Immunoassay Control (CLIA/ELISA) Level-1, 2, and 3

Fortress Diagnostics Quality Control Inserts | Insert.fortressdiagnostics.com

REF	BXC0363A (4x3ml)	GMDN GTIN	47869 5060476975917	LOT	363-01-031	EXP	2028-01
	BXC0363B (4x3ml)	GMDN GTIN	47869 5060476975924		363-02-031		
	BXC0363C (4x3ml)	GMDN GTIN	47869 5060476975931		363-03-035		

Intended Use

This product is an Immunoassay human based lyophilised assayed serum for the control of accuracy and precision. It is intended for the in vitro diagnostic use in the quality control of CLIA & ELISA diagnostic assays.

Description

The Immunoassay Serum Controls are supplied in 3 levels, level 1, 2 and 3. Target values and ranges are supplied for the analytes listed.

Value Assignment

The quoted ranges are provided for guidance as a result of variation caused by test equipment, test reagents and laboratory technique. Hence, we recommend that each laboratory establishes its own ranges, based on individual laboratory requirements.
Each batch of immunoassayed human serum is value assigned in a number of reference laboratories against international Reference Standards/ Methods.

Together with the values obtained from a large number of laboratories worldwide presented here after statistical analysis.
The ranges provided are based on mean ±3 S.D.

For technical support, please contact the technical team.

Stability & Limitations

This product must be stored refrigerated at +2°C to +8°C. Reconstituted immunoassay serum open vial is stable for 7 days at +2°C to +8°C, and 1 month when frozen once at –18°C to –80°C. (See Limitations). Unopened vial must be stored refrigerated at +2°C to +8°C and is stable to expiration date printed on individual vials. The immunoassay controls are transported under normal ambient temperature.

Limitations:
After reconstitution:
Total PSA is stable for 3 days at +2°C to +8°C.
Folate is stable for 3 days at +2°C to +8°C.
C-Peptide is stable for 8 hours at +2°C to +8°C.
The following Analytes must be assayed immediately after reconstitution:
ACTH
CALCITONIN
FREE PSA
After reconstitution, the frozen stability of this control if frozen once at –18°C to –80°C for all analytes is 1 month except for ACTH, Aldosterone, Calcitonin, and Free PSA which can be only tested immediately after reconstitution.

Bacterial contamination of the reconstituted immunoassay serum will cause reductions in the stability of many components.

Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot. The control should not be used as a calibration material.

Preparation for Use

Carefully reconstitute each vial of lyophilised immunoassay serum with exactly 3ml of distilled water at +15°C to +25°C.
Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.
Refrigerate any unused material. Mix thoroughly prior to reuse.

CE	2°C 5°C	REF	LOT	IVD		GTIN
European Conformity	Temperature Limitation	Catalogue Number	Lot Number	In Vitro Diagnostics Medical Device	Expiry Date (MM/YYYY)	Global Trade Item Number

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Immunoassay Tri-Level Level-1; Level-2; Level-3 L1 4 x 3 ml; L2 4 x 3 ml; L3 4 x 3 ml; L1/L2/L3 3 x 4 x 3 ml

Materials Required But Not Provided

Volumetric Pipette

Precautions & Warnings

For in vitro diagnostic use only.
Do not pipette by mouth.
Exercise the normal precautions required for handling laboratory reagents.
Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HBsAg), and Hepatitis C Virus (HCV) antibody and found to be negative. However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data (MSDS) Sheets are available on request.

https://insert.fortressdiagnostics.com/

L1	363-01-031		
L2	LOT 363-02-031	EXP	2028 / 01
L3	363-03-035		

Methods / Analytes		Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
Fortress Diagnostics-ELISA	Units	Target	Range	Target	Range	Target	Range
17-Alpha-Hydroxyprogesterone	ng/mL	0.49	0.39 - 0.59	1.69	1.35 - 2.03	4.51	3.61 - 5.41
Alpha Fetoprotein (AFP)	ng/mL	15.7	12.56 - 18.84	96	77.12 - 115.68	224.50	179.60 - 269.40
Carcinoembryonic Antigen (CEA)	ng/mL	2.02	1.62 - 2.42	12.73	10.18 - 15.28	21.06	16.85 - 25.27
Cortisol	µg/dL	3.21	2.57 - 3.85	19.13	15.30 - 22.96	32.70	26.16 - 39.24
C-Peptide	ng/mL	0.36	0.29 - 0.43	3.83	3.06 - 4.60	6.25	5.00 - 7.50
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate)	µg/mL	0.69	0.55 - 0.83	2.42	1.94 - 2.90	6.81	5.45 - 8.17
Digoxin	ng/mL	0.83	0.66 - 1.00	2.20	1.76 - 2.64	3.70	2.96 - 4.44
Estradiol, E2	pg/mL	116.40	93.12 - 139.68	215.90	172.72 - 259.08	346.00	276.80 - 415.20
Ferritin	ng/mL	53.50	42.80 - 64.20	115.00	92.00 - 138.00	355.40	284.32 - 426.48
Follicle Stimulating Hormone (FSH)	mIU/mL	6.05	4.84 - 7.26	23.90	19.12 - 28.68	51.20	40.96 - 61.44
Human Chorionic Gonadotropin (hCG) (Total Beta)	mIU/mL	4.88	3.90 - 5.86	18.82	15.06 - 22.58	189.40	151.52 - 227.28
Estriol, Free (Unconjugated) (UE3)	ng/mL	2.80	2.24 - 3.36	8.43	6.74 - 10.12	17.40	13.92 - 20.88
Human Growth Hormone (hGH)	µIU/mL	11.45	9.16 - 13.74	34.00	27.20 - 40.80	66.30	53.04 - 79.56
Immunoglobulin E (IgE)	IU/mL	363.00	290.40 - 435.60	92.70	74.16 - 111.24	116.70	93.36 - 140.04
Insulin	µIU/mL	11.22	8.98 - 13.46	50.90	40.72 - 61.08	149.60	119.68 - 179.52
Luteinizing Hormone (LH)	mIU/mL	1.66	1.33 - 1.99	22.60	18.08 - 27.12	70.55	56.44 - 84.66
Progesterone	ng/mL	1.27	1.02 - 1.52	12.30	9.84 - 14.76	25.82	20.66 - 30.98
Prolactin	ng/mL	8.86	7.09 - 10.63	23.90	19.12 - 28.68	55.43	44.34 - 66.52
Prostate Specific Antigen, Free (FPSA)	ng/mL	0.60	0.48 - 0.72	2.75	2.20 - 3.30	11.75	9.40 - 14.10
Prostate Specific Antigen, Total (PSA)	ng/mL	0.88	0.70 - 1.06	3.98	3.18 - 4.78	>25.0	
T3 Free (FT3)	pg/mL	2.60	2.08 - 3.12	4.90	3.92 - 5.88	7.61	6.09 - 9.13
T3 Total	ng/mL	0.96	0.77 - 1.15	2.33	1.86 - 2.80	4.14	3.31 - 4.97
T3 Uptake / T-Uptake	% Uptake	30.20	24.16 - 36.24	35.40	28.32 - 42.48	41.10	32.88 - 49.32
T4 Free (FT4)	ng/dL	0.84	0.67 - 1.01	1.96	1.57 - 2.35	3.58	2.86 - 4.30
T4 Total	µg/dL	4.68	3.74 - 5.62	9.54	7.63 - 11.45	16.70	13.36 - 20.04
Testosterone	ng/mL	1.26	1.01 - 1.51	3.11	2.49 - 3.73	10.74	8.59 - 12.89
Testosterone, Free	pg/mL	2.57	2.06 - 3.08	10.47	8.38 - 12.56	23.63	18.90 - 28.36
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.48	0.38 - 0.58	5.47	4.38 - 6.56	33.60	26.88 - 40.32

Methods / Analytes	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
17-ALPHA-HYDROXYPROGESTERONE							
DRG (EIA-1292)	ng/mL	0.98	0.78 - 1.18	2.78	1.53 - 4.02	8.23	4.53 - 11.94
Monobind AccuLite CLIA	ng/mL	0.77	0.62 - 0.92	2.39	1.59 - 3.16	7.26	4.87 - 9.68
IBL ELISA	ng/mL	0.49	0.39 - 0.59	1.69	0.93 - 2.44	4.43	2.44 - 6.42
ACETAMINOPHEN							
SEKURE (Sekisui Diagnostics)	µg/mL	9.40	7.52 - 11.28	33.10	24.95 - 40.92	107.00	80.50 - 133.50
AFP							
DRG ELISA (EIA-1468)	ng/mL	33.10	26.48 - 39.72	158.00	104.22 - 211.73	>193.0	-
Monobind AccuBind ELISA	ng/mL	15.20	12.16 - 18.24	96.70	64.52 - 127.92	223.00	149.03 - 295.86
Monobind AccuLite CLIA	ng/mL	15.60	12.48 - 18.72	92.60	61.73 - 122.45	218.00	146.36 - 290.67
ALDOSTERONE							
Beckman Coulter RIA (DSL8600)	pg/mL	147.00	117.60 - 176.40	308.00	194.95 - 417.11	984.00	663.89 - 1304.11
Monobind AccuBind ELISA	pg/mL	160.00	128.00 - 192.00	319.00	212.83 - 421.99	834.00	557.38 - 1106.50
Monobind AccuLite CLIA	pg/mL	188.00	150.40 - 225.60	353.00	235.31 - 466.79	815.00	547.16 - 1086.67
MP BioMedicals ImmuChem DA RIA	pg/mL	143.00	114.40 - 171.60	297.00	262.69 - 328.36	902.11	742.70 - 1061.52
ANDROSTENEDIONE							
Beckman Coulter RIA (DSL3800)	ng/mL	0.60	0.48 - 0.72	1.66	0.98 - 2.32	2.88	1.60 - 4.15
DRG ELISA (EIA-3265)	ng/mL	0.54	0.43 - 0.65	1.64	0.89 - 2.37	3.46	1.91 - 5.02
Monobind AccuBind ELISA	ng/mL	0.99	0.79 - 1.19	2.55	1.70 - 3.37	5.63	3.76 - 7.47
Monobind AccuLite CLIA	ng/mL	1.08	0.86 - 1.30	2.88	1.92 - 3.81	5.40	3.63 - 7.20
Siemens Atellica Solution	ng/mL	0.69	0.55 - 0.83	1.33	1.07 - 1.58	2.02	1.74 - 2.30
CAFFEINE							
Emit	µg/mL	2.38	1.90 - 2.86	7.53	5.39 - 9.59	15.60	11.27 - 20.02
CALCITONIN							
Siemens Atellica Solution	pg/mL	12.00	9.60 - 14.40	147.00	119.72 - 173.29	366.00	318.08 - 413.40
CEA							
Monobind AccuBind ELISA	ng/mL	2.05	1.64 - 2.46	12.60	8.38 - 16.63	20.80	13.90 - 27.60
Monobind AccuLite CLIA	ng/mL	2.20	1.76 - 2.64	11.30	7.52 - 14.93	18.70	12.56 - 24.84
CORTISOL							
DRG ELISA (EIA-1887)	ng/mL	41.00	32.80 - 49.20	222.00	140.98 - 300.81	359.00	229.54 - 488.46
MP BioMedicals Corti-Cote RIA	µg/dL	2.97	2.38 - 3.56	21.90	19.53 - 24.05	38.92	34.68 - 43.16
MP BioMedicals ImmuChem CT RIA	µg/dL	5.20	4.16 - 6.24	32.60	28.69 - 36.19	52.30	44.08 - 60.52
C-PEPTIDE							
DRG ELISA (EIA-1293)	ng/mL	0.56	0.45 - 0.67	4.14	2.27 - 5.97	6.80	3.74 - 9.88
Monobind AccuBind ELISA	ng/mL	0.36	0.29 - 0.43	3.84	2.56 - 5.08	6.26	4.20 - 8.16
Monobind AccuLite CLIA	ng/mL	0.38	0.30 - 0.46	3.78	2.52 - 5.01	5.82	3.90 - 7.74
DEHYDROEPIANDROSTERONE-SULFATE (DHEA-SULFATE)							
Beckman Coulter RIA DHEA-S-7 (DSL2700)	ng/mL	681.00	544.80 - 817.20	2060.00	1417.95 - 2683.00	5521.00	2846.16 - 8194.46
DRG ELISA (EIA-1562)	µg/mL	0.60	0.48 - 0.72	1.61	0.88 - 2.32	4.69	2.58 - 6.80
IBL ELISA	µg/mL	0.83	0.66 - 1.00	2.21	1.43 - 2.97	7.51	4.88 - 10.14
Monobind AccuBind ELISA	µg/mL	0.69	0.55 - 0.83	2.42	1.61 - 3.19	6.81	4.56 - 8.77
Monobind AccuLite CLIA	µg/mL	0.69	0.55 - 0.83	2.38	1.59 - 3.15	6.60	4.43 - 8.12
MP BioMedicals ImmuChem CT RIA	ng/mL	592.70	474.16 - 711.24	1972.00	1461.59 - 2462.78	4985.67	3826.43 - 6144.91
DIGOXIN							
Monobind AccuBind ELISA	ng/mL	0.83	0.66 - 1.00	2.19	1.46 - 2.90	3.70	2.47 - 4.38
Monobind AccuLite CLIA	ng/mL	0.82	0.66 - 0.98	2.28	1.53 - 3.02	3.89	2.61 - 4.52
ESTRADIOL							
Beckman Coulter RIA US Estradiol (DSL4800)	pg/mL	66.90	53.52 - 80.28	105.00	61.37 - 148.27	169.00	95.05 - 242.20
DRG ELISA (EIA-2963)	pg/mL	144.00	115.20 - 172.80	440.00	245.72 - 630.88	850.00	475.69 - 1224.31
Monobind AccuBind ELISA	pg/mL	116.00	92.80 - 139.20	216.00	143.28 - 285.48	345.00	231.22 - 458.78
Monobind AccuLite CLIA	pg/mL	111.00	88.80 - 133.20	204.00	135.64 - 270.33	320.00	214.46 - 425.54

