 ± 0.29	1.62 ± 0.30	2.46 ± 0.30	n = 7	Siemens Dimension Vista
1.06 ± 0.10	1.59 ± 0.20	3.87 ± 0.32	5.05 ± 0.36	7.19 ± 0.20	n = 3	Siemens Immulite 1000
1.00 ± 0.00	1.18 ± 0.12	2.81 ± 0.22	3.81 ± 0.20	5.40 ± 0.17	n = 21	Siemens Immulite 2000
1.03 ± 0.05	1.53 ± 0.14	3.32 ± 0.24	4.38 ± 0.24	5.97 ± 0.23	n = 3	Siemens Immulite 2500
0.74 ± 0.10	1.73 ± 0.42	2.68 ± 0.59	5.14 ± 0.56	6.03 ± 0.67	n = 3	Tosoh Bioscience
1.18 ± 0.58	1.54 ± 0.55	3.12 ± 0.73	4.45 ± 0.72	5.92 ± 0.62	n = 15	Mean of Above Means
<Reagents>						
1.18 ± 0.24	1.84 ± 0.26	3.72 ± 0.30	4.68 ± 0.34	6.97 ± 0.64	n = 12	Abbott
0.95 ± 0.17	1.38 ± 0.18	2.84 ± 0.20	4.05 ± 0.31	5.57 ± 0.42	n = 45	Beckman Coulter
0.76 ± 0.20	1.42 ± 0.21	2.57 ± 0.28	3.72 ± 0.35	5.15 ± 0.38	n = 22	Ortho Clinical Diagnostics
2.32 ± 0.55	3.06 ± 0.63	4.08 ± 0.50	5.27 ± 0.41	6.17 ± 0.38	n = 34	Roche Elecsys/Modular E/e601/e411
1.26 ± 0.22	1.06 ± 0.22	2.55 ± 0.33	3.86 ± 0.34	5.37 ± 0.49	n = 69	Siemens ADVIA/ADVIA Centaur
0.50 ± 0.00	0.56 ± 0.06	1.33 ± 0.29	1.62 ± 0.30	2.46 ± 0.30	n = 7	Siemens Dimension LOCI
1.00 ± 0.00	1.26 ± 0.21	2.93 ± 0.38	3.94 ± 0.39	5.45 ± 0.24	n = 28	Siemens Immulite
0.74 ± 0.10	1.73 ± 0.42	2.68 ± 0.59	5.14 ± 0.56	6.03 ± 0.67	n = 3	Tosoh AIA
0.93 ± 0.29	1.42 ± 0.57	2.86 ± 0.76	4.24 ± 0.89	5.74 ± 0.60	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Follitropin (FSH, mIU/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
8.60 ± 0.93	4.13 ± 0.84	18.51 ± 3.13	5.88 ± 1.02	26.16 ± 3.68	n = 188	All Methods & Instruments
8.50	4.30	19.00	6.00	26.40	n = 188	Median value, All Methods & Instruments
<Instruments>						
7.76 ± 0.30	3.78 ± 0.14	17.98 ± 0.85	5.82 ± 0.34	26.21 ± 0.90	n = 6	Abbott Architect
8.56 ± 0.56	4.07 ± 0.23	18.77 ± 0.79	6.12 ± 0.36	27.50 ± 1.95	n = 8	Abbott AxSym
10.11 ± 0.28	4.85 ± 0.20	21.58 ± 1.07	6.91 ± 0.33	30.42 ± 1.70	n = 9	Beckman Coulter ACCESS
9.85 ± 0.52	4.71 ± 0.27	21.38 ± 1.20	7.28 ± 0.42	30.90 ± 2.03	n = 20	Beckman Coulter UniCel DxI 800
9.07 ± 0.64	3.40 ± 0.25	15.56 ± 0.65	4.98 ± 0.37	23.18 ± 0.79	n = 9	Ortho Vitros Eci/ECiQ
7.98 ± 0.42	4.24 ± 0.25	19.21 ± 0.87	6.14 ± 0.29	27.41 ± 1.16	n = 9	Roche cobas e601
9.24 ± 0.25	4.98 ± 0.08	22.03 ± 0.57	6.92 ± 0.36	30.97 ± 1.80	n = 6	Roche Elecsys
7.87 ± 0.25	4.26 ± 0.17	18.97 ± 0.45	6.12 ± 0.10	27.11 ± 0.62	n = 9	Roche MODULAR E
8.06 ± 0.49	4.46 ± 0.38	19.41 ± 1.06	5.94 ± 0.41	25.86 ± 1.40	n = 52	Siemens ADVIA Centaur
7.35 ± 0.34	4.54 ± 0.35	19.78 ± 1.30	5.94 ± 0.28	26.94 ± 1.29	n = 4	Siemens ADVIA Centaur CP
8.82 ± 0.39	2.71 ± 0.19	14.08 ± 0.87	4.56 ± 0.28	21.88 ± 0.98	n = 11	Siemens Immulite 1000
8.61 ± 0.63	2.98 ± 0.21	14.17 ± 0.88	4.68 ± 0.37	22.14 ± 1.62	n = 27	Siemens Immulite 2000
8.38 ± 0.34	2.72 ± 0.14	13.76 ± 0.52	4.42 ± 0.25	21.66 ± 0.79	n = 6	Siemens Immulite 2500
10.37 ± 0.34	5.27 ± 0.14	23.99 ± 1.27	7.94 ± 0.47	34.83 ± 0.86	n = 3	Tosoh Bioscience
8.66 ± 0.93	4.12 ± 0.86	18.72 ± 3.27	5.98 ± 1.07	26.80 ± 3.92	n = 14	Mean of Above Means
<Reagents>						
8.17 ± 0.61	3.94 ± 0.24	18.44 ± 0.87	5.99 ± 0.37	26.74 ± 1.58	n = 14	Abbott
9.90 ± 0.51	4.73 ± 0.27	21.36 ± 1.19	7.12 ± 0.46	30.71 ± 1.94	n = 31	Beckman Coulter
9.12 ± 0.60	3.49 ± 0.35	15.66 ± 0.69	5.03 ± 0.38	23.30 ± 0.84	n = 10	Ortho Clinical Diagnostics
8.30 ± 0.73	4.44 ± 0.39	19.93 ± 1.63	6.37 ± 0.49	28.41 ± 2.24	n = 25	Roche Elecsys/Modular E/e601/e411
8.01 ± 0.53	4.47 ± 0.37	19.42 ± 1.07	5.95 ± 0.40	25.94 ± 1.41	n = 56	Siemens ADVIA/ADVIA Centaur
8.64 ± 0.55	2.87 ± 0.24	14.09 ± 0.84	4.60 ± 0.34	21.94 ± 1.32	n = 44	Siemens Immulite
8.61 ± 0.66	4.04 ± 0.68	18.32 ± 2.70	5.85 ± 0.89	26.16 ± 3.17	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Free T4 (ng/dL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
0.27 ± 0.08	1.79 ± 0.48	2.12 ± 0.52	2.42 ± 0.54	3.04 ± 0.60	n = 254	All Methods & Instruments
0.30	1.70	2.10	2.40	3.00	n = 254	Median value, All Methods & Instruments
0.7	2.4	2.4	3.9	5.2	n = 3	[---] Results of LC_MS_MS measurement*
<Instruments>						
0.40 ± 0.00	1.26 ± 0.07	1.51 ± 0.11	1.94 ± 0.14	2.53 ± 0.22	n = 11	Abbott Architect
0.39 ± 0.05	1.13 ± 0.06	1.48 ± 0.07	1.68 ± 0.07	2.18 ± 0.15	n = 9	Abbott AxSym
0.28 ± 0.05	1.82 ± 0.11	2.19 ± 0.14	2.38 ± 0.16	3.00 ± 0.24	n = 20	Beckman Coulter ACCESS
0.30 ± 0.09	1.71 ± 0.15	2.13 ± 0.14	2.28 ± 0.16	3.03 ± 0.19	n = 18	Beckman Coulter UniCel DxI 800
0.20 ± 0.00	2.96 ± 0.13	3.37 ± 0.13	3.90 ± 0.12	4.64 ± 0.19	n = 16	Ortho Vitros Eci/ECiQ
0.30 ± 0.00	1.70 ± 0.00	2.07 ± 0.05	2.47 ± 0.05	3.07 ± 0.05	n = 3	Roche cobas e411
0.30 ± 0.00	1.74 ± 0.06	2.09 ± 0.08	2.50 ± 0.08	3.13 ± 0.11	n = 11	Roche cobas e601
0.30 ± 0.00	1.79 ± 0.13	2.15 ± 0.11	2.53 ± 0.14	3.28 ± 0.04	n = 5	Roche Elecsys
0.30 ± 0.00	1.77 ± 0.09	2.12 ± 0.10	2.52 ± 0.11	3.18 ± 0.15	n = 17	Roche MODULAR E
0.23 ± 0.07	1.58 ± 0.11	1.82 ± 0.11	2.17 ± 0.13	2.69 ± 0.13	n = 66	Siemens ADVIA Centaur
0.20 ± 0.00	1.40 ± 0.09	1.65 ± 0.08	1.92 ± 0.08	2.56 ± 0.11	n = 5	Siemens Dimension EXL
0.20 ± 0.00	2.62 ± 0.39	2.93 ± 0.30	3.33 ± 0.38	3.80 ± 0.47	n = 16	Siemens Dimension RxL
0.25 ± 0.06	1.32 ± 0.08	1.64 ± 0.08	1.87 ± 0.09	2.46 ± 0.12	n = 10	Siemens Dimension Vista
0.19 ± 0.06	2.59 ± 0.34	2.88 ± 0.37	3.39 ± 0.39	4.11 ± 0.22	n = 6	Siemens Dimension Xpand
0.40 ± 0.00	2.34 ± 0.06	2.62 ± 0.08	2.92 ± 0.08	3.59 ± 0.13	n = 5	Siemens Immulite 1000
0.30 ± 0.00	2.25 ± 0.13	2.63 ± 0.11	2.87 ± 0.10	3.55 ± 0.09	n = 18	Siemens Immulite 2000
0.40 ± 0.17	2.35 ± 0.06	2.69 ± 0.11	2.95 ± 0.12	3.58 ± 0.13	n = 4	Siemens Immulite 2500
0.22 ± 0.04	2.25 ± 0.23	2.74 ± 0.28	3.18 ± 0.31	3.98 ± 0.38	n = 4	Tosoh Bioscience
0.28 ± 0.08	1.90 ± 0.53	2.24 ± 0.56	2.57 ± 0.60	3.22 ± 0.64	n = 18	Mean of Above Means
<Reagents>						
0.40 ± 0.00	1.21 ± 0.09	1.49 ± 0.08	1.81 ± 0.18	2.36 ± 0.26	n = 20	Abbott
0.29 ± 0.07	1.78 ± 0.14	2.17 ± 0.14	2.34 ± 0.16	3.02 ± 0.22	n = 40	Beckman Coulter
0.20 ± 0.00	2.96 ± 0.12	3.37 ± 0.12	3.90 ± 0.11	4.65 ± 0.19	n = 17	Ortho Clinical Diagnostics
0.30 ± 0.00	1.75 ± 0.08	2.10 ± 0.09	2.50 ± 0.10	3.16 ± 0.14	n = 35	Roche Elecsys/Modular E/e601/e411
0.23 ± 0.07	1.58 ± 0.11	1.83 ± 0.11	2.17 ± 0.14	2.69 ± 0.13	n = 68	Siemens ADVIA/ADVIA Centaur
0.22 ± 0.07	2.59 ± 0.41	2.91 ± 0.37	3.33 ± 0.42	3.82 ± 0.56	n = 23	Siemens Dimension
0.23 ± 0.05	1.35 ± 0.10	1.64 ± 0.09	1.89 ± 0.10	2.50 ± 0.13	n = 14	Siemens Dimension LOCI
0.32 ± 0.04	2.29 ± 0.12	2.63 ± 0.11	2.89 ± 0.10	3.56 ± 0.11	n = 27	Siemens Immulite
0.23 ± 0.05	2.34 ± 0.26	2.83 ± 0.34	3.30 ± 0.36	4.12 ± 0.41	n = 3	Tosoh ST AIA