Methods / Analytes	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
ESTRIOL (FREE)							
Calbiotech ELISA	ng/mL	2.51	2.01 - 3.01	10.20	6.67 - 13.62	14.70	9.69 - 19.71
DRG ELISA (EIA-1612)	ng/mL	2.10	1.68 - 2.52	5.46	2.99 - 7.88	13.10	7.19 - 18.99
Monobind AccuBind ELISA Unconjugated (UE3)	ng/mL	2.80	2.24 - 3.36	8.43	5.63 - 11.15	17.20	11.50 - 22.89
Monobind AccuLite CLIA Unconjugated (UE3)	ng/mL	3.22	2.58 - 3.86	9.86	6.57 - 13.10	16.40	10.97 - 21.75
ETHOSUXIMIDE							
Emit	µg/mL	27.90	22.32 - 33.48	64.70	47.94 - 80.82	123.00	95.84 - 149.65
FERRITIN							
BioCheck EIA	ng/mL	55.80	44.64 - 66.96	123.20	102.57 - 142.60	366.10	289.46 - 443.49
Monobind AccuBind ELISA	ng/mL	53.50	42.80 - 64.20	115.00	76.60 - 152.26	356.00	238.82 - 473.18
Monobind AccuLite CLIA	ng/mL	52.50	42.00 - 63.00	118.00	78.97 - 157.18	346.00	231.70 - 460.30
FOLATE							
Monobind AccuBind ELISA	ng/mL	2.70	2.16 - 3.24	6.51	5.07 - 7.89	10.70	7.56 - 13.84
Monobind AccuLite CLIA	ng/mL	3.08	2.46 - 3.70	6.93	5.85 - 7.94	10.60	8.39 - 12.81
FOLLICLE STIMULATING HORMONE (FSH)							
DRG ELISA (EIA-1288)	mIU/mL	5.17	4.14 - 6.20	19.00	10.39 - 27.35	33.20	18.24 - 48.16
Monobind AccuBind ELISA	mIU/mL	6.05	4.84 - 7.26	23.80	15.79 - 31.45	51.30	34.41 - 68.19
Monobind AccuLite CLIA	mIU/mL	5.88	4.70 - 7.06	23.20	15.39 - 30.65	51.30	34.40 - 68.20
MP BioMedicals ImmuChem CT IRMA	mIU/mL	6.50	5.20 - 7.80	24.60	20.19 - 28.77	48.90	39.32 - 58.48
FRUCTOSAMINE							
Siemens Atellica Solution	umol/L	243.00	194.40 - 291.60	178.00	147.39 - 206.84	157.00	128.71 - 185.29
HCG							
DRG ELISA (EIA-1469)	mIU/mL	12.20	9.76 - 14.64	34.90	23.25 - 46.20	202.00	135.00 - 246.34
Monobind AccuBind ELISA	mIU/mL	8.40	6.72 - 10.08	24.90	16.59 - 32.97	213.00	142.35 - 259.76
Monobind AccuBind ELISA (hCG-XR)	mIU/mL	4.86	3.89 - 5.83	18.80	12.52 - 24.89	188.00	125.64 - 229.27
Monobind AccuBind ELISA Rapid hCG)	mIU/mL	4.89	3.91 - 5.87	21.50	14.32 - 28.46	221.00	147.69 - 269.51
Monobind AccuLite CLIA	mIU/mL	5.16	4.13 - 6.19	20.90	13.94 - 27.66	237.00	158.46 - 344.48
Monobind AccuLite CLIA (hCG-XR)	mIU/mL	5.55	4.44 - 6.66	18.70	12.47 - 24.75	177.00	118.34 - 257.27
HCG-BETA SUBUNIT							
DRG ELISA (EIA-1911)	mIU/mL	3.02	2.42 - 3.62	15.60	9.62 - 21.49	118.00	73.15 - 162.71
HUMAN GROWTH HORMONE (HGH)							
BioCheck EIA	ng/mL	9.50	7.60 - 11.40	27.20	20.10 - 34.03	49.00	34.25 - 63.57
MEDIAGNOST ELISA	µIU/mL	10.60	8.48 - 12.72	30.10	21.92 - 38.11	50.00	40.42 - 59.47
Monobind AccuBind ELISA	µIU/mL	11.40	9.12 - 13.68	34.00	22.65 - 45.02	65.90	44.11 - 87.69
Monobind AccuLite CLIA	µIU/mL	11.50	9.20 - 13.80	35.40	23.57 - 46.74	64.30	43.03 - 85.45
MP BioMedicals ImmuChem DA RIA	ng/mL	10.70	8.56 - 12.84	27.00	21.39 - 32.34	57.90	44.65 - 71.15
IGF-1/SOMATOMEDIN C							
MEDIAGNOST IGF-1 ELISA (IGFBP Blocked)	ng/mL	122.00	97.60 - 146.40	130.00	102.92 - 155.79	133.00	99.99 - 166.98
MEDIAGNOST IGF-1 RIA (IGFBP Blocked)	ng/mL	122.00	97.60 - 146.40	130.00	102.92 - 155.79	133.00	99.99 - 166.98
IMMUNOGLOBULIN E (IGE)							
BioCheck EIA	IU/mL	407.00	325.60 - 488.40	103.00	76.26 - 128.57	127.00	83.01 - 171.60
ImmunoCAP total IgE	IU/mL	375.00	300.00 - 450.00	110.00	74.52 - 144.27	141.00	99.29 - 182.71
Monobind AccuBind ELISA	IU/mL	363.00	290.40 - 435.60	92.70	61.31 - 122.62	117.00	78.22 - 155.78
Monobind AccuLite CLIA	IU/mL	343.00	274.40 - 411.60	87.90	58.60 - 116.33	114.00	76.40 - 151.60
INSULIN							
DRG ELISA (EIA-2935)	µIU/mL	15.00	12.00 - 18.00	75.00	41.01 - 107.82	>100.0	-
Monobind AccuBind ELISA	µIU/mL	11.20	8.96 - 13.44	50.80	33.92 - 67.29	150.00	100.48 - 199.32
Monobind AccuLite CLIA	µIU/mL	11.40	9.12 - 13.68	49.70	33.09 - 65.81	144.00	96.27 - 191.31
LIDOCAINE							
Emit	µg/mL	1.08	0.86 - 1.30	3.45	2.61 - 4.25	6.78	5.41 - 8.15
LUTEINIZING HORMONE (LH)							
DRG Serum ELISA (EIA-1289)	mIU/mL	2.75	2.20 - 3.30	22.40	12.23 - 32.34	58.60	32.17 - 85.03
Monobind AccuBind ELISA	mIU/mL	1.64	1.31 - 1.97	22.60	15.07 - 29.91	70.60	47.35 - 93.85

Methods / Analytes	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
LUTEINIZING HORMONE (LH) cont.							
Monobind AccuLite CLIA	mIU/mL	<5.00	-	23.00	15.37 - 30.40	72.30	48.49 - 96.22
PRIMIDONE							
Emit	µg/mL	3.05	2.44 - 3.66	5.71	4.76 - 6.60	11.30	9.40 - 13.22
PROGESTERONE							
BioCheck EIA	ng/mL	0.80	0.64 - 0.96	8.00	5.61 - 10.31	27.30	19.25 - 35.31
DRG ELISA (EIA-1561)	ng/mL	0.74	0.59 - 0.89	8.97	4.91 - 12.89	30.50	16.78 - 44.31
Monobind AccuBind ELISA	ng/mL	1.27	1.02 - 1.52	12.30	8.20 - 16.32	25.80	17.33 - 34.37
Monobind AccuLite CLIA	ng/mL	1.36	1.09 - 1.63	12.40	8.27 - 16.45	27.90	18.66 - 37.04
MP BioMedicals ImmuChem DA RIA	ng/mL	0.77	0.62 - 0.92	11.30	8.94 - 13.55	26.90	21.55 - 32.25
PROLACTIN							
BioCheck EIA	ng/mL	7.80	6.24 - 9.36	29.40	22.12 - 36.39	57.10	41.14 - 73.06
DRG ELISA (EIA-1291)	ng/mL	4.81	3.85 - 5.77	12.10	6.64 - 17.54	29.30	16.07 - 42.44
Monobind AccuBind ELISA	ng/mL	8.84	7.07 - 10.61	23.80	15.91 - 31.58	55.30	37.02 - 73.58
Monobind AccuLite CLIA	ng/mL	7.87	6.30 - 9.44	23.10	15.45 - 30.65	58.50	39.26 - 77.87
MP BioMedicals ImmuChem CT IRMA	ng/mL	11.97	9.58 - 14.36	32.70	27.80 - 37.27	78.10	67.75 - 88.45
PSA (TOTAL)							
Monobind AccuBind ELISA	ng/mL	<2.0	-	5.02	3.35 - 6.64	25.90	17.34 - 34.46
Monobind AccuBind ELISA (tPSA-XS)	ng/mL	0.87	0.70 - 1.04	3.97	2.65 - 5.25	>25.0	
Monobind AccuLite CLIA	ng/mL	<2.0	-	4.74	3.16 - 6.27	24.50	16.41 - 32.59
QUINIDINE							
Emit 2000	ug/mL	0.85	0.68 - 1.02	2.48	1.65 - 3.28	4.33	2.90 - 5.76
SALICYLATE							
SEKURE (Sekisui Diagnostics)	mg/dL	< 5.30	-	16.50	12.26 - 20.58	43.70	32.78 - 54.63
T3 (FREE)							
Monobind AccuBind ELISA	pg/mL	2.60	2.08 - 3.12	4.90	3.27 - 6.48	7.61	5.09 - 10.11
Monobind AccuLite CLIA	pg/mL	2.54	2.03 - 3.05	4.93	3.29 - 6.52	7.75	5.19 - 10.30
MP BioMedicals SPCS RIA	pg/mL	2.10	1.68 - 2.52	4.88	4.08 - 5.63	7.90	6.73 - 9.07
T3 (TOTAL)							
Monobind AccuBind ELISA	ng/mL	0.95	0.76 - 1.14	2.31	1.54 - 3.05	4.09	2.74 - 5.44
Monobind AccuLite CLIA	ng/mL	1.06	0.85 - 1.27	2.34	1.56 - 3.10	3.87	2.60 - 5.15
T3 UPTAKE/T UPTAKE							
Monobind AccuBind ELISA	% Uptake	30.30	24.24 - 36.36	35.40	33.02 - 37.43	41.10	38.99 - 43.31
Monobind AccuLite CLIA	% Uptake	30.30	24.24 - 36.36	35.80	33.44 - 37.80	41.70	39.82 - 43.49
MP BioMedicals SPCS RIA	% Uptake	36.30	29.04 - 43.56	41.20	37.07 - 44.92	49.80	45.69 - 53.91
T4 (FREE)							
EUROIMMUN RIA CT	ng/dL	0.66	0.53 - 0.79	1.85	1.38 - 2.30	3.70	2.78 - 4.63
Monobind AccuBind ELISA	ng/dL	0.84	0.67 - 1.01	1.96	1.31 - 2.59	3.58	2.40 - 4.77
Monobind AccuLite CLIA	ng/dL	0.81	0.65 - 0.97	1.91	1.27 - 2.53	3.36	2.25 - 4.46
MP BioMedicals SPCS RIA	ng/dL	0.58	0.46 - 0.70	1.80	1.57 - 2.01	3.64	3.19 - 4.09
T4 (TOTAL)							
Monobind AccuBind ELISA	µg/dL	4.70	3.76 - 5.64	9.54	6.34 - 12.63	16.60	11.13 - 22.07
Monobind AccuLite CLIA	µg/dL	4.97	3.98 - 5.96	9.42	6.27 - 12.43	15.60	10.46 - 20.74
MP BioMedicals SPCS RIA	µg/dL	5.05	4.04 - 6.06	9.90	8.93 - 10.77	15.70	13.60 - 17.80

Methods / Analytes	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
TESTOSTERONE							
BioCheck EIA	ng/mL	1.39	1.11 - 1.67	3.85	2.37 - 5.36	10.77	8.10 - 13.46
DRG ELISA (EIA-1559)	ng/mL	1.45	1.16 - 1.74	3.93	2.27 - 5.58	10.90	6.31 - 15.48
MP BioMedicals ImmuChem DA RIA	ng/mL	1.56	1.25 - 1.87	4.43	3.51 - 5.31	11.10	8.36 - 13.84
TESTOSTERONE (FREE)							
Beckman Coulter RIA (DSL4900)	pg/mL	2.95	2.36 - 3.54	9.40	6.98 - 11.78	29.10	19.56 - 38.72
THYROID STIMULATING HORMONE (TSH)							
BioCheck EIA	µIU/mL	0.50	0.40 - 0.60	5.78	3.69 - 7.82	33.00	22.14 - 42.17
Monobind AccuBind ELISA	µIU/mL	0.49	0.39 - 0.59	5.39	3.60 - 7.14	32.90	22.07 - 42.04
Monobind AccuBind ELISA (Rapid TSH)	µIU/mL	0.43	0.34 - 0.52	5.57	3.72 - 7.38	32.10	21.54 - 41.02
Monobind AccuLite CLIA	µIU/mL	0.50	0.40 - 0.60	5.10	3.39 - 6.74	34.20	22.95 - 45.45
Monobind AccuLite CLIA (Rapid TSH)	µIU/mL	0.49	0.39 - 0.59	5.10	3.39 - 6.74	31.20	20.94 - 41.46
MP BioMedicals ImmuChem CT IRMA	µIU/mL	0.67	0.54 - 0.80	6.96	5.63 - 8.22	38.52	33.44 - 43.60

INSTRUMENTS / ANALYTE	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
ABBOTT Alinity c SYSTEMS							
Acetaminophen (MULTIGENT)	µg/mL	10.30	8.24 - 12.36	35.20	26.40 - 44.00	111.00	98.45 - 124.51
Amikacin (MULTIGENT)	µg/mL	5.00	4.00 - 6.00	11.80	8.85 - 14.75	25.20	20.48 - 29.92
Carbamazepine (5P05-21)	µg/mL	2.46	1.97 - 2.95	7.35	5.51 - 9.19	12.60	10.62 - 14.68
Digoxin (MULTIGENT)	ng/mL	0.75	0.60 - 0.90	2.17	1.63 - 2.71	3.81	3.06 - 4.57
Gentamicin (MULTIGENT)	µg/mL	2.15	1.72 - 2.58	4.37	3.28 - 5.46	6.48	5.47 - 7.49
Lithium (MULTIGENT)	mmol/L	0.40	0.32 - 0.48	1.10	0.83 - 1.38	1.71	1.51 - 1.91
Phenobarbital (5P07-21)	µg/mL	8.38	6.70 - 10.06	21.50	16.13 - 26.88	48.90	41.44 - 56.36
Phenytoin (5P08-21)	µg/mL	6.58	5.26 - 7.90	13.90	10.43 - 17.38	25.40	14.51 - 36.18
Salicylate (MULTIGENT)	mg/dL	< 5.00	-	15.30	11.48 - 19.13	42.70	38.14 - 47.16
Theophylline (5P06-21)	µg/mL	4.23	3.38 - 5.08	13.40	10.05 - 16.75	24.50	20.31 - 28.77
Tobramycin (MULTIGENT)	µg/mL	0.66	0.53 - 0.79	2.20	1.65 - 2.75	4.89	4.11 - 5.67
Valproic Acid (MULTIGENT)	µg/mL	28.30	22.64 - 33.96	73.90	55.43 - 92.38	110.00	96.54 - 123.75
Vancomycin (MULTIGENT)	µg/mL	7.11	5.69 - 8.53	18.90	14.18 - 23.63	34.80	26.91 - 42.69
ABBOTT Architect c SYSTEMS							
Acetaminophen (MULTIGENT)	µg/mL	9.47	7.58 - 11.36	33.90	25.43 - 42.38	109.00	96.68 - 122.27
Carbamazepine (5P05-21)	µg/mL	< 1.90	-	1.78	1.34 - 2.23	3.47	2.92 - 4.04
Digoxin (MULTIGENT)	ng/mL	0.75	0.60 - 0.90	2.17	1.63 - 2.71	3.81	3.06 - 4.57
Gentamicin (MULTIGENT)	µg/mL	2.15	1.72 - 2.58	4.37	3.28 - 5.46	6.48	5.47 - 7.49
Immunoglobulin A (IgA)	mg/dL	172.00	137.60 - 206.40	152.00	114.00 - 190.00	156.00	141.73 - 169.25
Immunoglobulin E (IgE) (MULTIGENT)	IU/mL	347.00	277.60 - 416.40	72.90	54.68 - 91.13	95.30	64.17 - 126.43
Immunoglobulin G (IgG)	mg/dL	905.00	724.00 - 1086.00	808.00	606.00 - 1010.00	836.00	800.08 - 873.01
Immunoglobulin M (IgM)	mg/dL	71.70	57.36 - 86.04	71.20	53.40 - 89.00	69.90	62.91 - 76.99
Iron	µg/dL	36.00	28.80 - 43.20	88.70	66.53 - 110.88	81.20	75.56 - 86.95
Lithium (MULTIGENT)	mEq/L	0.44	0.35 - 0.53	1.16	0.87 - 1.45	1.81	1.60 - 2.02
Phenobarbital (5P07-21)	µg/mL	8.83	7.06 - 10.60	23.40	17.55 - 29.25	46.00	38.98 - 53.02
Phenytoin (5P08-21)	µg/mL	6.80	5.44 - 8.16	14.20	10.65 - 17.75	25.50	14.57 - 36.32
Salicylate (MULTIGENT)	mg/dL	< 5.00	-	15.40	11.55 - 19.25	43.90	39.21 - 48.49
Theophylline (5P06-21)	µg/mL	4.37	3.50 - 5.24	14.50	10.88 - 18.13	28.30	23.47 - 33.23
Tobramycin (MULTIGENT)	µg/mL	0.63	0.50 - 0.75	2.25	1.69 - 2.81	5.05	4.24 - 5.85
Valproic Acid (MULTIGENT)	µg/mL	26.90	21.52 - 32.28	70.00	52.50 - 87.50	105.00	92.16 - 118.13
Vancomycin (MULTIGENT)	µg/mL	6.93	5.54 - 8.32	18.10	13.58 - 22.63	34.10	26.37 - 41.83
ABBOTT Alinity i SYSTEMS							
AFP	ng/mL	17.40	13.92 - 20.88	97.80	78.24 - 117.36	216.00	157.09 - 274.91
CEA	ng/mL	2.29	1.83 - 2.75	18.70	14.96 - 22.44	41.10	34.76 - 47.53
Cortisol	µg/dL	3.20	2.56 - 3.84	16.20	12.96 - 19.44	22.90	18.68 - 27.12
C-Peptide	ng/mL	0.52	0.41 - 0.62	5.52	4.42 - 6.62	8.92	6.32 - 11.51
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate)	µg/dL	77.20	61.76 - 92.64	184.00	147.20 - 220.80	625.00	517.61 - 732.39
Estradiol	pg/mL	87.30	69.84 - 104.76	174.00	139.20 - 208.80	269.00	239.98 - 297.23
Ferritin	ng/mL	87.60	70.08 - 105.12	274.00	219.20 - 328.80	756.00	615.72 - 896.28
Folate	ng/mL	4.44	3.55 - 5.33	11.20	8.96 - 13.44	19.00	14.88 - 20.11
Follicle Stimulating Hormone (FSH)	mIU/mL	5.54	4.43 - 6.65	21.10	16.88 - 25.32	41.10	34.86 - 47.45
hCG	mIU/mL	5.36	4.29 - 6.43	29.70	23.76 - 35.64	231.00	191.09 - 269.70
Insulin	µIU/mL	9.96	7.97 - 11.95	46.30	37.04 - 55.56	145.00	121.46 - 168.54
Luteinizing Hormone (LH)	mIU/mL	1.04	0.83 - 1.25	14.70	11.76 - 17.64	51.30	40.88 - 61.82

INSTRUMENTS / ANALYTE	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
ABBOTT Alinity i SYSTEMS cont.							
Progesterone	ng/mL	0.53	0.42 - 0.63	8.21	6.57 - 9.85	21.90	16.49 - 27.22
Prolactin	ng/mL	7.31	5.85 - 8.77	20.60	16.48 - 24.72	47.40	39.44 - 55.27
PSA (Free)	ng/mL	0.49	0.39 - 0.59	2.16	1.73 - 2.59	11.20	8.94 - 13.37
PSA (Total)	ng/mL	0.80	0.64 - 0.96	3.05	2.44 - 3.66	14.20	11.50 - 16.90
T3 (Free)	pg/mL	2.39	1.91 - 2.87	6.51	5.21 - 7.81	15.80	12.37 - 19.12
T3 (Total)	ng/mL	0.70	0.56 - 0.84	1.79	1.43 - 2.15	3.13	2.61 - 3.64
T3 Uptake/T Uptake	T Uptake Unit	0.93	0.74 - 1.12	0.86	0.69 - 1.03	0.85	0.63 - 1.06
T4 (Free)	ng/dL	0.72	0.58 - 0.86	1.67	1.34 - 2.00	3.96	2.34 - 5.02
T4 (Total)	µg/dL	4.60	3.68 - 5.52	9.37	7.50 - 11.24	15.40	12.32 - 17.60
Testosterone	ng/dL	182.00	145.60 - 218.40	357.00	285.60 - 428.40	867.00	705.06 - 1029.71
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.37	0.30 - 0.45	4.70	3.76 - 5.64	28.80	23.89 - 33.71
Vitamin B12	pg/mL	374.00	299.20 - 448.80	490.00	392.00 - 588.00	653.00	431.30 - 875.37
ABBOTT ARCHITECT i SYSTEMS							
AFP	ng/mL	16.90	13.52 - 20.28	93.70	74.96 - 112.44	206.00	149.82 - 262.18
CEA	ng/mL	2.51	2.01 - 3.01	18.30	14.64 - 21.96	40.10	33.92 - 46.38
Cortisol	µg/dL	3.30	2.64 - 3.96	17.10	13.68 - 20.52	23.80	19.42 - 28.18
C-Peptide	ng/mL	0.52	0.41 - 0.62	5.52	4.42 - 6.62	8.92	6.32 - 11.51
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate)	µg/dL	74.00	59.20 - 88.80	186.00	148.80 - 223.20	632.00	523.41 - 740.59
Digoxin (MULTIGENT)	ng/mL	0.52	0.41 - 0.62	1.57	1.18 - 1.96	2.92	2.35 - 3.50
Estradiol	pg/mL	87.10	69.68 - 104.52	178.00	142.40 - 213.60	284.00	253.36 - 313.81
Ferritin	ng/mL	85.40	68.32 - 102.48	268.00	214.40 - 321.60	763.00	621.43 - 904.57
Folate	ng/mL	4.33	3.46 - 5.20	12.00	9.60 - 14.40	> 20.0	-
Follicle Stimulating Hormone (FSH)	mIU/mL	5.72	4.58 - 6.86	21.60	17.28 - 25.92	43.40	36.81 - 50.10
Gentamicin (MULTIGENT)	µg/mL	2.08	1.66 - 2.50	4.54	3.41 - 5.68	6.85	5.79 - 7.91
hCG	mIU/mL	4.43	3.54 - 5.32	26.60	21.28 - 31.92	218.00	180.34 - 254.52
Insulin	µIU/mL	10.60	8.48 - 12.72	49.00	39.20 - 58.80	149.00	124.81 - 173.19
Luteinizing Hormone (LH)	mIU/mL	1.09	0.87 - 1.31	15.00	12.00 - 18.00	51.30	40.88 - 61.82
Phenobarbital	µg/mL	9.83	7.86 - 11.80	23.50	18.80 - 28.20	51.70	43.10 - 60.30
Phenytoin	µg/mL	6.39	5.11 - 7.67	12.70	10.16 - 15.24	24.00	20.73 - 27.18
Progesterone	ng/mL	0.60	0.48 - 0.72	9.32	7.46 - 11.18	25.30	19.05 - 31.44
Prolactin	ng/mL	7.09	5.67 - 8.51	19.20	15.36 - 23.04	44.70	37.19 - 52.12
PSA (Free)	ng/mL	0.52	0.42 - 0.63	2.32	1.86 - 2.78	11.90	9.50 - 14.21
PSA (Total)	ng/mL	0.70	0.56 - 0.84	2.73	2.18 - 3.28	13.60	11.01 - 16.19
T3 (Free)	pg/mL	2.41	1.93 - 2.89	6.06	4.85 - 7.27	14.60	11.43 - 17.67
T3 (Total)	ng/mL	0.70	0.56 - 0.84	1.80	1.44 - 2.16	3.05	2.54 - 3.55
T3 Uptake/T Uptake	T Uptake Unit	0.82	0.66 - 0.98	0.74	0.59 - 0.89	0.73	0.55 - 0.92