0.26 ± 0.06	1.96 ± 0.60	2.31 ± 0.65	2.65 ± 0.73	3.28 ± 0.78	n = 9	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analysis 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: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
6.0 ± 0.59	1.2 ± 0.71	41.3 ± 3.12	1.2 ± 0.71	42.9 ± 2.47	n = 65	All Methods & Instruments
6.0	1.0	41.0	1.0	43.0	n = 65	Median value, All Methods & Instruments
						<Instruments>
6.3 ± 1.81	0.8 ± 0.41	46.0 ± 2.72	0.8 ± 0.41	46.6 ± 2.31	n = 5	Roche Elecsys
6.0 ± 0.75	2.5 ± 1.23	42.5 ± 2.83	2.5 ± 1.23	44.3 ± 2.65	n = 4	Siemens Dimension EXL
6.1 ± 0.51	1.1 ± 0.54	40.7 ± 2.70	1.1 ± 0.54	42.7 ± 1.81	n = 44	Siemens Dimension RxL
6.0 ± 0.00	1.1 ± 0.74	41.8 ± 1.47	1.1 ± 0.74	41.2 ± 2.30	n = 10	Siemens Dimension Xpand
6.1 ± 0.12	1.3 ± 0.65	42.5 ± 2.05	1.3 ± 0.65	43.6 ± 2.18	n = 4	Mean of Above Means
						<Reagents>
6.4 ± 1.62	1.0 ± 0.64	46.2 ± 2.43	1.0 ± 0.64	46.7 ± 2.00	n = 6	Roche Elecsys/Modular E/e601/e411
6.0 ± 0.42	1.2 ± 0.71	41.0 ± 2.63	1.2 ± 0.71	42.5 ± 2.06	n = 58	Siemens Dimension
6.2 ± 0.22	1.1 ± 0.09	43.6 ± 3.02	1.1 ± 0.09	44.6 ± 2.40	n = 2	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Intact Parathyrin (PTH, pg/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
3.34 ± 2.31	18.83 ± 4.23	2.97 ± 1.56	212.01 ± 47.64	113.27 ± 25.11	n = 161	All Methods & Instruments
3.00	19.00	3.00	221.50	117.00	n = 161	Median value, All Methods & Instruments
<Instruments>						
1.73 ± 1.54	45.31 ± 1.98	1.99 ± 1.29	478.91 ± 29.16	258.58 ± 11.04	n = 5	Abbott Architect
0.45 ± 0.47	15.92 ± 1.33	0.56 ± 0.51	179.19 ± 13.23	95.27 ± 5.96	n = 8	Beckman Coulter ACCESS
0.81 ± 0.45	14.36 ± 0.80	0.82 ± 0.42	168.24 ± 8.68	90.02 ± 6.66	n = 14	Beckman Coulter UniCel DxI 800
6.88 ± 0.61	18.79 ± 1.52	4.70 ± 0.83	160.99 ± 9.71	89.26 ± 6.40	n = 10	Roche cobas e601
7.16 ± 1.39	21.01 ± 1.44	4.97 ± 1.23	179.45 ± 8.60	97.69 ± 4.61	n = 13	Roche Elecsys
5.80 ± 0.26	18.21 ± 1.00	3.87 ± 0.88	159.84 ± 5.10	88.36 ± 4.03	n = 9	Roche MODULAR E
2.33 ± 0.86	21.19 ± 2.85	2.44 ± 0.82	246.88 ± 18.40	134.32 ± 9.84	n = 42	Siemens ADVIA Centaur
4.40 ± 0.99	14.52 ± 7.96	4.32 ± 1.02	202.27 ± 49.32	103.29 ± 29.90	n = 13	Siemens Immulite 1000
3.00 ± 0.00	18.69 ± 2.68	3.00 ± 0.00	241.70 ± 18.00	125.96 ± 9.63	n = 34	Siemens Immulite 2000
3.02 ± 0.04	24.79 ± 3.35	3.00 ± 0.00	251.26 ± 10.08	136.79 ± 2.86	n = 5	Siemens Immulite 2500
1.00 ± 0.00	11.27 ± 0.59	1.00 ± 0.00	130.30 ± 9.66	68.97 ± 3.12	n = 3	Tosoh Bioscience
3.17 ± 2.48	17.86 ± 3.92	2.81 ± 1.64	190.27 ± 43.15	101.76 ± 22.47	n = 11	Mean of Above Means
<Reagents>						
1.73 ± 1.54	45.31 ± 1.98	1.99 ± 1.29	478.91 ± 29.16	258.58 ± 11.04	n = 5	Abbott
0.69 ± 0.49	14.71 ± 1.24	0.74 ± 0.47	171.04 ± 11.63	91.65 ± 6.81	n = 23	Beckman Coulter
6.72 ± 1.10	19.52 ± 1.94	4.64 ± 1.14	168.58 ± 12.91	92.87 ± 7.02	n = 33	Roche Elecsys/Modular E/e601/e411
2.35 ± 0.86	21.13 ± 2.83	2.46 ± 0.81	246.22 ± 18.66	133.97 ± 9.98	n = 43	Siemens ADVIA/ADVIA Centaur
3.00 ± 0.00	19.42 ± 4.19	3.00 ± 0.00	244.69 ± 20.24	127.34 ± 12.59	n = 47	Siemens Immulite
5.00 ± 0.00	9.82 ± 1.74	5.00 ± 0.01	175.29 ± 12.34	90.41 ± 9.07	n = 5	Siemens Immulite Turbo
3.09 ± 2.16	17.39 ± 4.43	2.96 ± 1.60	199.19 ± 41.02	106.04 ± 21.61	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
15.67 \pm 10.64	209.98 \pm 110.60	67.35 \pm 41.49	53.40 \pm 25.35	153.72 \pm 81.04	n = 100	All Methods & Instruments
18.10	231.60	78.60	57.00	170.50	n = 100	Median value, All Methods & Instruments
						<Instruments>
19.88 \pm 1.25	248.76 \pm 6.69	79.42 \pm 2.04	57.60 \pm 0.67	172.40 \pm 4.03	n = 5	Abbott Architect
18.28 \pm 1.34	247.69 \pm 11.55	81.61 \pm 3.47	57.85 \pm 1.29	177.73 \pm 8.52	n = 8	Beckman Coulter UniCel DxI 800
23.79 \pm 2.21	309.63 \pm 9.40	100.29 \pm 3.49	74.51 \pm 3.50	217.64 \pm 7.25	n = 4	Roche cobas e601
23.29 \pm 1.37	299.44 \pm 8.91	97.04 \pm 3.46	73.81 \pm 2.65	214.41 \pm 8.84	n = 6	Roche Elecsys
23.30 \pm 1.37	299.71 \pm 10.19	95.94 \pm 3.50	71.86 \pm 2.07	208.59 \pm 6.17	n = 6	Roche MODULAR E
27.35 \pm 2.27	354.97 \pm 34.35	116.38 \pm 9.29	85.36 \pm 6.05	252.98 \pm 17.41	n = 19	Siemens ADVIA Centaur
6.03 \pm 2.77	122.66 \pm 20.03	29.43 \pm 5.53	31.79 \pm 3.97	82.11 \pm 10.50	n = 7	Siemens Immulite 1000
5.95 \pm 1.96	119.87 \pm 21.47	27.84 \pm 5.84	30.16 \pm 3.52	75.86 \pm 11.22	n = 32	Siemens Immulite 2000
4.83 \pm 1.10	114.80 \pm 15.35	26.10 \pm 3.26	28.59 \pm 2.87	73.01 \pm 7.54	n = 5	Siemens Immulite 2500
37.17 \pm 1.14	308.37 \pm 13.50	108.26 \pm 4.15	75.89 \pm 2.70	215.03 \pm 10.62	n = 3	Tosoh Bioscience
19.13 \pm 10.56	249.58 \pm 92.77	79.28 \pm 35.92	60.13 \pm 22.03	174.41 \pm 68.71	n = 10	Mean of Above Means
						<Reagents>
19.88 \pm 1.25	248.76 \pm 6.69	79.42 \pm 2.04	57.60 \pm 0.67	172.40 \pm 4.03	n = 5	Abbott
18.60 \pm 1.32	249.33 \pm 10.51	81.57 \pm 2.73	57.70 \pm 1.08	177.10 \pm 7.93	n = 10	Beckman Coulter
23.45 \pm 1.57	301.91 \pm 10.37	97.42 \pm 3.81	73.04 \pm 2.86	212.87 \pm 8.36	n = 16	Roche Elecsys/Modular E/e601/e411
27.35 \pm 2.27	354.97 \pm 34.35	116.38 \pm 9.29	85.36 \pm 6.05	252.98 \pm 17.41	n = 19	Siemens ADVIA/ADVIA Centaur
5.83 \pm 2.06	119.44 \pm 20.54	27.78 \pm 5.54	30.17 \pm 3.55	76.38 \pm 11.00	n = 44	Siemens Immulite
37.17 \pm 1.14	308.37 \pm 13.50	108.26 \pm 4.15	75.89 \pm 2.70	215.03 \pm 10.62	n = 3	Tosoh ST AIA
22.24 \pm 9.61	274.51 \pm 70.96	90.19 \pm 26.78	65.17 \pm 18.00	192.73 \pm 52.26	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Lutropin (LH, mIU/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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20.42 ± 2.60	15.73 ± 2.05	56.60 ± 7.16	8.21 ± 1.14	115.48 ± 16.04	n = 188	All Methods & Instruments
20.30	16.00	56.30	8.20	114.70	n = 188	Median value, All Methods & Instruments
<Instruments>						
11.86 ± 0.44	11.17 ± 0.54	37.89 ± 1.98	6.74 ± 0.29	76.52 ± 4.00	n = 6	Abbott Architect
15.91 ± 1.24	13.54 ± 1.09	49.82 ± 4.28	7.69 ± 0.66	105.05 ± 12.99	n = 8	Abbott AxSym
19.38 ± 0.56	13.54 ± 0.51	50.43 ± 2.43	6.74 ± 0.47	97.06 ± 4.91	n = 9	Beckman Coulter ACCESS
18.67 ± 0.69	13.06 ± 0.58	47.87 ± 2.32	6.64 ± 0.33	97.80 ± 4.50	n = 20	Beckman Coulter UniCel DxI 800
27.59 ± 1.06	17.98 ± 0.74	70.17 ± 3.79	8.06 ± 0.36	143.95 ± 8.46	n = 9	Ortho Vitros Eci/ECiQ
20.85 ± 0.63	16.66 ± 0.44	55.47 ± 1.56	9.30 ± 0.16	110.77 ± 2.30	n = 9	Roche cobas e601
20.66 ± 0.45	16.67 ± 0.34	55.15 ± 0.52	9.19 ± 0.06	110.31 ± 3.75	n = 6	Roche Elecsys