INSTRUMENTS / ANALYTE	Units	Level 1	BXC0363A	Level 2	BXC0363B	Level 3	BXC0363C
		Target	Range	Target	Range	Target	Range
ABBOTT ARCHITECT i SYSTEMS cont.							
T4 (Free)	ng/dL	0.79	0.63 - 0.94	1.77	1.42 - 2.12	3.77	2.23 - 4.78
T4 (Total)	µg/dL	4.68	3.74 - 5.62	9.53	7.62 - 11.44	16.60	13.28 - 18.97
Testosterone	ng/dL	174.00	139.20 - 208.80	346.00	276.80 - 415.20	897.00	729.45 - 1065.34
Theophylline	µg/mL	4.37	3.50 - 5.24	13.10	10.48 - 15.72	24.60	19.37 - 29.83
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.37	0.29 - 0.44	4.48	3.58 - 5.38	27.00	22.40 - 31.60
Valproic Acid	µg/mL	29.20	23.36 - 35.04	73.90	59.12 - 88.68	110.00	85.62 - 134.77
Vancomycin (1P30-28)	µg/mL	7.78	6.22 - 9.34	20.60	16.48 - 24.72	38.60	31.90 - 45.20
Vitamin B12	pg/mL	344.00	275.20 - 412.80	464.00	371.20 - 556.80	657.00	433.94 - 880.73
BECKMAN COULTER ACCESS / 2 / 2i							
AFP	ng/mL	16.90	13.52 - 20.28	85.30	63.98 - 106.63	191.00	141.68 - 239.42
Cortisol	µg/dL	2.97	2.38 - 3.56	18.00	13.50 - 22.50	26.10	20.28 - 31.92
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEA-S)	µg/dL	56.30	45.04 - 67.56	137.00	102.75 - 171.25	428.00	335.04 - 521.93
Digoxin	ng/mL	0.79	0.63 - 0.95	2.02	1.52 - 2.53	3.36	2.69 - 4.04
Estradiol (Sensitive)	pg/mL	92.80	74.24 - 111.36	208.00	156.00 - 260.00	334.00	215.61 - 452.39
Ferritin	ng/mL	51.60	41.28 - 61.92	131.00	98.25 - 163.75	342.00	245.68 - 439.41
Folate (FOLW)	ng/mL	4.03	3.22 - 4.84	9.94	7.46 - 12.43	15.70	11.48 - 19.92
Follicle Stimulating Hormone (FSH) (hFSH)	mIU/mL	7.00	5.60 - 8.40	20.50	15.38 - 25.63	33.30	25.70 - 40.90
hCG (Total ßhCG) (5th IS)	mIU/mL	6.17	4.94 - 7.40	29.40	22.05 - 36.75	226.00	186.19 - 264.64
Insulin (Ultrasensitive Insulin)	µIU/mL	12.20	9.76 - 14.64	54.10	40.58 - 67.63	159.00	131.48 - 187.54
Luteinizing Hormone (LH) (hLH)	mIU/mL	1.18	0.94 - 1.42	18.70	14.03 - 23.38	58.20	46.20 - 70.20
Progesterone	ng/mL	0.71	0.57 - 0.86	9.39	7.04 - 11.74	22.90	15.13 - 30.67
Progesterone (P4DE)	ng/mL	0.43	0.34 - 0.52	7.34	5.51 - 9.18	19.60	12.44 - 27.08
Prolactin	ng/mL	7.25	5.80 - 8.70	18.20	13.65 - 22.75	41.20	33.95 - 48.45
PSA (Free) (Hybritech free PSA)	ng/mL	0.69	0.55 - 0.83	2.80	2.10 - 3.50	14.00	11.09 - 16.91
PSA (Free) (WHO 96/668)	ng/mL	0.55	0.44 - 0.65	2.27	1.70 - 2.84	11.10	8.77 - 13.36
PSA (Total) (Hybritech PSA)	ng/mL	1.14	0.91 - 1.37	4.11	3.08 - 5.14	21.20	17.49 - 25.01
PSA (Total) (WHO 96/670)	ng/mL	0.96	0.77 - 1.16	3.20	2.40 - 4.00	16.50	13.57 - 19.43
T3 (Free) (Free T3)	pg/mL	2.43	1.94 - 2.92	5.64	4.23 - 7.05	10.90	8.71 - 13.14
T3 (Total) (Total T3)	ng/mL	0.88	0.70 - 1.06	1.90	1.43 - 2.38	3.44	2.63 - 4.24
T3 Uptake/T Uptake	% Uptake	44.00	35.20 - 52.80	46.50	34.88 - 58.13	52.20	43.91 - 60.49
T4 (Free) (Free T4)	ng/dL	0.72	0.58 - 0.87	1.92	1.44 - 2.40	4.10	3.22 - 4.98
Testosterone	ng/mL	1.14	0.91 - 1.37	3.33	2.50 - 4.16	8.80	7.17 - 10.48
Thyroid Stimulating Hormone (TSH) (3rd IS)	µIU/mL	0.41	0.33 - 0.49	5.32	3.99 - 6.65	33.80	23.67 - 43.93
Vitamin B12	pg/mL	259.00	207.20 - 310.80	359.00	269.25 - 448.75	531.00	379.99 - 682.71
BECKMAN COULTER AU SYSTEMS							
Acetaminophen	µg/mL	< 10	<10.0 - 12.10	33.20	24.90 - 41.50	107.00	88.10 - 127.00
Carbamazepine	µg/mL	2.47	<2.0 - 3.33	7.48	5.61 - 9.35	13.20	10.42 - 15.98
Digoxin	ng/mL	0.68	0.54 - 0.82	1.94	1.46 - 2.43	3.27	2.22 - 4.32
Ferritin	ng/mL	51.60	41.28 - 61.92	131.00	98.25 - 163.75	342.00	302.06 - 383.19
Gentamicin	µg/mL	2.38	1.90 - 2.86	5.03	3.77 - 6.29	7.22	5.15 - 9.29
Immunoglobulin A (IgA)	mg/dL	177.00	141.60 - 212.40	161.00	120.75 - 201.25	164.00	153.94 - 173.06
Immunoglobulin G (IgG)	mg/dL	893.00	714.40 - 1071.60	798.00	598.50 - 997.50	832.00	782.48 - 880.42
Immunoglobulin M (IgM)	mg/dL	72.20	57.76 - 86.64	71.20	53.40 - 89.00	69.80	63.61 - 76.10
Lithium	mEq/L	0.50	0.40 - 0.60	1.20	0.90 - 1.50	1.83	1.60 - 2.06

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
BECKMAN COULTER AU SYSTEMS cont.							
Phenobarbital	µg/mL	8.65	6.92 - 10.38	21.50	16.13 - 26.88	46.50	31.47 - 61.53
Phenytoin	µg/mL	6.22	4.98 - 7.46	12.50	9.38 - 15.63	25.30	18.36 - 32.24
Salicylate	mg/dL	3.70	2.96 - 4.44	15.20	11.40 - 19.00	41.00	36.41 - 45.49
T4 (Total) (DRI)	µg/dL	5.17	4.14 - 6.20	10.90	8.18 - 13.63	14.20	11.20 - 17.20
Theophylline	µg/mL	4.62	3.70 - 5.54	14.10	10.58 - 17.63	26.70	19.07 - 34.33
Tobramycin	µg/mL	0.99	0.79 - 1.18	2.79	2.09 - 3.49	6.08	5.21 - 6.96
Valproic Acid	µg/mL	34.80	27.84 - 41.76	80.00	60.00 - 100.00	115.00	93.30 - 137.00
Vancomycin	µg/mL	6.38	5.10 - 7.66	15.50	11.63 - 19.38	28.30	14.35 - 42.35
BECKMAN COULTER UniCel DxI							
AFP	ng/mL	17.00	13.60 - 20.40	88.50	65.49 - 111.51	192.00	141.37 - 241.67
CEA (CEA2)	ng/mL	1.95	1.56 - 2.34	16.80	12.43 - 21.17	36.10	26.91 - 45.39
Cortisol	µg/dL	2.87	2.30 - 3.44	18.40	13.62 - 23.18	27.00	20.93 - 32.98
C-Peptide	ng/mL	0.34	0.27 - 0.41	3.59	2.87 - 4.31	5.89	4.17 - 7.60
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEA-S)	µg/dL	61.00	48.80 - 73.20	151.00	111.74 - 190.26	442.00	340.97 - 544.08
Digoxin	ng/mL	0.79	0.63 - 0.95	2.02	1.49 - 2.55	3.36	2.69 - 4.04
Estradiol (Sensitive)	pg/mL	85.90	68.72 - 103.08	193.00	142.82 - 243.18	327.00	201.27 - 452.73
Ferritin	ng/mL	51.80	41.44 - 62.16	130.00	96.20 - 163.80	348.00	267.24 - 429.95
Folate (FOLW)	ng/mL	4.14	3.31 - 4.97	10.30	7.62 - 12.98	16.40	10.71 - 22.09
Follicle Stimulating Hormone (FSH) (hFSH)	mIU/mL	7.00	5.60 - 8.40	20.50	15.17 - 25.83	33.30	23.67 - 42.81
hCG (Total ßhCG) (5th IS)	mIU/mL	5.60	4.48 - 6.72	26.80	19.83 - 33.77	208.00	180.79 - 235.21
Insulin (Ultrasensitive Insulin)	µIU/mL	11.20	8.96 - 13.44	52.80	39.07 - 66.53	158.00	123.61 - 192.39
Luteinizing Hormone (LH) (hLH)	mIU/mL	1.18	0.94 - 1.42	18.70	13.84 - 23.56	58.20	46.20 - 70.20
Progesterone	ng/mL	0.60	0.48 - 0.72	9.32	6.90 - 11.74	23.70	14.29 - 33.11
Progesterone (P4DE)	ng/mL	0.36	0.28 - 0.43	7.28	5.39 - 9.17	20.30	11.64 - 29.38
Prolactin	ng/mL	6.15	4.92 - 7.38	17.00	12.58 - 21.42	38.60	31.28 - 45.92
PSA (Total) (Hybritech PSA)	ng/mL	1.00	0.80 - 1.20	3.66	2.71 - 4.61	18.00	14.69 - 21.39
PSA (Total) (WHO 96/670)	ng/mL	0.85	0.68 - 1.01	2.85	2.11 - 3.59	14.00	11.43 - 16.57
T3 (Free) (Free T3)	pg/mL	2.26	1.81 - 2.71	5.12	3.79 - 6.45	9.02	7.22 - 10.82
T3 (Total) (Total T3)	ng/mL	0.78	0.62 - 0.93	1.86	1.38 - 2.34	3.31	2.44 - 4.17
T3 Uptake/T Uptake	% Uptake	46.70	37.36 - 56.04	46.90	34.71 - 59.09	53.80	45.42 - 62.09
T4 (Free) (Free T4)	ng/dL	0.74	0.59 - 0.89	1.84	1.36 - 2.32	4.59	3.67 - 5.51
T4 (Total) (Total T4)	µg/dL	5.02	4.02 - 6.02	9.63	7.13 - 12.13	17.90	14.42 - 21.29
Testosterone	ng/mL	1.20	0.96 - 1.44	3.31	2.45 - 4.17	8.17	6.42 - 9.92
Thyroid Stimulating Hormone (TSH) (3rd IS)	µIU/mL	0.40	0.32 - 0.48	5.33	3.94 - 6.72	35.10	24.64 - 45.68
Vitamin B12	pg/mL	249.00	199.20 - 298.80	357.00	264.18 - 449.82	551.00	387.13 - 714.87
BECKMAN COULTER UniCel DxI 9000							
Cortisol	µg/dL	2.97	2.38 - 3.56	18.00	13.32 - 22.68	26.10	20.23 - 31.88
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEA-S)	µg/dL	56.30	45.04 - 67.56	137.00	101.38 - 172.62	428.00	330.17 - 526.85
Estradiol (Sensitive)	pg/mL	92.80	74.24 - 111.36	208.00	153.92 - 262.08	334.00	205.58 - 462.42
Ferritin	ng/mL	51.60	41.28 - 61.92	131.00	96.94 - 165.06	342.00	262.63 - 422.54
Folate (FOLW)	ng/mL	4.03	3.22 - 4.84	9.94	7.36 - 12.52	15.70	10.25 - 21.15
Follicle Stimulating Hormone (FSH) (hFSH)	mIU/mL	7.00	5.60 - 8.40	20.50	15.17 - 25.83	33.30	23.67 - 42.81
hCG (Total ßhCG) (5th IS)	mIU/mL	6.17	4.94 - 7.40	29.40	21.76 - 37.04	226.00	196.43 - 255.57
Insulin (Ultrasensitive Insulin)	µIU/mL	12.20	9.76 - 14.64	54.10	40.03 - 68.17	159.00	124.39 - 193.61
Luteinizing Hormone (LH) (hLH)	mIU/mL	1.18	0.94 - 1.42	18.70	13.84 - 23.56	58.20	46.20 - 70.20