20.35 ± 0.60	16.55 ± 0.58	54.60 ± 1.72	9.14 ± 0.21	110.63 ± 3.00	n = 9	Roche MODULAR E
19.94 ± 1.33	15.69 ± 1.15	58.18 ± 3.80	7.97 ± 0.51	124.12 ± 9.40	n = 51	Siemens ADVIA Centaur
19.54 ± 0.76	15.99 ± 0.35	56.06 ± 3.24	8.10 ± 0.18	119.90 ± 2.87	n = 4	Siemens ADVIA Centaur CP
22.79 ± 1.28	17.35 ± 1.24	60.78 ± 4.27	9.53 ± 0.66	128.22 ± 9.83	n = 11	Siemens Immulite 1000
22.86 ± 1.71	17.28 ± 1.17	62.35 ± 4.09	9.21 ± 0.64	120.82 ± 10.27	n = 27	Siemens Immulite 2000
22.14 ± 1.72	16.69 ± 0.86	63.16 ± 4.79	9.19 ± 0.58	121.88 ± 9.33	n = 6	Siemens Immulite 2500
19.52 ± 0.59	15.65 ± 0.54	55.34 ± 2.02	8.14 ± 0.39	111.52 ± 2.12	n = 3	Tosoh Bioscience
20.33 ± 2.72	15.83 ± 1.87	55.87 ± 6.95	8.31 ± 1.07	113.49 ± 14.53	n = 14	Mean of Above Means
<Reagents>						
14.24 ± 2.67	12.42 ± 1.57	44.11 ± 7.47	7.22 ± 0.70	92.30 ± 18.44	n = 14	Abbott
18.85 ± 0.81	13.21 ± 0.57	48.50 ± 2.69	6.66 ± 0.39	97.62 ± 4.45	n = 31	Beckman Coulter
27.60 ± 0.96	18.07 ± 0.75	70.08 ± 3.51	8.09 ± 0.35	143.63 ± 7.70	n = 10	Ortho Clinical Diagnostics
20.59 ± 0.65	16.60 ± 0.50	55.19 ± 1.52	9.22 ± 0.20	110.57 ± 3.24	n = 25	Roche Elecsys/Modular E/e601/e411
19.90 ± 1.29	15.72 ± 1.10	58.01 ± 3.80	7.98 ± 0.49	123.74 ± 9.08	n = 55	Siemens ADVIA/ADVIA Centaur
22.76 ± 1.68	17.20 ± 1.16	62.09 ± 4.33	9.28 ± 0.65	122.64 ± 10.55	n = 44	Siemens Immulite
20.54 ± 4.09	15.66 ± 2.25	56.19 ± 9.11	8.08 ± 1.05	114.56 ± 18.49	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Prolactin ($\mu\text{g/L}$)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
1.19 \pm 0.21	3.23 \pm 0.47	3.65 \pm 0.51	4.63 \pm 0.70	33.18 \pm 4.15	n = 173	All Methods & Instruments
1.20	3.30	3.70	4.70	32.70	n = 173	Median value, All Methods & Instruments
						<Instruments>
1.40 \pm 0.10	4.38 \pm 0.11	5.04 \pm 0.25	6.48 \pm 0.29	41.74 \pm 2.37	n = 5	Abbott Architect
1.43 \pm 0.17	4.31 \pm 0.31	4.97 \pm 0.23	6.58 \pm 0.04	42.52 \pm 1.63	n = 6	Abbott AxSym
1.14 \pm 0.07	3.31 \pm 0.08	3.75 \pm 0.10	4.61 \pm 0.13	29.48 \pm 1.10	n = 8	Beckman Coulter ACCESS
0.94 \pm 0.06	2.94 \pm 0.15	3.46 \pm 0.25	4.16 \pm 0.17	29.53 \pm 1.17	n = 20	Beckman Coulter UniCel DxI 800
2.45 \pm 0.32	5.03 \pm 0.19	4.75 \pm 0.24	6.62 \pm 0.27	34.32 \pm 0.84	n = 9	Ortho Vitros ECI/ECiQ
1.15 \pm 0.06	3.38 \pm 0.14	3.90 \pm 0.00	5.03 \pm 0.13	38.38 \pm 0.64	n = 8	Roche cobas e601
1.19 \pm 0.11	3.54 \pm 0.14	4.03 \pm 0.11	5.19 \pm 0.20	39.63 \pm 1.17	n = 7	Roche Elecsys
1.16 \pm 0.06	3.50 \pm 0.08	3.93 \pm 0.11	5.05 \pm 0.13	39.08 \pm 0.91	n = 7	Roche MODULAR E
1.32 \pm 0.11	3.34 \pm 0.23	3.68 \pm 0.23	4.76 \pm 0.19	31.51 \pm 1.55	n = 55	Siemens ADVIA Centaur
1.48 \pm 0.13	3.39 \pm 0.23	3.70 \pm 0.29	4.82 \pm 0.27	30.18 \pm 1.70	n = 4	Siemens ADVIA Centaur CP
1.19 \pm 0.17	3.15 \pm 0.22	3.37 \pm 0.22	4.18 \pm 0.39	37.81 \pm 2.89	n = 9	Siemens Immulite 1000
1.01 \pm 0.08	2.63 \pm 0.15	3.01 \pm 0.14	3.79 \pm 0.21	32.49 \pm 1.78	n = 21	Siemens Immulite 2000
1.20 \pm 0.07	2.75 \pm 0.10	3.05 \pm 0.10	3.86 \pm 0.26	35.54 \pm 1.89	n = 6	Siemens Immulite 2500
1.21 \pm 0.16	3.42 \pm 0.62	3.84 \pm 0.66	4.92 \pm 0.99	35.55 \pm 4.89	n = 13	Mean of Above Means
						<Reagents>
1.41 \pm 0.14	4.38 \pm 0.21	5.00 \pm 0.24	6.48 \pm 0.23	42.15 \pm 2.07	n = 11	Abbott
0.99 \pm 0.11	3.05 \pm 0.23	3.56 \pm 0.27	4.31 \pm 0.29	29.51 \pm 1.09	n = 30	Beckman Coulter
2.41 \pm 0.32	4.99 \pm 0.24	4.71 \pm 0.30	6.60 \pm 0.38	34.19 \pm 0.93	n = 10	Ortho Clinical Diagnostics
1.15 \pm 0.07	3.46 \pm 0.13	3.97 \pm 0.12	5.08 \pm 0.16	38.99 \pm 0.99	n = 22	Roche Elecsys/Modular E/e601/e411
1.33 \pm 0.11	3.34 \pm 0.23	3.68 \pm 0.23	4.76 \pm 0.20	31.43 \pm 1.60	n = 59	Siemens ADVIA/ADVIA Centaur
1.07 \pm 0.14	2.74 \pm 0.25	3.08 \pm 0.19	3.86 \pm 0.28	34.10 \pm 3.03	n = 36	Siemens Immulite
1.19 \pm 0.17	3.59 \pm 0.83	3.97 \pm 0.72	5.13 \pm 1.13	34.79 \pm 4.61	n = 6	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Progesterone (ng/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
5.44 ± 0.67	16.84 ± 2.35	11.41 ± 1.76	40.56 ± 6.57	19.52 ± 2.86	n = 153	All Methods & Instruments
5.40	17.00	11.30	41.00	19.80	n = 153	Median value, All Methods & Instruments
<Instruments>						
6.13 ± 0.23	16.21 ± 0.74	11.17 ± 0.31	43.01 ± 1.99	20.21 ± 0.98	n = 3	Abbott Architect
5.79 ± 0.41	14.81 ± 0.95	10.75 ± 0.55	39.51 ± 7.43	18.53 ± 0.98	n = 4	Abbott AxSym
6.06 ± 0.42	17.47 ± 1.11	12.01 ± 1.16	42.15 ± 2.50	19.82 ± 2.10	n = 8	Beckman Coulter ACCESS
6.31 ± 0.70	18.87 ± 1.46	12.38 ± 1.15	44.67 ± 4.23	22.40 ± 1.88	n = 14	Beckman Coulter UniCel DxI 800
6.80 ± 2.54	20.21 ± 3.09	14.03 ± 2.87	57.56 ± 25.79	28.07 ± 11.79	n = 3	Gamma Counter
5.48 ± 0.56	13.37 ± 1.78	9.30 ± 1.08	37.63 ± 3.41	18.73 ± 2.15	n = 4	LC/MS/MS
3.61 ± 0.30	12.23 ± 0.69	7.90 ± 0.63	29.04 ± 1.66	14.70 ± 0.93	n = 6	Ortho Vitros Eci/ECiQ
5.41 ± 0.18	16.93 ± 0.45	10.79 ± 0.34	43.33 ± 2.23	19.51 ± 0.71	n = 6	Roche cobas e601
5.60 ± 0.26	17.44 ± 0.64	10.89 ± 0.43	43.50 ± 1.48	20.32 ± 1.11	n = 5	Roche Elecsys
5.50 ± 0.20	16.73 ± 0.46	10.68 ± 0.52	42.66 ± 1.33	19.61 ± 0.78	n = 10	Roche MODULAR E
5.08 ± 0.52	18.14 ± 1.52	12.94 ± 1.11	43.55 ± 3.77	21.21 ± 1.75	n = 40	Siemens ADVIA Centaur
5.58 ± 0.50	18.32 ± 0.77	13.09 ± 0.89	42.66 ± 3.13	21.16 ± 0.71	n = 3	Siemens ADVIA Centaur CP
5.40 ± 0.63	14.04 ± 1.50	9.57 ± 1.15	27.25 ± 9.59	17.05 ± 0.45	n = 9	Siemens Immulite 1000
5.29 ± 0.35	15.05 ± 1.29	10.25 ± 0.78	33.11 ± 3.08	16.54 ± 1.21	n = 24	Siemens Immulite 2000
5.24 ± 0.16	15.90 ± 0.99	10.48 ± 1.02	34.63 ± 2.61	17.32 ± 1.00	n = 6	Siemens Immulite 2500
5.62 ± 0.48	16.45 ± 2.19	11.07 ± 1.57	40.25 ± 6.54	19.29 ± 2.28	n = 15	Mean of Above Means
<Reagents>						
5.96 ± 0.37	15.43 ± 1.10	10.99 ± 0.10	41.07 ± 5.78	19.23 ± 1.30	n = 7	Abbott
6.28 ± 0.65	18.54 ± 1.62	12.19 ± 1.11	43.81 ± 3.83	21.44 ± 2.29	n = 24	Beckman Coulter
5.48 ± 0.56	13.37 ± 1.78	9.30 ± 1.08	37.63 ± 3.41	18.73 ± 2.15	n = 4	In-House
3.61 ± 0.30	12.23 ± 0.69	7.90 ± 0.63	29.04 ± 1.66	14.70 ± 0.93	n = 6	Ortho Clinical Diagnostics
5.54 ± 0.23	17.03 ± 0.64	10.85 ± 0.44	43.28 ± 1.66	19.88 ± 0.95	n = 22	Roche Elecsys/Modular E/e601/e411
5.12 ± 0.54	18.12 ± 1.39	12.95 ± 1.10	43.46 ± 3.70	21.14 ± 1.59	n = 43	Siemens ADVIA/ADVIA Centaur
5.32 ± 0.36	14.99 ± 1.39	10.17 ± 0.93	33.33 ± 4.58	16.76 ± 1.16	n = 39	Siemens Immulite
5.52 ± 0.60	15.72 ± 2.39	10.67 ± 1.66	39.40 ± 5.58	19.06 ± 2.30	n = 7	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Qualitative hCG report:

[AB1] Abbott	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	0	2	0	2	0
Indeterminant	1	0	0	0	0
Positive	1	0	2	0	2
[AD1] American Diagnostics	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	1	2	0	2	0
Indeterminant	0	0	0	0	0
Positive	1	0	2	0	2
[BC1] Beckman Coulter	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	17	35	0	35	0
Indeterminant	10	0	0	0	0
Positive	8	0	35	0	35
[CD1] Cardinal Health	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	2	8	0	8	0
Indeterminant	0	0	0	0	0
Positive	6	0	8	0	8
[FI1] Fisher	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	24	51	0	51	0
Indeterminant	10	0	0	0	1
Positive	17	0	51	0	50
[GZ1] Genzyme	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	7	11	0	11	0
Indeterminant	1	0	0	0	0
Positive	3	0	11	0	11
[IM1] Inverness Medical	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	4	6	0	6	0
Indeterminant	0	0	0	0	0
Positive	2	0	6	0	6

Statistical Summary (Mean and Standard Deviation)

[JJ1] Ortho Clinical Diagnostics	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	0	2	0	2	0
Indeterminant	1	0	0	0	0
Positive	1	0	2	0	2
[PM1] Polymedco	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	4	5	0	5	0
Indeterminant	0	0	0	0	0
Positive	1	0	5	0	5
[QQ2] Quidel QuickVue One-Step hCG Combo	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	13	25	0	25	0
Indeterminant	4	0	0	0	0
Positive	8	0	25	0	25
[QQ1] Quidel QuickVue± One-Step hCG Combo	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	3	19	0	19	0
Indeterminant	2	0	0	0	0
Positive	14	0	19	0	19
[RO2] Roche Hitachi and Modular D/P	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	3	3	0	3	0
Indeterminant	0	0	0	0	0
Positive	0	0	3	0	3
[RO1] Roche Integra and MIRA	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	1	2	0	2	0
Indeterminant	0	0	0	0	0
Positive	1	0	2	0	2
[BY1] Siemens ADVIA/ADVIA Centaur	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	3	19	0	19	0
Indeterminant	10	0	0	0	0
Positive	6	0	19	0	19

Statistical Summary (Mean and Standard Deviation)

[DA5] Siemens Dimension	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	4	6	0	6	0
Indeterminant	1	0	0	0	0
Positive	1	0	6	0	6
[DA6] Siemens Dimension LOCI	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	1	3	0	3	0
Indeterminant	2	0	0	0	0
Positive	0	0	3	0	3
[DP5] Siemens Immulite	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	4	7	0	7	0
Indeterminant	1	0	0	0	0
Positive	2	0	7	0	7
[SB1] Stanbio	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	8	15	0	15	0
Indeterminant	1	0	0	0	0
Positive	6	0	15	0	15
[ZZZ] Reagent Not Listed	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	11	16	0	16	0
Indeterminant	2	0	0	0	0
Positive	3	0	16	0	16
[---] All Methods & Instruments	Specimen:E51*	Specimen:E52	Specimen:E53	Specimen:E54	Specimen:E55
Negative	110	237	0	237	0
Indeterminant	46	0	0	0	1
Positive	81	0	237	0	236

* The source that caused discrepancy in reported results was due to the presence of total beta hCG at ca 10 mIU/mL.

Statistical Summary (Mean and Standard Deviation)

Triiodothyronine (T3, ng/dL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
36.5 ± 12.29	146.8 ± 19.63	108.3 ± 13.41	123.2 ± 13.99	165.7 ± 15.08	n = 195	All Methods & Instruments
36.0	148.0	108.0	122.0	165.0	n = 195	Median value, All Methods & Instruments
15.9	87.1	59.2	87.9	110.0	n = 3	[---] Results of LC_MS_MS measurement*
<Instruments>						
29.6 ± 5.74	116.8 ± 0.76	79.6 ± 3.94	104.9 ± 3.20	147.4 ± 0.85	n = 8	Abbott Architect
40.6 ± 6.59	125.3 ± 6.70	88.7 ± 6.77	108.7 ± 7.26	144.7 ± 8.57	n = 10	Abbott AxSym
40.3 ± 5.45	131.7 ± 5.84	107.1 ± 5.19	117.1 ± 5.96	160.0 ± 6.84	n = 12	Beckman Coulter ACCESS
43.7 ± 11.86	130.6 ± 10.92	104.5 ± 14.20	118.4 ± 11.03	158.3 ± 13.70	n = 19	Beckman Coulter UniCel DxI 800
39.1 ± 5.05	158.5 ± 7.18	109.9 ± 6.95	133.9 ± 6.37	169.0 ± 7.64	n = 8	Ortho Vitros ECi/ECiQ
54.0 ± 6.21	158.2 ± 6.71	116.9 ± 5.06	130.5 ± 5.03	171.3 ± 7.34	n = 8	Roche cobas e601
56.6 ± 2.91	165.9 ± 7.41	122.6 ± 7.23	134.5 ± 6.30	169.2 ± 4.80	n = 4	Roche Elecsys
52.3 ± 4.25	157.3 ± 5.61	116.5 ± 4.01	130.9 ± 4.03	170.3 ± 7.90	n = 14	Roche MODULAR E
28.1 ± 5.95	153.0 ± 12.27	111.5 ± 8.40	119.9 ± 8.04	166.4 ± 12.22	n = 56	Siemens ADVIA Centaur
21.3 ± 2.26	158.6 ± 9.79	118.9 ± 5.22	116.7 ± 2.26	166.4 ± 12.64	n = 3	Siemens ADVIA Centaur CP
29.7 ± 12.40	123.5 ± 14.16	91.1 ± 15.95	116.3 ± 14.25	156.2 ± 16.92	n = 10	Siemens Dimension RxL
20.0 ± 0.00	129.6 ± 7.51	93.9 ± 7.49	126.2 ± 10.23	167.3 ± 11.18	n = 6	Siemens Dimension Vista
40.0 ± 0.00	170.5 ± 8.41	112.3 ± 10.83	142.8 ± 14.55	183.8 ± 18.61	n = 7	Siemens Immulite 1000
40.0 ± 0.00	166.2 ± 10.84	115.6 ± 10.34	146.8 ± 11.16	183.3 ± 8.88	n = 16	Siemens Immulite 2000
29.9 ± 18.43	162.3 ± 4.96	113.2 ± 7.69	147.7 ± 8.64	187.2 ± 5.00	n = 3	Siemens Immulite 2500
71.6 ± 119.59	142.9 ± 11.77	100.7 ± 7.96	120.0 ± 3.36	165.0 ± 6.09	n = 4	Tosoh Bioscience
38.7 ± 13.18	147.8 ± 19.03	107.8 ± 12.11	125.5 ± 13.22	166.7 ± 11.64	n = 16	Mean of Above Means
<Reagents>						
35.6 ± 8.35	120.9 ± 7.11	84.4 ± 7.13	106.0 ± 4.83	145.5 ± 6.19	n = 18	Abbott
42.2 ± 8.73	130.4 ± 8.99	104.3 ± 10.93	116.9 ± 9.39	158.6 ± 10.16	n = 33	Beckman Coulter
38.1 ± 5.65	156.4 ± 10.11	108.7 ± 8.08	132.7 ± 7.55	168.1 ± 7.22	n = 9	Ortho Clinical Diagnostics
53.3 ± 4.80	158.4 ± 6.64	117.0 ± 5.11	131.2 ± 5.08	170.5 ± 7.99	n = 27	Roche Elecsys/Modular E/e601/e411
27.7 ± 6.11	153.3 ± 12.22	112.0 ± 8.50	119.6 ± 7.57	166.4 ± 12.25	n = 59	Siemens ADVIA/ADVIA Centaur
26.7 ± 11.51	125.4 ± 12.64	93.1 ± 13.80	117.9 ± 13.07	157.6 ± 14.77	n = 13	Siemens Dimension
17.1 ± 12.42	129.8 ± 7.68	90.0 ± 8.11	131.0 ± 9.22	174.5 ± 11.83	n = 3	Siemens Dimension LOCI
40.0 ± 0.00	166.5 ± 10.47	114.5 ± 9.81	146.1 ± 11.70	184.5 ± 10.61	n = 26	Siemens Immulite
27.3 ± 0.51	138.2 ± 7.69	97.7 ± 4.22	121.3 ± 3.16	162.7 ± 4.22	n = 3	Tosoh ST AIA
34.0 ± 10.40	141.8 ± 17.42	102.8 ± 12.00	124.3 ± 11.24	165.5 ± 10.48	n = 9	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analysis 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: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
1.34 ± 0.39	5.05 ± 0.52	6.61 ± 0.59	8.20 ± 0.77	11.12 ± 1.03	n = 238	All Methods & Instruments
1.30	5.00	6.60	8.20	11.00	n = 238	Median value, All Methods & Instruments
1.4	4.2	5.4	7.6	9.6	n = 3	[---] Results of LC_MS_MS measurement*
<Instruments>						
1.95 ± 0.43	4.82 ± 0.35	6.05 ± 0.48	8.03 ± 0.59	11.50 ± 0.82	n = 9	Abbott Architect
1.80 ± 0.48	4.94 ± 0.27	6.74 ± 0.34	7.80 ± 0.39	11.16 ± 0.36	n = 11	Abbott AxSym
1.11 ± 0.13	5.33 ± 0.69	6.64 ± 1.00	8.15 ± 1.07	10.23 ± 1.50	n = 18	Beckman Coulter ACCESS
1.23 ± 0.27	4.62 ± 0.45	6.18 ± 0.14	8.12 ± 0.29	10.96 ± 0.17	n = 11	Beckman Coulter AU Chemistry System
1.05 ± 0.19	5.57 ± 0.55	7.12 ± 0.39	8.68 ± 0.78	11.02 ± 1.14	n = 22	Beckman Coulter UniCel DxI 800
1.43 ± 0.42	4.68 ± 0.41	6.37 ± 0.42	7.60 ± 0.64	10.94 ± 0.65	n = 3	Gamma Counter
1.37 ± 0.12	4.95 ± 0.22	6.60 ± 0.34	8.14 ± 0.48	11.36 ± 0.67	n = 15	Ortho Vitros Eci/ECiQ
1.88 ± 0.14	4.73 ± 0.26	6.18 ± 0.21	7.76 ± 0.43	10.86 ± 0.62	n = 9	Roche cobas e601
1.78 ± 0.32	4.60 ± 0.27	5.88 ± 0.32	7.75 ± 0.27	10.93 ± 0.32	n = 3	Roche MODULAR D/P
1.92 ± 0.13	4.77 ± 0.20	6.23 ± 0.29	7.86 ± 0.33	10.88 ± 0.39	n = 15	Roche MODULAR E
1.32 ± 0.27	4.96 ± 0.31	6.49 ± 0.31	7.72 ± 0.36	10.32 ± 0.44	n = 53	Siemens ADVIA Centaur
1.27 ± 0.48	5.47 ± 0.55	6.85 ± 0.54	9.08 ± 0.56	12.49 ± 0.62	n = 17	Siemens Dimension RxL
1.85 ± 0.70	5.97 ± 0.64	7.68 ± 0.35	9.58 ± 0.36	13.00 ± 0.19	n = 7	Siemens Dimension Vista
1.00 ± 0.00	4.90 ± 0.67	6.85 ± 0.68	9.01 ± 0.87	13.01 ± 1.44	n = 7	Siemens Immulite 1000
1.02 ± 0.04	5.10 ± 0.45	6.92 ± 0.43	8.73 ± 0.39	11.73 ± 0.48	n = 16	Siemens Immulite 2000
1.17 ± 0.14	5.83 ± 0.34	7.27 ± 0.05	9.17 ± 0.14	12.10 ± 0.18	n = 3	Siemens Immulite 2500
1.27 ± 0.07	5.30 ± 0.09	6.67 ± 0.43	8.59 ± 0.60	11.44 ± 0.39	n = 6	Tosoh Bioscience
1.42 ± 0.37	5.04 ± 0.42	6.60 ± 0.46	8.29 ± 0.63	11.32 ± 0.79	n = 17	Mean of Above Means
<Reagents>						
1.87 ± 0.46	4.89 ± 0.32	6.46 ± 0.54	7.88 ± 0.49	11.27 ± 0.59	n = 20	Abbott
1.08 ± 0.16	5.48 ± 0.66	6.88 ± 0.81	8.41 ± 0.98	10.65 ± 1.33	n = 43	Beckman Coulter
1.78 ± 0.32	4.60 ± 0.27	5.88 ± 0.32	7.75 ± 0.27	10.93 ± 0.32	n = 3	Microgenics CEDIA
1.27 ± 0.26	4.66 ± 0.35	6.18 ± 0.14	8.12 ± 0.27	10.96 ± 0.17	n = 10	Microgenics DRI
1.37 ± 0.11	4.96 ± 0.22	6.59 ± 0.32	8.15 ± 0.46	11.36 ± 0.64	n = 16	Ortho Clinical Diagnostics
1.91 ± 0.12	4.75 ± 0.21	6.22 ± 0.26	7.84 ± 0.36	10.87 ± 0.40	n = 28	Roche Elecsys/Modular E/e601/e411
1.32 ± 0.27	4.97 ± 0.32	6.50 ± 0.32	7.73 ± 0.37	10.33 ± 0.45	n = 54	Siemens ADVIA/ADVIA Centaur
1.36 ± 0.53	5.53 ± 0.54	6.99 ± 0.56	9.20 ± 0.55	12.61 ± 0.57	n = 24	Siemens Dimension
1.43 ± 0.51	5.84 ± 0.65	7.88 ± 0.41	9.60 ± 0.09	13.39 ± 0.80	n = 3	Siemens Dimension LOCI
1.02 ± 0.06	5.16 ± 0.55	6.99 ± 0.50	8.88 ± 0.54	12.02 ± 0.70	n = 27	Siemens Immulite
1.28 ± 0.04	5.28 ± 0.04	6.66 ± 0.30	8.53 ± 0.42	11.43 ± 0.30	n = 4	Tosoh ST AIA
1.40 ± 0.30	5.08 ± 0.40	6.60 ± 0.46	8.30 ± 0.61	11.30 ± 0.81	n = 11	Mean of Above Means