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
BECKMAN COULTER UniCel DxI 9000 cont.							
Prolactin	ng/mL	7.25	5.80 - 8.70	18.20	13.47 - 22.93	41.20	33.39 - 49.01
T3 (Free) (Free T3)	pg/mL	2.43	1.94 - 2.92	5.64	4.17 - 7.11	10.90	8.72 - 13.08
T3 (Total) (Total T3)	ng/mL	0.88	0.70 - 1.06	1.90	1.41 - 2.39	3.44	2.53 - 4.34
Testosterone	ng/mL	1.14	0.91 - 1.37	3.33	2.46 - 4.20	8.80	6.91 - 10.69
Vitamin B12	pg/mL	259.00	207.20 - 310.80	359.00	265.66 - 452.34	531.00	373.08 - 688.92
BIOMÉRIEUX VIDAS							
AFP	ng/mL	18.20	14.56 - 21.84	96.10	70.15 - 122.05	222.00	178.36 - 265.64
CEA (S)	ng/mL	1.35	1.08 - 1.62	8.02	5.85 - 10.19	13.50	10.98 - 16.02
Digoxin	ng/mL	0.80	0.64 - 0.96	2.10	1.53 - 2.67	3.40	2.70 - 4.10
Estradiol (II)	pg/mL	97.40	77.92 - 116.88	307.00	224.11 - 389.89	663.00	531.58 - 794.42
Ferritin	ng/mL	64.30	51.44 - 77.16	148.00	108.04 - 187.96	371.00	282.34 - 459.66
Follicle Stimulating Hormone (FSH)	mIU/mL	6.56	5.25 - 7.87	24.00	17.52 - 30.48	53.00	45.77 - 60.23
hCG	mIU/mL	5.55	4.44 - 6.66	28.70	20.95 - 36.45	283.00	224.30 - 341.70
Immunoglobulin E (IgE) (Total)	IU/mL	322.00	257.60 - 386.40	82.10	59.93 - 104.27	105.00	79.21 - 130.79
Luteinizing Hormone (LH)	mIU/mL	1.21	0.97 - 1.45	16.20	11.83 - 20.57	59.10	50.18 - 68.02
Progesterone	ng/mL	0.52	0.42 - 0.63	11.70	8.54 - 14.86	34.50	27.40 - 41.60
Prolactin	ng/mL	5.12	4.10 - 6.14	19.30	14.09 - 24.51	40.20	33.68 - 46.72
PSA (Total)	ng/mL	1.08	0.86 - 1.30	3.75	2.74 - 4.76	18.70	14.63 - 22.77
T3 (Free)	pg/mL	2.10	1.68 - 2.52	6.45	4.71 - 8.19	14.80	11.44 - 18.21
T3 (Total)	ng/mL	0.69	0.55 - 0.83	1.94	1.42 - 2.46	3.40	2.73 - 4.07
T4 (Free) (FT4N) (30459)	ng/dL	0.88	0.70 - 1.06	2.39	1.74 - 3.04	5.63	3.62 - 6.70
T4 (Total)	µg/dL	5.45	4.36 - 6.54	10.40	7.59 - 13.21	18.50	15.07 - 22.03
Testosterone (30418)	ng/mL	1.30	1.04 - 1.56	3.38	2.47 - 4.29	8.30	6.64 - 9.96
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.42	0.33 - 0.50	6.35	4.64 - 8.06	39.90	31.92 - 47.88
DIASORIN LIAISON							
CEA	ng/mL	2.71	2.17 - 3.25	17.80	12.46 - 23.14	40.90	34.54 - 47.26
Cortisol	µg/dL	2.52	2.02 - 3.02	24.00	16.80 - 31.20	35.80	28.42 - 43.18
C-Peptide	ng/mL	0.60	0.48 - 0.72	6.05	4.24 - 7.87	9.15	6.42 - 11.91
Follicle Stimulating Hormone (FSH)	mIU/mL	7.61	6.09 - 9.13	30.10	21.07 - 39.13	68.70	53.80 - 83.60
Luteinizing Hormone (LH)	mIU/mL	1.39	1.11 - 1.67	25.70	17.99 - 33.41	102.00	86.65 - 117.47
Prolactin (xt)	µIU/mL	162.00	129.60 - 194.40	477.00	333.90 - 620.10	1100.00	934.83 - 1265.17
T3 (Free)	pg/mL	2.60	2.08 - 3.12	8.86	6.20 - 11.52	22.30	17.42 - 27.18
T4 (Free)	ng/dL	0.91	0.72 - 1.09	2.72	1.90 - 3.54	7.55	6.04 - 9.06
DIASORIN LIAISON XL							
CEA	ng/mL	2.78	2.22 - 3.34	18.30	12.81 - 23.79	41.90	35.60 - 48.20
Cortisol	µg/dL	1.91	1.53 - 2.29	23.50	16.45 - 30.55	38.80	31.30 - 46.30
Follicle Stimulating Hormone (FSH)	mIU/mL	7.92	6.34 - 9.50	32.70	22.89 - 42.51	68.10	53.40 - 82.80
hCG (XL hCG) (REF 312321)	mIU/mL	4.94	3.95 - 5.93	32.70	22.89 - 42.51	233.00	197.77 - 268.23
Luteinizing Hormone (LH)	mIU/mL	1.92	1.54 - 2.30	28.10	19.67 - 36.53	110.00	93.55 - 126.79
Prolactin (xt)	µIU/mL	165.00	132.00 - 198.00	458.00	320.60 - 595.40	1040.00	848.45 - 1231.55
T3 (Free)	pg/mL	2.50	2.00 - 3.00	9.37	6.56 - 12.18	23.80	18.14 - 28.79
T4 (Free)	ng/dL	0.97	0.78 - 1.17	2.91	2.04 - 3.78	>7	7.40 - >7.70
T4 (Total)	µg/dL	3.91	3.13 - 4.69	6.49	4.54 - 8.44	11.90	8.55 - 15.25
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.66	0.52 - 0.79	7.75	5.43 - 10.08	42.70	33.46 - 51.94
DIASORIN LIAISON XS							
ACTH (313221)	pg/mL	102.00	81.60 - 122.40	135.00	94.50 - 175.50	260.00	198.15 - 314.52
Cortisol	µg/dL	1.85	1.48 - 2.22	23.50	16.45 - 30.55	37.60	30.33 - 44.87
Ferritin	ng/mL	77.10	61.68 - 92.52	182.00	132.86 - 231.14	468.00	356.16 - 579.84

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
DIASORIN LIAISON XS cont.							
Follicle Stimulating Hormone (FSH)	mIU/mL	9.41	7.53 - 11.29	38.80	27.16 - 50.44	87.80	68.84 - 106.76
hCG (XL hCG) (REF 312321)	mIU/mL	4.35	3.48 - 5.22	31.20	21.84 - 40.56	230.00	195.22 - 264.78
Luteinizing Hormone (LH)	mIU/mL	1.76	1.41 - 2.11	30.20	21.14 - 39.26	120.00	102.06 - 138.32
Prolactin (xt)	µIU/mL	159.00	127.20 - 190.80	477.00	333.90 - 620.10	1110.00	905.56 - 1314.44
T3 (Free)	pg/mL	2.48	1.98 - 2.98	8.46	5.92 - 11.00	20.70	15.78 - 25.04
T3 (Total)	ng/dL	67.60	54.08 - 81.12	160.00	116.80 - 203.20	299.00	240.28 - 357.72
T4 (Free)	ng/dL	0.88	0.71 - 1.06	2.64	1.85 - 3.43	8.08	7.40 - >7.70
T4 (Total)	µg/dL	3.92	3.14 - 4.70	6.37	4.46 - 8.28	11.10	7.98 - 14.22
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.59	0.47 - 0.70	6.50	4.55 - 8.45	40.70	31.89 - 49.51
IDS-Isys							
Human Growth Hormone (hGH) (IS-3700)	ng/mL	2.51	2.01 - 3.01	8.60	6.28 - 10.92	14.70	11.65 - 17.75
ORTHO VITROS MICROSLIDE SERIES							
Acetaminophen (ACET)	µg/mL	10.80	8.64 - 12.96	40.10	32.08 - 48.12	130.00	122.35 - 138.60
Iron (Fe)	µg/dL	42.50	34.00 - 51.00	81.90	65.52 - 98.28	75.70	59.76 - 91.74
Lithium (Li)	mmol/L	0.74	0.60 - 0.89	1.67	1.34 - 2.00	2.44	2.04 - 2.85
Phenytoin (PHYT)	µg/mL	6.05	4.84 - 7.26	11.80	9.44 - 14.16	21.70	17.94 - 25.36
Theophylline (THEO)	µg/mL	4.77	3.82 - 5.72	14.50	11.60 - 17.40	28.70	23.76 - 33.75
ORTHO VITROS MICROTIP SERIES							
Gentamicin (GENT)	µg/mL	2.44	1.95 - 2.93	5.00	3.70 - 6.30	7.00	5.86 - 8.13
Valproic Acid (VALP)	µg/mL	33.60	26.88 - 40.32	75.60	55.94 - 95.26	112.00	92.80 - 131.20
Vancomycin (VANC)	µg/mL	6.39	5.11 - 7.67	15.40	11.40 - 19.40	27.60	23.18 - 32.12
ORTHO VITROS MICROWELL SERIES							
AFP	IU/ml	15.00	12.00 - 18.00	79.20	63.36 - 95.04	172.00	134.53 - 210.32
CEA	ng/mL	2.14	1.71 - 2.57	17.30	13.84 - 20.76	39.80	33.72 - 45.88
Cortisol (Cort)	µg/dL	2.94	2.35 - 3.53	18.60	14.88 - 22.32	27.50	20.09 - 35.02
C-Peptide	ng/mL	0.42	0.33 - 0.50	5.49	4.39 - 6.59	8.39	5.94 - 10.82
Estradiol (E2)	pg/mL	87.90	70.32 - 105.48	321.00	256.80 - 385.20	721.00	454.77 - 986.28
Ferritin (Ferr)	ng/mL	55.50	44.40 - 66.60	129.00	103.20 - 154.80	341.00	258.26 - 423.74
Folate	ng/mL	2.76	2.21 - 3.31	8.78	7.02 - 10.54	15.40	8.41 - 18.78
Folate (Fol/RCFol)	ng/mL	2.85	2.28 - 3.42	10.50	8.40 - 12.60	18.10	9.89 - 22.07
Follicle Stimulating Hormone (FSH)	mIU/mL	4.71	3.77 - 5.65	19.80	15.84 - 23.76	41.20	32.34 - 50.06
hCG (B-hCG)	mIU/mL	6.60	5.28 - 7.92	25.70	20.56 - 30.84	251.00	203.94 - 297.14
Insulin	µIU/mL	14.70	11.76 - 17.64	58.50	43.29 - 73.71	171.00	133.78 - 208.22
Luteinizing Hormone (LH)	mIU/mL	0.80	0.64 - 0.96	19.30	15.44 - 23.16	64.90	55.37 - 74.43
Progesterone (Prog)	ng/mL	0.66	0.53 - 0.79	9.84	7.87 - 11.81	27.10	20.88 - 33.41
Prolactin (Prol)	ng/mL	6.24	4.99 - 7.49	17.60	14.08 - 21.12	37.90	31.51 - 44.29
PSA (Total) (PSA)	ng/mL	0.82	0.66 - 0.98	2.54	2.03 - 3.05	11.50	9.66 - 13.43
T3 (Free) (FT3 II)	pg/mL	4.09	3.27 - 4.91	12.70	10.16 - 15.24	>22.7	-
T3 (Free) (FT3)	pg/mL	4.18	3.34 - 5.02	14.80	11.84 - 17.76	>22.7	-
T3 (Total) (TT3)	mmol/L	1.31	1.05 - 1.57	3.22	2.58 - 3.86	6.05	4.77 - 7.33
T3 Uptake/T Uptake (T3U)	% Uptake	40.60	32.48 - 48.72	52.20	41.76 - 62.64	>65	
T3 Uptake/T Uptake (T3U-2)	% Uptake	39.50	31.60 - 47.40	52.50	42.00 - 63.00	>65	
T4 (Free) (FT4)	ng/dL	1.21	0.97 - 1.45	4.75	3.80 - 5.70	>6.98	-
T4 (Total) (TT4)	µg/dL	4.25	3.40 - 5.10	9.61	7.69 - 11.53	17.10	14.22 - 20.07
Testosterone (Testo)	ng/dL	108.00	86.40 - 129.60	432.00	345.60 - 518.40	1265.00	922.44 - 1606.81
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.25	0.20 - 0.30	4.65	3.72 - 5.58	29.30	24.55 - 34.05
Vitamin B12	pg/mL	326.00	260.80 - 391.20	461.00	368.80 - 553.20	654.00	546.34 - 732.36

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
PerkinElmer AUTODELFIA							
hCG	mIU/mL	<10		26.60	21.28 - 31.92	250.00	199.60 - 300.40
ROCHE / HITACHI COBAS C SYSTEMS							
Acetaminophen (REF 06769942190)	µg/mL	10.00	8.00 - 12.00	32.90	23.69 - 42.11	103.00	83.27 - 122.25
Amikacin	µg/mL	5.15	4.12 - 6.18	12.00	8.64 - 15.36	26.70	24.01 - 29.50
Carbamazepine (CARB4)	µg/mL	2.46	1.97 - 2.95	7.63	5.49 - 9.77	14.00	10.99 - 17.01
Digoxin	ng/mL	0.76	0.60 - 0.91	2.08	1.50 - 2.66	3.48	3.09 - 3.88
Ferritin	ng/mL	82.00	65.60 - 98.40	162.00	116.64 - 207.36	372.00	288.40 - 454.20
Iron	µg/dL	31.80	25.44 - 38.16	83.90	60.41 - 107.39	77.00	70.53 - 83.47
ROCHE / HITACHI COBAS C SYSTEMS cont.							
Iron (TIBC)	µg/dL	267.00	213.60 - 320.40	242.00	174.24 - 309.76	242.00	224.44 - 260.54
Lithium	mg/dL	0.35	0.28 - 0.41	0.84	0.60 - 1.07	1.30	1.19 - 1.41
Phenobarbital	µg/mL	8.77	7.02 - 10.52	22.30	16.06 - 28.54	48.60	42.46 - 54.74
Phenytoin	µg/mL	5.80	4.64 - 6.96	12.60	9.07 - 16.13	23.00	18.74 - 27.26
Salicylate	mg/dL	3.69	2.95 - 4.43	15.30	11.02 - 19.58	42.90	39.07 - 46.63
Theophylline	µg/mL	4.27	3.42 - 5.12	13.10	9.43 - 16.77	25.50	22.37 - 28.63
Tobramycin	µg/mL	0.96	0.77 - 1.15	2.70	1.94 - 3.46	5.79	4.90 - 6.69
Valproic Acid	µg/mL	30.80	24.64 - 36.96	73.20	52.70 - 93.70	104.00	84.54 - 122.53
Vancomycin	µg/mL	5.48	4.38 - 6.58	16.60	11.95 - 21.25	31.20	25.09 - 37.31
ROCHE ELECSYS / COBAS e SYSTEMS							
ACTH	pg/mL	71.30	57.04 - 85.56	68.90	48.23 - 89.57	144.00	100.78 - 186.70
AFP	ng/mL	18.70	14.96 - 22.44	102.00	71.40 - 132.60	221.00	154.51 - 287.49
Calcitonin	pg/mL	22.90	18.32 - 27.48	181.00	126.70 - 235.30	446.00	356.80 - 535.20
CEA	ng/mL	2.21	1.77 - 2.65	14.50	10.15 - 18.85	31.10	24.57 - 37.63
Cortisol (II)	µg/dL	3.37	2.70 - 4.04	18.40	12.88 - 23.92	26.60	18.56 - 34.54
C-Peptide	ng/mL	0.60	0.48 - 0.72	5.11	3.58 - 6.13	8.06	6.12 - 9.97
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEA-Sulfate)	µg/dL	76.40	61.12 - 91.68	197.00	137.90 - 256.10	654.00	497.00 - 811.00
Digoxin	ng/mL	0.70	0.56 - 0.84	1.99	1.39 - 2.59	3.54	2.69 - 4.21
Estradiol (III)	pg/mL	88.40	70.72 - 106.08	191.00	133.70 - 248.30	325.00	227.91 - 422.91
Ferritin	ng/mL	90.80	72.64 - 108.96	198.00	138.60 - 257.40	442.00	336.33 - 547.67
Folate (III)	ng/mL	2.27	1.82 - 2.72	7.07	4.95 - 9.19	12.60	8.19 - 17.01
Follicle Stimulating Hormone (FSH)	mIU/mL	5.79	4.63 - 6.95	22.40	15.68 - 29.12	44.70	31.28 - 58.12
hCG (+ ß)	mIU/mL	4.49	3.59 - 5.39	25.10	17.57 - 32.63	209.00	139.99 - 278.01
hCG (STAT)	mIU/mL	2.99	2.39 - 3.59	23.20	16.24 - 30.16	213.00	142.34 - 283.66
Human Growth Hormone (hGH)	ng/mL	2.98	2.38 - 3.58	8.13	5.69 - 10.57	13.60	10.13 - 16.98
Immunoglobulin E (IgE)	ng/mL	904.00	723.20 - 1084.80	261.00	182.70 - 339.30	332.00	263.01 - 401.51
Insulin	µIU/mL	13.30	10.64 - 15.96	61.50	43.05 - 79.95	178.00	135.00 - 221.00
Luteinizing Hormone (LH)	mIU/mL	1.80	1.44 - 2.16	20.70	14.49 - 26.91	67.20	51.09 - 83.31
Progesterone (III)	ng/mL	0.79	0.63 - 0.95	10.90	7.63 - 14.17	27.50	17.56 - 37.44
Prolactin	ng/mL	8.31	6.65 - 9.97	23.10	16.17 - 30.03	55.10	41.86 - 68.34
PSA (Free) (fPSA) (Cobas e411/e601/602)	ng/mL	0.49	0.39 - 0.58	2.08	1.46 - 2.70	10.00	7.90 - 12.13
PSA (Free) (fPSA) (Cobas e801/e402)	ng/mL	0.49	0.39 - 0.59	2.09	1.46 - 2.72	10.10	7.98 - 12.25
PSA (Total) (tPSA)(e411/e601/602)	ng/mL	0.95	0.76 - 1.14	3.52	2.46 - 4.58	17.20	13.10 - 21.30
PSA (Total)(tPSA)(e801/e402)	ng/mL	0.89	0.71 - 1.06	3.27	2.29 - 4.25	16.00	12.19 - 19.81
T3 Total	ng/mL	1.00	0.80 - 1.20	2.33	1.63 - 3.03	3.96	3.18 - 4.74
T3 Uptake/T-Uptake	TBI	0.96	0.77 - 1.16	0.69	0.48 - 0.89	0.25	0.18 - 0.48