*Values of LC_MS_MS measurements were results of multiple analysis 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: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
7.6 ± 2.40	1.5 ± 1.30	51.1 ± 4.05	1.5 ± 1.28	56.2 ± 7.64	n = 240	All Methods & Instruments
7.0	1.0	52.0	1.0	56.0	n = 240	Median value, All Methods & Instruments
<Instruments>						
9.7 ± 0.72	1.0 ± 0.00	46.4 ± 1.79	1.0 ± 0.00	52.3 ± 2.18	n = 12	Abbott Architect
6.8 ± 0.80	1.3 ± 1.10	66.5 ± 3.92	1.3 ± 1.10	75.3 ± 3.25	n = 5	Abbott AxSym
7.3 ± 0.57	2.1 ± 2.20	51.1 ± 2.54	2.1 ± 2.18	58.0 ± 2.64	n = 35	Beckman Coulter ACCESS
6.4 ± 0.55	0.8 ± 0.41	48.5 ± 3.46	1.0 ± 0.00	57.7 ± 4.20	n = 5	Beckman Coulter UniCel DxI 600
7.0 ± 0.00	1.1 ± 0.58	52.3 ± 2.90	1.1 ± 0.48	58.2 ± 3.51	n = 20	Beckman Coulter UniCel DxI 800
7.1 ± 0.47	1.6 ± 1.40	49.3 ± 3.30	1.6 ± 1.40	52.1 ± 3.60	n = 21	Ortho Vitros ECI/ECIQ
5.0 ± 0.00	1.3 ± 0.51	61.2 ± 4.11	1.3 ± 0.51	72.3 ± 5.09	n = 3	Roche cobas e411
4.6 ± 0.56	1.4 ± 1.90	54.7 ± 2.29	1.4 ± 1.90	63.8 ± 2.57	n = 12	Roche cobas e601
5.0 ± 0.00	0.9 ± 1.51	59.0 ± 2.70	0.9 ± 1.51	67.4 ± 2.76	n = 6	Roche Elecsys
4.2 ± 0.41	0.9 ± 0.63	53.9 ± 2.16	0.9 ± 0.63	63.1 ± 2.00	n = 16	Roche MODULAR E
11.1 ± 1.23	2.3 ± 1.37	50.0 ± 2.56	2.3 ± 1.40	50.0 ± 2.53	n = 54	Siemens ADVIA Centaur
9.0 ± 0.00	2.0 ± 0.00	49.2 ± 2.88	2.0 ± 0.00	49.4 ± 2.21	n = 5	Siemens ADVIA Centaur CP
5.7 ± 0.51	1.0 ± 0.00	49.3 ± 0.99	1.0 ± 0.00	55.1 ± 0.89	n = 12	Siemens Dimension Vista
7.5 ± 1.64	1.0 ± 0.00	65.1 ± 11.69	1.0 ± 0.00	76.2 ± 6.91	n = 8	Siemens Immulite 1000
7.6 ± 0.79	1.0 ± 0.00	77.1 ± 4.43	1.0 ± 0.00	93.9 ± 5.43	n = 17	Siemens Immulite 2000
6.0 ± 0.90	1.0 ± 0.00	56.7 ± 6.76	1.0 ± 0.00	65.9 ± 5.22	n = 3	Siemens Immulite 2500
6.7 ± 1.81	1.2 ± 0.43	54.1 ± 7.13	1.2 ± 0.42	61.5 ± 10.54	n = 16	Mean of Above Means
<Reagents>						
9.0 ± 1.57	1.1 ± 0.69	50.7 ± 9.76	1.1 ± 0.69	57.3 ± 11.08	n = 17	Abbott
7.1 ± 0.56	1.8 ± 1.92	51.3 ± 2.86	1.8 ± 1.86	58.0 ± 3.04	n = 60	Beckman Coulter
7.1 ± 0.44	1.6 ± 1.35	49.3 ± 3.19	1.6 ± 1.35	52.0 ± 3.51	n = 22	Ortho Clinical Diagnostics
4.5 ± 0.57	0.8 ± 0.68	55.2 ± 3.30	0.8 ± 0.68	64.3 ± 3.12	n = 36	Roche Elecsys/Modular E/e601/e411
10.9 ± 1.37	2.2 ± 1.22	50.0 ± 2.61	2.2 ± 1.27	50.0 ± 2.50	n = 59	Siemens ADVIA/ADVIA Centaur
5.8 ± 0.41	1.4 ± 1.90	44.0 ± 6.87	1.4 ± 1.90	46.5 ± 10.19	n = 4	Siemens Dimension
5.6 ± 0.55	1.0 ± 0.00	49.1 ± 1.04	1.0 ± 0.00	55.1 ± 1.09	n = 10	Siemens Dimension LOCI
7.4 ± 1.03	1.0 ± 0.00	72.8 ± 10.46	1.0 ± 0.00	87.5 ± 12.76	n = 28	Siemens Immulite
7.0 ± 1.89	1.3 ± 0.47	50.1 ± 2.89	1.3 ± 0.48	54.7 ± 5.90	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Testosterone (ng/dL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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174.17 ± 23.37	388.65 ± 76.25	192.73 ± 43.11	273.43 ± 39.57	149.90 ± 23.27	n = 140	All Methods & Instruments
171.50	383.00	189.20	272.20	149.00	n = 140	Median value, All Methods & Instruments
<Instruments>						
152.98 ± 29.96	270.95 ± 46.58	146.72 ± 23.18	206.72 ± 29.88	121.20 ± 24.99	n = 3	Abbott AxSym
175.06 ± 8.30	339.23 ± 24.05	171.10 ± 10.41	245.71 ± 13.06	131.22 ± 9.49	n = 6	Beckman Coulter ACCESS
165.43 ± 12.05	316.56 ± 19.87	161.24 ± 12.32	235.99 ± 15.74	126.75 ± 10.07	n = 15	Beckman Coulter UniCel DxI 800
175.48 ± 33.98	345.38 ± 52.59	180.66 ± 32.76	264.51 ± 54.29	152.06 ± 24.99	n = 7	Gamma Counter
218.61 ± 16.17	325.11 ± 33.38	189.50 ± 8.30	250.74 ± 16.91	153.98 ± 11.20	n = 6	LC/MS/MS
128.13 ± 6.67	453.75 ± 25.38	203.18 ± 6.12	285.65 ± 9.47	131.04 ± 8.60	n = 4	Ortho Vitros Eci/ECiQ
195.79 ± 14.56	431.62 ± 48.34	203.00 ± 9.63	304.20 ± 49.28	153.80 ± 19.51	n = 6	Roche cobas e601
173.21 ± 29.93	408.48 ± 33.79	190.63 ± 22.73	294.44 ± 32.17	143.51 ± 17.36	n = 10	Roche Elecsys
185.50 ± 8.67	450.38 ± 19.37	207.27 ± 9.61	325.08 ± 12.22	163.42 ± 6.91	n = 8	Roche MODULAR E
168.89 ± 14.15	373.28 ± 33.90	183.61 ± 16.72	272.66 ± 19.71	149.73 ± 12.91	n = 39	Siemens ADVIA Centaur
206.44 ± 19.22	710.85 ± 47.82	365.25 ± 32.81	410.00 ± 22.26	233.51 ± 11.13	n = 5	Siemens Immulite 1000
177.85 ± 18.82	484.48 ± 46.09	271.51 ± 27.88	291.02 ± 20.49	173.08 ± 12.25	n = 21	Siemens Immulite 2000
184.95 ± 23.46	497.55 ± 23.47	277.86 ± 39.81	283.24 ± 23.25	168.91 ± 13.80	n = 3	Siemens Immulite 2500
178.26 ± 20.74	396.57 ± 86.54	194.51 ± 38.73	274.95 ± 36.69	147.99 ± 18.59	n = 13	Mean of Above Means
<Reagents>						
152.98 ± 29.96	270.95 ± 46.58	146.72 ± 23.18	206.72 ± 29.88	121.20 ± 24.99	n = 3	Abbott
167.77 ± 11.94	321.26 ± 22.94	162.97 ± 13.38	238.09 ± 16.45	127.41 ± 10.31	n = 23	Beckman Coulter
215.74 ± 16.54	331.94 ± 34.26	191.19 ± 9.74	254.57 ± 25.01	154.09 ± 10.16	n = 7	In-House
128.13 ± 6.67	453.75 ± 25.38	203.18 ± 6.12	285.65 ± 9.47	131.04 ± 8.60	n = 4	Ortho Clinical Diagnostics
182.89 ± 22.88	427.73 ± 39.41	199.55 ± 17.35	307.33 ± 34.78	152.75 ± 18.23	n = 23	Roche Elecsys/Modular E/e601/e411
168.53 ± 14.01	371.84 ± 35.59	183.22 ± 16.54	271.65 ± 20.90	149.70 ± 12.61	n = 40	Siemens ADVIA/ADVIA Centaur
182.88 ± 30.18	359.10 ± 43.62	188.27 ± 27.47	276.21 ± 49.02	156.92 ± 24.13	n = 6	Siemens Coat-A-Count
182.88 ± 22.24	501.15 ± 73.32	282.81 ± 42.94	299.63 ± 40.82	178.01 ± 22.95	n = 29	Siemens Immulite
173.24 ± 23.50	377.19 ± 75.92	184.91 ± 22.35	270.33 ± 31.90	146.10 ± 18.50	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
0.52 \pm 0.06	1.70 \pm 0.22	1.69 \pm 0.19	4.21 \pm 0.50	2.21 \pm 0.25	n = 295	All Methods & Instruments
0.50	1.70	1.70	4.20	2.20	n = 295	Median value, All Methods & Instruments
						<Instruments>
0.48 \pm 0.04	1.48 \pm 0.09	1.46 \pm 0.08	3.66 \pm 0.12	1.93 \pm 0.12	n = 11	Abbott Architect
0.50 \pm 0.00	1.56 \pm 0.13	1.59 \pm 0.05	4.10 \pm 0.35	2.10 \pm 0.07	n = 10	Abbott AxSym
0.50 \pm 0.00	1.52 \pm 0.10	1.53 \pm 0.09	3.83 \pm 0.20	2.01 \pm 0.13	n = 26	Beckman Coulter ACCESS
0.48 \pm 0.05	1.56 \pm 0.09	1.55 \pm 0.11	3.86 \pm 0.26	2.00 \pm 0.15	n = 21	Beckman Coulter UniCel DxI 800
0.54 \pm 0.06	1.95 \pm 0.07	1.93 \pm 0.08	5.24 \pm 0.20	2.48 \pm 0.10	n = 19	Ortho Vitros Eci/ECiQ
0.63 \pm 0.05	2.06 \pm 0.10	2.00 \pm 0.09	4.81 \pm 0.20	2.56 \pm 0.10	n = 3	Roche cobas e411
0.60 \pm 0.00	2.01 \pm 0.05	1.90 \pm 0.00	4.71 \pm 0.12	2.51 \pm 0.09	n = 14	Roche cobas e601
0.60 \pm 0.00	2.00 \pm 0.09	1.92 \pm 0.07	4.67 \pm 0.20	2.48 \pm 0.10	n = 6	Roche Elecsys
0.60 \pm 0.00	2.01 \pm 0.05	1.94 \pm 0.06	4.68 \pm 0.09	2.50 \pm 0.00	n = 20	Roche MODULAR E
0.50 \pm 0.00	1.73 \pm 0.08	1.73 \pm 0.08	4.34 \pm 0.23	2.29 \pm 0.13	n = 67	Siemens ADVIA Centaur
0.52 \pm 0.05	1.78 \pm 0.07	1.77 \pm 0.07	4.25 \pm 0.07	2.30 \pm 0.05	n = 7	Siemens Dimension EXL
0.47 \pm 0.06	1.50 \pm 0.14	1.51 \pm 0.12	3.72 \pm 0.27	1.99 \pm 0.14	n = 24	Siemens Dimension RxL
0.50 \pm 0.00	1.70 \pm 0.00	1.70 \pm 0.07	4.29 \pm 0.20	2.27 \pm 0.11	n = 10	Siemens Dimension Vista
0.45 \pm 0.10	1.43 \pm 0.09	1.52 \pm 0.10	3.70 \pm 0.12	1.96 \pm 0.11	n = 8	Siemens Dimension Xpand
0.57 \pm 0.05	1.70 \pm 0.08	1.68 \pm 0.11	4.20 \pm 0.32	2.13 \pm 0.11	n = 9	Siemens Immulite 1000
0.53 \pm 0.05	1.54 \pm 0.14	1.59 \pm 0.10	3.94 \pm 0.28	2.05 \pm 0.14	n = 20	Siemens Immulite 2000
0.60 \pm 0.00	1.60 \pm 0.00	1.50 \pm 0.06	3.81 \pm 0.24	2.00 \pm 0.10	n = 5	Siemens Immulite 2500
0.64 \pm 0.06	1.91 \pm 0.13	1.90 \pm 0.10	4.77 \pm 0.43	2.48 \pm 0.18	n = 5	Tosoh Bioscience
0.54 \pm 0.06	1.72 \pm 0.23	1.70 \pm 0.20	4.23 \pm 0.48	2.22 \pm 0.25	n = 18	Mean of Above Means
						<Reagents>
0.50 \pm 0.00	1.52 \pm 0.12	1.52 \pm 0.10	3.81 \pm 0.27	2.02 \pm 0.13	n = 21	Abbott
0.50 \pm 0.00	1.53 \pm 0.10	1.54 \pm 0.11	3.84 \pm 0.23	2.00 \pm 0.14	n = 49	Beckman Coulter
0.54 \pm 0.06	1.95 \pm 0.07	1.93 \pm 0.07	5.24 \pm 0.19	2.48 \pm 0.10	n = 20	Ortho Clinical Diagnostics
0.60 \pm 0.00	2.01 \pm 0.06	1.93 \pm 0.06	4.70 \pm 0.12	2.49 \pm 0.07	n = 41	Roche Elecsys/Modular E/e601/e411
0.52 \pm 0.05	1.72 \pm 0.09	1.72 \pm 0.08	4.27 \pm 0.26	2.30 \pm 0.13	n = 36	Siemens ADVIA/ADVIA Centaur
0.46 \pm 0.06	1.49 \pm 0.14	1.51 \pm 0.11	3.72 \pm 0.26	1.99 \pm 0.13	n = 33	Siemens Dimension
0.50 \pm 0.00	1.75 \pm 0.08	1.74 \pm 0.08	4.27 \pm 0.15	2.29 \pm 0.08	n = 16	Siemens Dimension LOCI
0.55 \pm 0.06	1.60 \pm 0.14	1.61 \pm 0.12	3.99 \pm 0.33	2.07 \pm 0.14	n = 35	Siemens Immulite
0.50 \pm 0.00	1.74 \pm 0.08	1.75 \pm 0.09	4.43 \pm 0.18	2.29 \pm 0.13	n = 33	Siemens TSH-3
0.62 \pm 0.04	1.88 \pm 0.13	1.87 \pm 0.09	4.69 \pm 0.45	2.44 \pm 0.18	n = 4	Tosoh AIA
0.52 \pm 0.05	1.71 \pm 0.19	1.71 \pm 0.17	4.26 \pm 0.47	2.24 \pm 0.21	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T Uptake (Unit)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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1.073 ± 0.162	0.825 ± 0.337	0.817 ± 0.297	0.882 ± 0.174	0.868 ± 0.074	n = 27	All Methods & Instruments
1.050	0.940	0.910	0.940	0.880	n = 27	Median value, All Methods & Instruments
<Instruments>						
0.887 ± 0.035	0.568 ± 0.015	0.578 ± 0.024	0.788 ± 0.036	0.841 ± 0.043	n = 7	Abbott AxSym
1.070 ± 0.036	0.547 ± 0.005	0.570 ± 0.009	0.617 ± 0.005	0.634 ± 0.010	n = 3	Ortho Vitros ECi/ECiQ
1.218 ± 0.040	0.993 ± 0.046	0.968 ± 0.049	0.977 ± 0.023	0.924 ± 0.061	n = 4	Roche cobas e601
1.211 ± 0.022	0.964 ± 0.017	0.955 ± 0.037	0.964 ± 0.021	0.898 ± 0.019	n = 7	Roche MODULAR E
0.968 ± 0.053	1.903 ± 0.154	1.832 ± 0.106	1.561 ± 0.110	1.503 ± 0.100	n = 4	Siemens ADVIA Centaur
1.073 ± 0.145	0.910 ± 0.473	0.899 ± 0.440	0.934 ± 0.310	0.904 ± 0.266	n = 5	Mean of Above Means
<Reagents>						
0.894 ± 0.048	0.572 ± 0.019	0.579 ± 0.037	0.792 ± 0.030	0.834 ± 0.043	n = 8	Abbott
1.070 ± 0.036	0.547 ± 0.005	0.570 ± 0.009	0.617 ± 0.005	0.634 ± 0.010	n = 3	Ortho Clinical Diagnostics
1.209 ± 0.019	0.969 ± 0.023	0.955 ± 0.040	0.967 ± 0.023	0.899 ± 0.020	n = 12	Roche Elecsys/Modular E/e601/e411
0.968 ± 0.053	1.903 ± 0.154	1.832 ± 0.106	1.561 ± 0.110	1.503 ± 0.100	n = 4	Siemens ADVIA/ADVIA Centaur
1.030 ± 0.128	0.918 ± 0.564	0.909 ± 0.527	0.940 ± 0.368	0.922 ± 0.330	n = 4	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

T3-Uptake (%)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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29.71 ± 3.73	46.32 ± 8.26	45.64 ± 7.40	42.06 ± 5.40	41.83 ± 4.80	n = 146	All Methods & Instruments
29.40	45.30	45.00	41.30	41.20	n = 146	Median value, All Methods & Instruments
<Instruments>						
28.78 ± 0.13	42.14 ± 1.36	40.76 ± 0.90	36.32 ± 0.04	35.74 ± 0.84	n = 5	Abbott Architect
32.17 ± 1.99	44.87 ± 2.15	42.15 ± 1.60	36.63 ± 1.48	33.88 ± 1.34	n = 7	Abbott AxSym
35.90 ± 2.91	45.38 ± 2.03	46.00 ± 2.12	42.25 ± 1.89	41.30 ± 2.49	n = 13	Beckman Coulter ACCESS
25.52 ± 0.66	45.93 ± 4.66	45.67 ± 3.87	42.78 ± 3.43	43.40 ± 2.55	n = 11	Beckman Coulter AU Chemistry System
37.47 ± 2.41	46.29 ± 2.43	45.81 ± 1.84	42.15 ± 1.98	42.43 ± 2.19	n = 13	Beckman Coulter UniCel DxI 800
28.83 ± 0.65	60.21 ± 2.08	56.61 ± 2.20	51.32 ± 1.47	48.88 ± 1.63	n = 7	Ortho Vitros Eci/ECiQ
25.23 ± 1.41	47.63 ± 1.56	46.95 ± 0.99	45.03 ± 0.86	44.53 ± 1.05	n = 3	Roche MODULAR D/P
30.28 ± 0.54	36.77 ± 0.25	37.15 ± 0.22	36.85 ± 0.46	38.35 ± 0.45	n = 5	Roche MODULAR E
29.87 ± 1.90	57.30 ± 3.64	55.46 ± 2.71	48.27 ± 2.70	46.69 ± 2.38	n = 35	Siemens ADVIA Centaur
28.57 ± 1.30	38.98 ± 0.91	38.88 ± 1.11	37.54 ± 1.42	38.66 ± 1.51	n = 11	Siemens Dimension RxL
28.00 ± 0.75	37.87 ± 1.88	39.16 ± 1.27	37.30 ± 0.82	38.84 ± 1.27	n = 4	Siemens Dimension Vista
25.69 ± 1.04	44.68 ± 1.52	42.69 ± 1.92	41.42 ± 2.09	39.36 ± 3.06	n = 5	Siemens Immulite 1000
29.37 ± 1.30	38.69 ± 1.40	38.28 ± 1.42	37.64 ± 1.05	37.88 ± 1.53	n = 13	Siemens Immulite 2000
28.39 ± 1.38	39.85 ± 1.44	39.40 ± 0.36	38.50 ± 2.09	39.46 ± 0.98	n = 3	Siemens Immulite 2500
23.46 ± 1.32	42.30 ± 1.30	42.82 ± 1.25	39.52 ± 1.40	41.02 ± 1.86	n = 4	Tosoh Bioscience
28.73 ± 3.43	43.30 ± 5.42	42.82 ± 5.04	40.22 ± 4.14	40.45 ± 3.88	n = 15	Mean of Above Means
<Reagents>						
30.69 ± 2.26	43.61 ± 2.25	41.47 ± 1.43	36.49 ± 0.99	34.75 ± 1.49	n = 12	Abbott
36.77 ± 2.85	45.84 ± 2.54	45.93 ± 2.24	42.18 ± 2.04	41.96 ± 2.54	n = 28	Beckman Coulter
25.47 ± 0.80	48.72 ± 0.57	47.68 ± 1.01	44.98 ± 1.40	44.84 ± 0.86	n = 10	Microgenics CEDIA
25.50 ± 1.09	40.11 ± 0.80	40.87 ± 0.69	39.00 ± 0.82	40.43 ± 0.31	n = 3	Microgenics DRI
28.83 ± 0.65	60.21 ± 2.08	56.61 ± 2.20	51.32 ± 1.47	48.88 ± 1.63	n = 7	Ortho Clinical Diagnostics
30.37 ± 0.50	36.61 ± 0.44	37.03 ± 0.51	36.66 ± 0.61	38.34 ± 0.38	n = 6	Roche Elecsys/Modular E/e601/e411
29.87 ± 1.90	57.30 ± 3.64	55.46 ± 2.71	48.27 ± 2.70	46.69 ± 2.38	n = 35	Siemens ADVIA/ADVIA Centaur
28.40 ± 1.09	39.00 ± 1.09	39.16 ± 1.31	37.56 ± 1.27	38.89 ± 1.48	n = 17	Siemens Dimension
28.42 ± 1.93	40.12 ± 3.00	39.38 ± 2.30	38.49 ± 2.33	38.44 ± 1.96	n = 22	Siemens Immulite
24.00 ± 0.81	42.83 ± 0.31	43.29 ± 0.52	40.08 ± 0.77	41.82 ± 0.87	n = 3	Tosoh ST AIA
28.44 ± 3.08	44.34 ± 7.38	43.86 ± 6.52	40.86 ± 4.94	41.32 ± 4.26	n = 10	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