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
ROCHE ELECSYS / COBAS e SYSTEMS cont.							
T3 (Free) (III)	pg/mL	2.64	2.11 - 3.17	7.45	5.22 - 9.69	16.30	14.20 - 18.50
T4 Total	µg/dL	4.73	3.78 - 5.68	8.98	6.29 - 11.67	15.00	11.90 - 18.10
T4 (Free) (IV)	ng/dL	1.01	0.81 - 1.21	2.47	1.73 - 3.21	6.05	4.68 - 7.43
Testosterone (II)	ng/mL	1.49	1.19 - 1.79	3.83	2.68 - 4.98	9.34	7.77 - 10.90
Vitamin B12 (II) (Cobas e601 /e602/e411)	pg/mL	397.00	317.60 - 476.40	529.00	425.00 - 632.00	730.00	604.00 - 855.00
Vitamin B12 (II) (Cobas e801/e402)	pg/mL	343.00	274.40 - 411.60	445.00	351.00 - 540.00	603.00	491.00 - 715.00
ROCHE HITACHI / MODULAR							
Iron	µg/dL	31.80	25.44 - 38.16	83.90	54.54 - 113.27	77.00	69.14 - 84.96
Phenobarbital	µg/mL	8.77	7.02 - 10.52	22.30	14.50 - 30.11	48.60	42.46 - 54.74
Phenytoin	µg/mL	5.80	4.64 - 6.96	12.60	8.19 - 17.01	23.00	18.74 - 27.26
Theophylline	µg/mL	4.27	3.42 - 5.12	13.10	8.52 - 17.69	25.50	22.37 - 28.63
Tobramycin	µg/mL	0.96	0.77 - 1.15	2.70	1.76 - 3.65	5.79	4.90 - 6.69
Valproic Acid	µg/mL	30.80	24.64 - 36.96	73.20	47.58 - 98.82	104.00	84.54 - 122.53
SIEMENS ADVIA CENTAUR CP							
AFP	ng/mL	19.80	15.84 - 23.76	98.10	58.86 - 137.34	229.00	159.12 - 298.88
Androstenedione	ng/mL	0.69	0.55 - 0.82	1.39	0.83 - 1.95	2.18	1.63 - 2.74
CEA	ng/mL	2.21	1.77 - 2.65	16.00	9.60 - 22.40	38.80	28.97 - 48.73
Cortisol (COR)	µg/dL	3.27	2.62 - 3.92	21.60	12.96 - 30.24	31.30	22.20 - 40.30
C-Peptide (CpS)	ng/mL	0.47	0.38 - 0.57	4.70	2.82 - 6.58	7.65	5.20 - 10.10
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEAS)	µg/dL	71.20	56.96 - 85.44	151.00	90.60 - 211.40	475.00	364.81 - 585.19
Digoxin (DIG)	ng/mL	0.77	0.62 - 0.93	2.22	1.33 - 3.11	3.97	3.26 - 4.67
Estradiol (eE2)	pg/mL	82.00	65.60 - 98.40	265.00	159.00 - 371.00	584.00	425.21 - 742.79
Ferritin (FER)	ng/mL	57.50	46.00 - 69.00	157.00	94.20 - 219.80	402.00	280.54 - 522.39
Follicle Stimulating Hormone (FSH)	mIU/mL	5.64	4.51 - 6.77	27.30	16.38 - 38.22	61.20	47.34 - 74.92
Follicle Stimulating Hormone (FSH) (Rgt lot 033280 & above, Cal CB13 & above)	mIU/mL	5.87	4.70 - 7.04	27.80	16.68 - 38.92	62.10	48.03 - 76.03
hCG (ThCG)	mIU/mL	7.14	5.71 - 8.57	32.00	19.20 - 44.80	244.00	190.63 - 296.10
Immunoglobulin E (IgE) (tIgE)	IU/mL	356.00	284.80 - 427.20	90.50	54.30 - 126.70	123.00	73.90 - 172.60
Insulin (IRI)	µIU/mL	14.20	11.36 - 17.04	60.70	36.42 - 84.98	176.00	125.71 - 221.85
Luteinizing Hormone (LH)	mIU/mL	1.41	1.13 - 1.69	18.30	10.98 - 25.62	63.20	50.58 - 75.82
Progesterone (PRGE)	ng/mL	0.75	0.60 - 0.90	8.99	5.39 - 12.59	19.30	14.88 - 23.62
Prolactin (PRL)	ng/mL	5.36	4.29 - 6.43	13.80	8.28 - 19.32	32.20	25.37 - 39.12
PSA (Total) (PSA)	ng/mL	0.85	0.68 - 1.02	2.88	1.73 - 4.03	14.70	9.89 - 19.43
PSA Complexed (cPSA)	ng/mL	0.32	0.26 - 0.39	0.85	0.51 - 1.19	3.96	2.66 - 5.23
T3 (Free) (FT3)	pg/mL	2.71	2.17 - 3.25	6.82	4.09 - 9.55	14.20	12.61 - 15.67
T3 (Total) (T3)	ng/mL	0.89	0.71 - 1.07	2.17	1.30 - 3.04	4.06	3.25 - 4.87
T3 Uptake/T Uptake (TUp)	T Uptake Unit	1.25	1.00 - 1.50	1.50	0.90 - 2.10	1.83	1.53 - 2.13
T4 (Free) (FT4)	ng/dL	0.68	0.55 - 0.82	1.71	1.03 - 2.39	3.98	3.19 - 4.76
T4 (Total) (T4)	µg/dL	5.03	4.02 - 6.04	10.60	6.36 - 14.84	18.50	14.88 - 22.12
Testosterone (TSTO)	ng/dL	153.00	122.40 - 183.60	340.00	204.00 - 476.00	797.00	605.72 - 988.28
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.45	0.36 - 0.54	6.37	3.82 - 8.92	36.90	18.59 - 55.21
Thyroid Stimulating Hormone (TSH3-UL)	µIU/mL	0.36	0.28 - 0.43	4.65	2.79 - 6.51	30.20	15.22 - 45.18
Thyroid Stimulating Hormone (TSH) (TSH3-ULII)	µIU/mL	0.41	0.33 - 0.49	5.60	3.36 - 7.84	34.90	16.87 - 52.93
Vitamin B12 (VB12)	pg/mL	364.00	291.20 - 436.80	501.00	300.60 - 701.40	763.00	603.07 - 922.10

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
SIEMENS ADVIA CENTAUR SYSTEMS							
AFP	ng/mL	19.90	15.92 - 23.88	105.53	83.36 - 127.69	218.00	181.00 - 255.00
Androstenedione	ng/mL	0.68	0.54 - 0.81	1.41	1.11 - 1.71	2.12	1.53 - 2.69
CEA	ng/mL	2.26	1.81 - 2.71	17.99	14.21 - 21.77	39.60	31.30 - 48.00
Cortisol (COR)	µg/dL	2.98	2.38 - 3.58	17.69	13.97 - 21.40	29.70	20.70 - 38.70
C-Peptide (CpS)	ng/mL	0.47	0.38 - 0.56	4.83	3.82 - 5.84	7.58	5.16 - 10.00
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEAS)	µg/dL	67.30	53.84 - 80.76	133.67	105.60 - 161.73	500.00	368.00 - 632.00
Digoxin (DIG)	ng/mL	0.89	0.72 - 1.07	1.98	1.56 - 2.40	3.45	2.86 - 4.05
Estradiol (eE2)	pg/mL	88.70	70.96 - 106.44	264.32	208.81 - 319.82	545.00	436.16 - 653.84
Ferritin (FER)	ng/mL	56.30	45.04 - 67.56	136.68	107.98 - 165.38	408.00	320.00 - 496.00
Folate (FOL)	ng/mL	2.09	1.67 - 2.51	6.26	4.95 - 7.57	10.90	5.82 - 15.90
Follicle Stimulating Hormone (FSH)	mIU/mL	6.00	4.80 - 7.20	24.52	19.37 - 29.67	60.70	50.00 - 71.52
SIEMENS ADVIA CENTAUR SYSTEMS cont.							
Follicle Stimulating Hormone (FSH) (Rgt lot 033280 & above, Cal CB13 & above)	mIU/mL	5.87	4.70 - 7.04	27.80	16.68 - 38.92	60.70	46.95 - 74.31
hCG (ThCG)	mIU/mL	7.11	5.69 - 8.53	32.00	25.28 - 38.72	225.00	191.25 - 257.63
Immunoglobulin E (IgE) (tIgE)	IU/mL	383.00	306.40 - 459.60	97.30	76.87 - 117.73	127.00	76.30 - 177.70
Insulin (IRI)	µIU/mL	15.10	12.08 - 18.12	65.60	51.82 - 79.38	189.00	123.35 - 216.41
Luteinizing Hormone (LH)	mIU/mL	1.27	1.02 - 1.52	18.20	14.38 - 22.02	63.50	50.97 - 76.14
Progesterone (PRGE)	ng/mL	0.86	0.69 - 1.03	9.49	7.50 - 11.48	20.20	15.97 - 24.43
Prolactin (PRL)	ng/mL	5.25	4.20 - 6.30	15.00	11.85 - 18.15	33.60	27.27 - 39.93
PSA (Total) (PSA)	ng/mL	0.87	0.70 - 1.04	2.94	2.32 - 3.56	15.30	12.58 - 17.93
PSA Complexed (cPSA)	ng/mL	0.38	0.30 - 0.45	0.94	0.57 - 1.32	4.25	2.86 - 5.62
T3 (Free) (FT3)	pg/mL	2.65	2.12 - 3.18	6.67	5.27 - 8.07	13.20	11.85 - 14.67
T3 (Total) (T3)	ng/mL	0.83	0.66 - 0.99	1.99	1.57 - 2.41	3.61	2.82 - 4.40
T3 Uptake/T Uptake (TUp) (Unit)	T Uptake Unit	1.13	0.90 - 1.36	1.42	1.12 - 1.72	1.66	1.40 - 1.92
T4 (Free) (FT4)	ng/dL	0.73	0.58 - 0.87	1.77	1.40 - 2.14	3.94	3.13 - 4.75
T4 (Total) (T4)	µg/dL	4.99	3.99 - 5.99	10.40	8.22 - 12.58	18.30	14.54 - 22.06
Testosterone (TSTII)	ng/dL	177.00	141.60 - 212.40	373.00	294.67 - 451.33	827.00	548.78 - 1105.22
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.50	0.40 - 0.60	6.42	5.07 - 7.77	41.90	26.54 - 57.26
Thyroid Stimulating Hormone (TSH) (TSH3-UL)	µIU/mL	0.45	0.36 - 0.54	5.45	4.31 - 6.59	34.00	21.35 - 46.53
Thyroid Stimulating Hormone (TSH) (TSH3-ULII)	µIU/mL	0.39	0.31 - 0.47	5.49	4.34 - 6.64	35.10	22.05 - 48.03
Vitamin B12 (VB12)	pg/mL	373.00	298.40 - 447.60	541.00	427.39 - 654.61	786.00	611.15 - 960.85
SIEMENS ADVIA CHEMISTRY SYSTEMS							
Acetaminophen (ACET)	mg/dL	1.00	0.80 - 1.20	3.30	2.48 - 4.13	10.40	8.87 - 11.99
Carbamazepine (CARB_2)	µg/mL	2.62	2.10 - 3.14	7.43	5.57 - 9.29	12.20	9.80 - 14.58
Digoxin (DIG)	ng/mL	0.47	0.38 - 0.57	1.88	1.41 - 2.35	3.14	2.81 - 3.48
Ferritin (FRT)	ng/mL	64.80	51.84 - 77.76	132.00	99.00 - 165.00	311.00	251.76 - 371.47
Gentamicin (GENT_2)	µg/mL	2.25	1.80 - 2.70	4.45	3.34 - 5.56	5.88	4.83 - 6.93
Immunoglobulin A (IgA) (IGA_2)	mg/dL	178.00	142.40 - 213.60	159.00	119.25 - 198.75	154.00	145.49 - 161.66
Immunoglobulin G (IgG) (IGG_2)	mg/dL	850.00	680.00 - 1020.00	775.00	581.25 - 968.75	758.00	717.48 - 798.52
Immunoglobulin M (IgM) (IGM_2)	mg/dL	68.10	54.48 - 81.72	66.10	49.58 - 82.63	65.10	60.98 - 69.22
Iron (IRON_2)	µg/dL	31.10	24.88 - 37.32	79.70	59.78 - 99.63	72.40	68.53 - 76.27
Lithium (LITH)	mEq/L	0.45	0.36 - 0.53	1.22	0.92 - 1.53	1.93	1.70 - 2.16
Phenobarbital (PHNB_2)	µg/mL	8.38	6.70 - 10.06	21.50	16.13 - 26.88	47.10	33.41 - 60.91
Phenytoin (PHNY_2)	µg/mL	6.36	5.09 - 7.63	12.10	9.08 - 15.13	20.70	12.31 - 29.00
Salicylate (SAL)	mg/dL	2.53	2.02 - 3.04	14.20	10.65 - 17.75	39.40	33.76 - 44.96

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
SIEMENS ADVIA CHEMISTRY SYSTEMS cont.							
Theophylline (THEO_2)	µg/mL	4.32	3.46 - 5.18	13.50	10.13 - 16.88	24.20	14.19 - 34.21
Tobramycin (TOB_2)	µg/mL	0.87	0.69 - 1.04	2.53	1.90 - 3.16	5.42	4.68 - 6.16
Valproic Acid (VPA_2)	µg/mL	34.00	27.20 - 40.80	80.70	60.53 - 100.88	117.00	88.35 - 146.52
Vancomycin (VANC_2)	µg/mL	6.18	4.94 - 7.42	16.20	12.15 - 20.25	27.90	19.99 - 35.81
SIEMENS BN SERIES NEPHELOMETERS							
Immunoglobulin A (IgA)	mg/dL	210.00	168.00 - 252.00	172.00	137.60 - 206.40	176.00	153.09 - 199.95
Immunoglobulin E (IgE)	IU/mL	361.00	288.80 - 433.20	93.80	75.04 - 112.56	122.00	109.47 - 135.07
Immunoglobulin G (IgG)	mg/dL	970.00	776.00 - 1164.00	835.00	668.00 - 1002.00	868.00	732.27 - 1003.73
Immunoglobulin M (IgM)	mg/dL	85.40	68.32 - 102.48	70.90	56.72 - 85.08	72.00	60.75 - 83.25
SIEMENS DIMENSION SERIES							
Carbamazepine (CRBM)	µg/mL	2.68	2.14 - 3.22	7.57	5.60 - 9.54	13.20	11.20 - 15.09
Folate (F0LA) (EXL LOCI MODULE()RF644)	ng/mL	2.08	1.66 - 2.50	6.15	4.55 - 7.75	10.50	9.31 - 11.72
hCG	mIU/mL	7.67	6.14 - 9.20	26.30	19.46 - 33.14	250.00	213.44 - 286.56
Iron (TIBC)	µg/dL	263.00	210.40 - 315.60	251.00	185.74 - 316.26	245.00	223.46 - 266.54
Lithium (LI)	mmol/L	0.41	0.33 - 0.49	1.16	0.86 - 1.46	1.85	1.60 - 2.09
Phenytoin (PTN)	µg/mL	6.38	5.10 - 7.66	14.10	10.43 - 17.77	27.00	19.74 - 34.16
PSA (Free) (FPSA)	ng/mL	0.47	0.37 - 0.56	1.96	1.45 - 2.47	10.10	8.54 - 11.66
T3 (Free) (FT3)	pg/mL	2.20	1.76 - 2.64	7.59	5.62 - 9.56	17.90	16.07 - 19.84
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.36	0.29 - 0.43	5.55	4.11 - 6.99	31.50	21.50 - 41.50
Valproic Acid (VALP)	µg/mL	34.50	27.60 - 41.40	78.60	58.16 - 99.04	110.00	93.35 - 127.48
Vitamin B12 (VB12) (EXL LOCI MODULE) (RF642)	pg/mL	339.00	271.20 - 406.80	469.00	347.06 - 590.94	671.00	516.63 - 825.37
SIEMENS DIMENSION VISTA SYSTEMS							
Acetaminophen (ACTM)	µg/mL	14.40	11.52 - 17.28	41.40	28.57 - 54.23	120.00	110.24 - 129.76
AFP	ng/mL	17.40	13.92 - 20.88	90.90	62.72 - 119.08	198.00	176.62 - 218.45
Amikacin	µg/mL	4.96	3.97 - 5.95	11.90	8.21 - 15.59	23.80	16.20 - 31.40
Caffeine	µg/mL	1.80	1.44 - 2.16	6.13	4.23 - 8.03	14.10	10.19 - 18.10
Carbamazepine (CRBM)	µg/mL	2.53	2.02 - 3.04	7.35	5.07 - 9.63	12.70	11.17 - 14.34
CEA	ng/mL	2.01	1.61 - 2.41	16.60	11.45 - 21.75	37.70	31.83 - 43.57
Digoxin (DGXN)	ng/mL	0.75	0.60 - 0.90	2.04	1.41 - 2.67	3.68	3.32 - 4.05
Estradiol	pg/mL	77.00	61.60 - 92.40	203.00	140.07 - 265.93	384.00	333.21 - 434.79
Ferritin (FERR)	ng/mL	59.50	47.60 - 71.40	157.00	108.33 - 205.67	419.00	351.02 - 486.98
Folate (FOL)	ng/mL	2.17	1.74 - 2.60	5.26	3.63 - 6.89	9.17	5.02 - 13.32
Follicle Stimulating Hormone (FSH)	mIU/mL	5.59	4.47 - 6.71	21.80	15.04 - 28.56	42.30	38.80 - 45.91
Gentamicin (GENT)	µg/mL	2.02	1.62 - 2.42	4.38	3.02 - 5.74	6.22	5.23 - 7.21
hCG (Beta, BHCG)	mIU/mL	7.00	5.60 - 8.40	24.60	16.97 - 32.23	235.00	214.15 - 255.85
Immunoglobulin A (IgA)	mg/dL	205.00	164.00 - 246.00	170.00	117.30 - 222.70	171.00	156.58 - 184.39
Immunoglobulin E (IgE)	IU/mL	364.00	291.20 - 436.80	100.00	69.00 - 131.00	127.00	119.69 - 134.31
Immunoglobulin G (IgG)	mg/dL	957.00	765.60 - 1148.40	836.00	576.84 - 1095.16	852.00	755.81 - 949.25
Immunoglobulin M (IgM)	mg/dL	87.30	69.84 - 104.76	74.00	51.06 - 96.94	71.00	63.01 - 78.99
Iron	µg/dL	32.00	25.60 - 38.40	81.70	56.37 - 107.03	74.60	18.62 - 130.93
Iron (TIBC)	µg/dL	269.00	215.20 - 322.80	263.00	194.62 - 331.38	258.00	235.32 - 280.68
Lidocaine (LIDO)	µg/mL	1.28	1.02 - 1.54	3.63	2.50 - 4.76	7.29	6.73 - 7.86
Lithium (LITH)	mmol/L	0.46	0.37 - 0.56	1.21	0.83 - 1.59	1.87	1.63 - 2.11
Luteinizing Hormone (LH)	mIU/mL	1.34	1.07 - 1.61	22.20	15.32 - 29.08	80.70	72.21 - 89.08
Phenobarbital (PHNO)	µg/mL	9.41	7.53 - 11.29	23.80	16.42 - 31.18	48.70	40.58 - 56.82
Phenytoin (PTN)	µg/mL	6.44	5.15 - 7.73	14.30	9.87 - 18.73	25.70	22.33 - 29.07
Prolactin (PRL)	ng/mL	6.02	4.82 - 7.22	18.70	12.90 - 24.50	47.10	42.22 - 51.98
PSA (Free) (FPSA)	ng/mL	0.44	0.35 - 0.53	1.90	1.31 - 2.49	9.72	8.18 - 11.15

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
SIEMENS DIMENSION VISTA SYSTEMS cont.							
PSA (Total) (TPSA)	ng/mL	0.86	0.68 - 1.03	3.15	2.17 - 4.13	15.50	13.85 - 17.06
Salicylate (SAL)	mg/dL	4.73	3.78 - 5.68	16.50	11.39 - 21.62	42.80	40.29 - 45.40
T3 (Free) (FT3)	pg/mL	2.02	1.62 - 2.42	7.25	5.00 - 9.50	17.10	15.68 - 18.52
T3 Uptake/T Uptake (%, TU)	% Uptake	32.20	25.76 - 38.64	39.10	26.98 - 51.22	45.00	37.55 - 52.55
T4 (Free) (FT4)	ng/dL	0.90	0.72 - 1.08	1.97	1.36 - 2.58	6.34	5.60 - 6.81
T4 (Total) (T4)	µg/dL	5.56	4.45 - 6.67	10.80	7.45 - 14.15	18.60	15.36 - 21.84
Theophylline (THEO)	µg/mL	4.55	3.64 - 5.46	13.90	9.59 - 18.21	25.90	20.97 - 30.73
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.37	0.30 - 0.44	5.38	3.71 - 7.05	36.10	28.17 - 44.13
Tobramycin (TOBR)	µg/mL	0.52	0.41 - 0.62	2.32	1.60 - 3.04	5.42	4.60 - 6.24
Tricyclic Antidepressants (TCA)	Qualitative	Negative	-	Positive	-	Positive	-
Valproic Acid (VALP)	µg/mL	33.70	26.96 - 40.44	79.90	55.13 - 104.67	112.00	93.50 - 130.50
Vancomycin (VANC)	µg/mL	6.49	5.19 - 7.79	18.00	12.42 - 23.58	32.20	26.92 - 37.48
Vitamin B12 (VB12)	pg/mL	347.00	277.60 - 416.40	462.00	318.78 - 605.22	653.00	569.28 - 735.96
SIEMENS IMMULITE / IMMULITE 1000							
AFP	ng/mL	19.70	15.76 - 23.64	105.00	73.50 - 136.50	233.00	157.87 - 307.04
Androstenedione	ng/mL	1.22	0.98 - 1.46	3.35	2.35 - 4.36	6.35	2.64 - 10.06
CEA	ng/mL	2.19	1.75 - 2.63	17.60	12.32 - 22.88	39.70	30.30 - 49.18
Cortisol	µg/dL	2.78	2.22 - 3.34	17.40	12.18 - 22.62	25.10	19.17 - 31.03
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate)	µg/dL	59.50	47.60 - 71.40	146.00	102.20 - 189.80	486.00	359.40 - 611.52
Estradiol	pg/mL	107.00	85.60 - 128.40	261.00	182.70 - 339.30	549.00	412.15 - 686.65
Estriol (Free) (UE3)	ng/mL	1.25	1.00 - 1.50	4.87	3.41 - 6.33	>10.0	7.79 - >11.2
Ferritin	ng/mL	67.40	53.92 - 80.88	140.00	98.00 - 182.00	359.00	265.97 - 452.03
Follicle Stimulating Hormone (FSH)	mIU/mL	6.49	5.19 - 7.79	27.20	19.04 - 35.36	55.80	42.47 - 69.13
hCG	mIU/mL	8.77	7.02 - 10.52	33.00	23.10 - 42.90	297.00	192.12 - 401.88
hCG (Turbo)	mIU/mL	9.45	7.56 - 11.34	34.00	23.80 - 44.20	341.00	242.37 - 439.63
Human Growth Hormone (hGH) (LKGRH)	ng/mL	2.73	2.18 - 3.28	7.22	5.05 - 9.39	12.60	8.07 - 17.13
Immunoglobulin E (IgE) (Rgt. Lots 401+)	IU/mL	368.00	294.40 - 441.60	99.90	69.93 - 129.87	132.00	113.91 - 150.09
Luteinizing Hormone (LH)	mIU/mL	1.56	1.25 - 1.87	19.50	13.65 - 25.35	58.60	43.61 - 73.59
Progesterone (LKPW1)	ng/mL	0.86	0.69 - 1.03	9.98	6.99 - 12.97	23.90	15.78 - 32.02
Prolactin	ng/mL	7.21	5.77 - 8.65	20.50	14.35 - 26.65	48.70	34.86 - 62.54
PSA (Free)	ng/mL	0.38	0.30 - 0.46	1.74	1.22 - 2.26	8.11	6.26 - 9.99
PSA (Total)	ng/mL	0.95	0.76 - 1.14	3.61	2.53 - 4.69	18.10	12.37 - 23.73
PSA (Total) (Gen. 3)	ng/mL	0.73	0.58 - 0.88	2.44	1.71 - 3.17	14.70	9.90 - 19.22
T3 (Free)	pg/mL	2.69	2.15 - 3.23	6.49	4.54 - 8.44	11.00	8.26 - 13.72
T3 (Total)	ng/dL	64.30	51.44 - 77.16	178.00	124.60 - 231.40	348.00	272.76 - 423.24
T3 Uptake/T Uptake	% Uptake	25.90	20.72 - 31.08	33.00	23.10 - 42.90	39.70	30.18 - 49.31
T4 (Free)	ng/dL	1.09	0.87 - 1.31	2.59	1.81 - 3.37	>6.00	-
T4 (Total)	µg/dL	4.45	3.56 - 5.34	10.20	7.14 - 13.26	16.70	12.76 - 20.64
Testosterone	ng/dL	121.00	96.80 - 145.20	420.00	294.00 - 546.00	990.00	646.00 - 1355.00
Thyroglobulin (Tg)	ng/mL	2.87	2.30 - 3.44	1.65	0.79 - 2.51	2.44	0.89 - 5.26
Thyroid Stimulating Hormone (TSH) (Gen. 3)	µIU/mL	0.46	0.37 - 0.55	5.61	3.93 - 7.29	36.50	25.37 - 47.63
Thyroid Stimulating Hormone (TSH) (Rapid)	µIU/mL	0.53	0.42 - 0.63	5.87	4.11 - 7.63	36.00	26.69 - 45.18
Vitamin B12	pg/mL	404.00	323.20 - 484.80	589.00	412.30 - 765.70	866.00	599.47 - 1062.58
SIEMENS IMMULITE 2000 / 2000 XPi							
ACTH	pg/mL	86.90	69.52 - 104.28	151.00	72.48 - 229.52	348.00	145.41 - 550.59
AFP	ng/mL	18.30	14.64 - 21.96	99.30	47.66 - 150.94	214.00	150.01 - 276.94
Androstenedione	ng/mL	0.86	0.69 - 1.03	3.32	1.59 - 5.05	5.83	2.08 - 9.58
Calcitonin	pg/mL	25.20	20.16 - 30.24	180.00	86.40 - 273.60	418.00	298.20 - 536.94
Carbamazepine	µg/mL	2.25	1.80 - 2.70	6.36	3.05 - 9.67	11.20	8.59 - 13.70