Vitamin B12 (pg/mL)

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
391.5 ± 45.23	311.1 ± 39.89	315.3 ± 39.19	462.7 ± 63.93	468.6 ± 62.87	n = 228	All Methods & Instruments
395.0	312.0	316.0	469.0	474.0	n = 228	Median value, All Methods & Instruments
<Instruments>						
406.9 ± 14.24	330.4 ± 17.07	335.7 ± 17.54	485.1 ± 27.96	495.7 ± 23.44	n = 12	Abbott AxSym
347.2 ± 20.62	301.5 ± 18.08	301.6 ± 22.98	443.6 ± 35.24	445.1 ± 33.12	n = 21	Beckman Coulter ACCESS
329.5 ± 26.43	281.9 ± 9.80	287.4 ± 24.41	414.4 ± 25.17	381.3 ± 43.72	n = 3	Beckman Coulter UniCel DxI 600
323.0 ± 19.37	269.7 ± 16.54	275.7 ± 26.56	380.1 ± 30.90	382.9 ± 21.25	n = 22	Beckman Coulter UniCel DxI 800
415.7 ± 25.62	350.5 ± 19.54	356.4 ± 15.57	516.4 ± 35.06	521.9 ± 33.42	n = 22	Ortho Vitros ECi/ECiQ
453.1 ± 23.31	296.9 ± 36.46	299.7 ± 12.17	523.3 ± 13.02	521.7 ± 34.25	n = 3	Roche cobas e411
429.0 ± 13.69	349.8 ± 12.56	346.8 ± 8.92	506.8 ± 10.18	504.5 ± 12.50	n = 13	Roche cobas e601
477.1 ± 48.88	357.4 ± 27.09	357.6 ± 30.63	561.8 ± 62.00	554.1 ± 66.08	n = 4	Roche Elecsys
426.1 ± 12.14	345.6 ± 10.83	346.5 ± 13.87	505.0 ± 15.81	507.1 ± 12.77	n = 17	Roche MODULAR E
389.4 ± 30.36	294.8 ± 29.58	301.6 ± 31.66	420.9 ± 37.99	433.2 ± 38.21	n = 67	Siemens ADVIA Centaur
413.0 ± 23.62	326.9 ± 18.79	332.7 ± 24.50	468.4 ± 27.48	478.7 ± 20.91	n = 4	Siemens ADVIA Centaur CP
433.8 ± 17.92	233.9 ± 18.88	249.2 ± 7.98	406.1 ± 24.61	426.3 ± 15.93	n = 9	Siemens Dimension Vista
416.4 ± 16.94	318.6 ± 21.09	320.6 ± 27.08	514.4 ± 26.10	558.7 ± 19.57	n = 3	Siemens Immulite 1000
365.0 ± 26.72	301.6 ± 24.98	308.2 ± 24.49	519.4 ± 30.42	527.2 ± 36.62	n = 20	Siemens Immulite 2000
412.9 ± 42.50	400.4 ± 57.32	390.6 ± 58.95	548.5 ± 32.35	554.5 ± 30.97	n = 3	Tosoh Bioscience
405.6 ± 43.61	317.5 ± 39.48	321.0 ± 36.35	484.2 ± 57.45	490.8 ± 60.52	n = 15	Mean of Above Means
<Reagents>						
406.9 ± 14.24	330.4 ± 17.07	335.7 ± 17.54	485.1 ± 27.96	495.7 ± 23.44	n = 12	Abbott
333.9 ± 23.83	286.1 ± 24.87	289.0 ± 27.93	410.8 ± 46.40	407.1 ± 44.44	n = 46	Beckman Coulter
414.7 ± 25.34	349.1 ± 21.43	355.2 ± 17.46	513.6 ± 37.59	519.5 ± 36.27	n = 23	Ortho Clinical Diagnostics
428.3 ± 15.22	346.3 ± 14.41	345.1 ± 16.67	506.2 ± 15.48	505.9 ± 17.15	n = 36	Roche Elecsys/Modular E/e601/e411
390.8 ± 31.09	297.0 ± 30.65	303.5 ± 32.68	423.4 ± 39.74	436.0 ± 39.93	n = 70	Siemens ADVIA/ADVIA Centaur
434.9 ± 15.29	233.0 ± 15.69	249.1 ± 7.91	405.0 ± 22.04	425.9 ± 15.23	n = 8	Siemens Dimension LOCI
376.4 ± 35.41	308.2 ± 29.29	311.4 ± 27.14	522.1 ± 32.70	533.6 ± 38.96	n = 27	Siemens Immulite
412.9 ± 42.50	400.4 ± 57.32	390.6 ± 58.95	548.5 ± 32.35	554.5 ± 30.97	n = 3	Tosoh AIA
405.0 ± 28.30	319.5 ± 47.17	323.2 ± 42.32	478.8 ± 57.77	486.8 ± 56.14	n = 8	Mean of Above Means

Statistical Summary (Mean and Standard Deviation)

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

Specimen: E51	Specimen: E52	Specimen: E53	Specimen: E54	Specimen: E55	Number	Instrument or Reagent System
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13.81 ± 2.43	26.45 ± 5.39	30.41 ± 4.29	30.98 ± 5.60	36.71 ± 5.47	n = 73	All Methods & Instruments
14.00	25.60	30.40	30.80	36.70	n = 73	Median value, All Methods & Instruments
<Instruments>						
15.14 ± 0.84	34.34 ± 1.66	35.54 ± 1.27	35.74 ± 1.87	38.97 ± 0.59	n = 3	Automated microplate processor
13.85 ± 0.19	31.00 ± 0.99	33.08 ± 0.77	33.85 ± 0.19	36.99 ± 1.15	n = 3	BioRad PhD System
13.86 ± 1.53	23.99 ± 2.08	28.79 ± 2.80	27.21 ± 2.53	33.72 ± 3.05	n = 36	DiaSorin Liaison
17.38 ± 2.75	33.93 ± 12.90	38.25 ± 15.44	46.87 ± 20.87	57.86 ± 28.44	n = 3	Gamma Counter
9.17 ± 1.60	24.24 ± 3.00	28.74 ± 3.19	37.40 ± 4.00	47.30 ± 6.56	n = 12	LC/MS/MS
15.44 ± 1.57	34.62 ± 3.58	36.35 ± 3.92	35.91 ± 3.17	39.98 ± 2.43	n = 14	Reagent Not Listed
14.53 ± 2.32	30.72 ± 5.02	33.58 ± 4.03	35.76 ± 5.60	41.22 ± 7.84	n = 6	Mean of Above Means
<Reagents>						
13.86 ± 1.53	23.99 ± 2.08	28.79 ± 2.80	27.21 ± 2.53	33.72 ± 3.05	n = 36	DiaSorin Liaison
14.91 ± 1.42	34.00 ± 2.77	35.44 ± 3.08	35.29 ± 2.61	38.65 ± 2.80	n = 21	Immuno Diagnostic Systems Enzyme Im
9.17 ± 1.60	24.24 ± 3.00	28.74 ± 3.19	37.40 ± 4.00	47.30 ± 6.56	n = 12	In-House
12.89 ± 2.72	26.89 ± 5.06	30.64 ± 3.42	33.70 ± 4.80	39.62 ± 6.18	n = 3	Mean of Above Means