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
SIEMENS IMMULITE 2000 / 2000 Xpi cont.							
CEA	ng/mL	2.55	2.04 - 3.06	21.20	10.18 - 32.22	47.00	36.28 - 57.62
Cortisol	µg/dL	2.86	2.29 - 3.43	17.40	8.35 - 26.45	24.90	19.10 - 30.70
C-Peptide	ng/mL	0.40	0.32 - 0.48	5.25	2.52 - 7.98	8.51	6.32 - 10.71
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (DHEA-Sulfate)	µg/dL	57.90	46.32 - 69.48	144.00	69.12 - 218.88	513.00	383.22 - 641.56
Digoxin	ng/mL	0.84	0.67 - 1.01	2.47	1.19 - 3.75	4.02	2.78 - 5.25
Estradiol	pg/mL	93.90	75.12 - 112.68	270.00	129.60 - 410.40	546.00	441.14 - 650.86
Estriol (Free)	ng/mL	1.01	0.81 - 1.21	4.36	2.09 - 6.63	10.40	7.60 12.00
Ferritin	ng/mL	73.50	58.80 - 88.20	159.00	76.32 - 241.68	424.00	310.24 - 536.46
Folate	ng/mL	3.71	2.97 - 4.45	8.66	4.16 - 13.16	14.50	9.49 - 19.42
Follicle Stimulating Hormone (FSH)	mIU/mL	6.26	5.01 - 7.51	26.30	12.62 - 39.98	56.50	40.40 - 72.60
Gastrin	pg/mL	59.20	47.36 - 71.04	249.00	119.52 - 378.48	523.00	367.90 - 620.40
hCG	mIU/mL	8.56	6.85 - 10.27	26.70	12.82 - 40.58	250.00	176.56 - 323.44
Human Growth Hormone (hGH) (L2KGRH/L5KGRH)	ng/mL	2.85	2.28 - 3.42	7.99	3.84 - 12.14	13.10	7.53 - 18.62
IGF-1/Somatomedin C	ng/mL	105.00	84.00 - 126.00	111.00	53.28 - 168.72	116.00	51.31 - 180.35
Immunoglobulin E (IgE)	IU/mL	369.00	295.20 - 442.80	96.10	46.13 - 146.07	125.00	80.02 - 169.51
Luteinizing Hormone (LH)	mIU/mL	1.57	1.26 - 1.88	18.60	8.93 - 28.27	54.40	39.98 - 68.82
Phenobarbital	µg/mL	8.65	6.92 - 10.38	21.60	10.37 - 32.83	47.20	36.85 - 57.44
Phenytoin	µg/mL	6.96	5.57 - 8.35	13.80	6.62 - 20.98	24.40	15.07 - 33.73
Progesterone	ng/mL	0.70	0.56 - 0.84	7.77	3.73 - 11.81	19.10	13.71 - 24.40
Prolactin	ng/mL	6.78	5.42 - 8.14	18.30	8.78 - 27.82	43.80	34.44 - 53.07
Prostatic Acid Phosphatase (PAP)	ng/mL	1.44	1.15 - 1.73	23.80	11.42 - 36.18	49.30	34.29 - 64.39
PSA (Free)	ng/mL	0.41	0.33 - 0.49	1.75	0.84 - 2.66	8.84	6.68 - 10.99
PSA (Total)	ng/mL	0.94	0.75 - 1.13	3.24	1.56 - 4.92	16.40	11.25 - 21.64
T3 (Free)	pg/mL	2.76	2.21 - 3.31	6.28	3.01 - 9.55	11.00	8.12 - 13.89
T3 (Total)	ng/dL	61.60	49.28 - 73.92	181.00	86.88 - 275.12	364.00	287.59 - 441.47
T3 Uptake/T Uptake	% Uptake	27.70	22.16 - 33.24	32.20	15.46 - 48.94	37.20	27.47 - 46.85
T4 (Free) (L2KFT4/L5KFT4)	ng/dL	0.95	0.76 - 1.13	2.34	1.12 - 3.56	5.42	4.23 - 5.87
T4 (Total)	µg/dL	4.07	3.26 - 4.88	8.86	4.25 - 13.47	15.60	11.89 - 19.31
Testosterone	ng/dL	139.00	111.20 - 166.80	422.00	202.56 - 641.44	1207.00	781.25 - 1354.28
Theophylline	µg/mL	4.19	3.35 - 5.03	13.80	6.62 - 20.98	24.30	18.00 - 30.51
Thyroglobulin (Tg)	ng/mL	2.54	2.03 - 3.05	1.34	0.64 - 2.04	2.37	0.87 - 5.11
Thyroid Stimulating Hormone (TSH) (Gen. 3)	µIU/mL	0.45	0.36 - 0.54	5.52	2.65 - 8.39	32.70	23.97 - 41.43
Thyroid Stimulating Hormone (TSH) (Rapid)	µIU/mL	0.46	0.37 - 0.56	5.52	2.65 - 8.39	32.00	23.86 - 40.14
Thyroxine Binding Globulin (TBG)	µg/mL	15.00	12.00 - 18.00	13.40	6.43 - 20.37	14.00	10.16 - 17.79
Valproic Acid	µg/mL	29.40	23.52 - 35.28	74.80	35.90 - 113.70	113.00	90.83 - 134.52
Vitamin B12	pg/mL	326.00	260.80 - 391.20	538.00	258.24 - 817.76	873.00	609.36 - 965.71
SNIBE MAGLUMI							
AFP	IU/mL	15.60	10.91 - 20.29	78.30	54.80 - 102.00	173.00	121.00 - 225.00
CEA	ng/mL	2.81	1.97 - 3.65	16.30	11.40 - 21.20	31.50	22.10 - 41.00
Cortisol	ng/mL	34.40	24.10 - 44.70	186.00	130.00 - 242.00	312.00	218.00 - 406.00
C-Peptide	ng/mL	1.96	1.37 - 2.55	5.84	4.09 - 7.59	7.97	5.58 - 10.40
Estradiol	pg/mL	71.50	50.10 - 93.00	340.00	238.00 - 442.00	803.00	562.00 - 1044.00
Estriol	ng/mL	1.02	0.71 - 1.33	5.32	3.72 - 6.92	9.73	6.81 - 12.60
Ferritin	ng/mL	52.60	36.80 - 68.40	127.00	88.90 - 165.00	375.00	263.00 - 488.00
Follicle Stimulating Hormone (FSH)	mIU/mL	11.20	7.84 - 14.60	25.40	17.80 - 33.00	47.80	33.50 - 62.10
hCG	mIU/mL	4.53	3.17 - 5.89	20.40	14.30 - 26.50	226.00	158.00 - 294.00
Human Growth Hormone (hGH)	ng/mL	3.41	2.39 - 4.43	9.44	6.61 - 12.30	19.00	13.30 - 24.70
Immunoglobulin E (IgE)	IU/mL	310.00	217.00 - 403.00	74.80	52.40 - 97.20	210.00	147.00 - 273.00
Insulin	µIU/mL	15.50	10.90 - 20.20	44.90	31.40 - 58.40	133.00	93.10 - 173.00

INSTRUMENTS / ANALYTE	Units	Target	Range	Target	Range	Target	Range
		Target	Range	Target	Range	Target	Range
SNIBE MAGLUMI cont.							
Luteinizing Hormone (LH)	mIU/mL	2.06	1.44 - 2.68	16.90	11.80 - 22.00	65.40	45.80 - 85.00
Progesterone	ng/mL	0.76	0.38 - 1.15	11.40	7.98 - 14.80	30.00	21.00 - 39.00
Prolactin	µIU/mL	153.00	107.00 - 199.00	398.00	279.00 - 517.00	971.00	680.00 - 1262.00
PSA (Free)	ng/mL	0.10	0.08 - 0.12	1.64	1.15 - 2.13	11.70	8.19 - 15.20
PSA (Total)	ng/mL	0.47	0.38 0.59	2.93	2.05 - 3.81	18.00	12.60 - 23.40
T3 (Free)	pg/mL	2.19	1.53 - 2.85	6.49	4.54 - 8.44	13.10	9.17 - 17.00
T3 (Total)	ng/mL	0.75	0.53 - 0.98	2.19	1.53 - 2.85	4.45	3.12 - 5.79
T4 (Free)	pg/mL	8.47	5.93 - 11.00	21.20	14.80 - 27.60	56.80	39.80 - 73.80
T4 (Total)	ng/mL	55.50	38.90 - 72.20	118.00	82.60 - 153.00	194.00	136.00 - 252.00
Testosterone	ng/mL	1.70	1.19 - 2.21	6.09	4.26 - 7.92	9.54	6.68 - 12.40
Thyroid Stimulating Hormone (TSH)	µIU/mL	0.50	0.35 - 0.65	5.98	4.19 - 7.77	40.50	28.40 - 52.70
TOSOH AIA SYSTEMS							
25-Hydroxy Vitamin D (AIA-PACK)	ng/mL	16.60	13.28 - 19.92	25.90	18.13 - 33.67	22.20	15.49 - 28.84
ACTH (ST AIA-PACK)	pg/mL	71.20	56.96 - 85.44	85.70	59.99 - 111.41	190.00	104.12 - 277.04
TOSOH AIA SYSTEMS cont.							
AFP (ST AIA-PACK)	ng/mL	18.80	15.04 - 22.56	95.80	67.06 - 124.54	203.00	142.51 - 264.52
CEA (ST AIA-PACK)	ng/mL	2.90	2.32 - 3.48	20.00	14.00 - 26.00	42.50	29.75 - 55.25
Cortisol (ST AIA-PACK)	µg/dL	3.30	2.64 - 3.96	19.90	13.93 - 25.87	28.40	19.90 - 36.90
C-Peptide (II, ST AIA-PACK)	ng/mL	0.47	0.33 - 0.61	5.05	3.54 - 6.57	8.04	5.74 - 10.34
Dehydroepiandrosterone-Sulfate (DHEA-Sulfate) (ST AIA-PACK)	µg/dL	72.60	58.08 - 87.12	179.00	125.30 - 232.70	562.00	393.02 - 730.03
Estradiol (REF E2-025274)	pg/mL	247.00	197.60 - 296.40	579.00	405.30 - 752.70	1125.00	787.23 - 1462.77
Estradiol (REF HSE2-025225)	pg/mL	75.90	60.72 - 91.08	222.00	155.40 - 288.60	380.00	266.22 - 494.51
Ferritin (ST AIA-PACK)	ng/mL	52.00	41.60 - 62.40	117.00	81.90 - 152.10	298.00	208.21 - 387.79
Folate (AIA-PACK)	ng/mL	5.02	4.02 - 6.02	10.10	7.07 - 13.13	15.80	11.04 - 20.56
Follicle Stimulating Hormone (FSH) (ST AIA-PACK)	mIU/mL	7.90	6.32 - 9.48	21.80	15.26 - 28.34	33.20	23.20 - 43.20
hCG (Total Beta, ST AIA-PACK)	mIU/mL	7.00	5.60 - 8.40	26.60	18.62 - 34.58	234.00	164.16 - 303.84
Human Growth Hormone (hGH) (ST AIA-PACK)	ng/mL	2.77	2.22 - 3.32	8.40	5.88 - 10.92	14.50	10.14 - 18.76
Immunoglobulin E (IgE) (II, ST AIA-PACK)	IU/mL	338.00	270.40 - 405.60	91.80	64.26 - 119.34	121.00	84.90 - 157.59
Insulin (IRI, ST AIA-PACK)	µIU/mL	17.10	13.68 - 20.52	64.30	45.01 - 83.59	177.00	124.59 - 230.40
Luteinizing Hormone (LH) (II, ST AIA-PACK)	mIU/mL	1.10	0.88 - 1.32	18.70	13.09 - 24.31	68.20	47.72 - 88.57
Progesterone (ST AIA-PACK, PROGII)	ng/mL	0.31	0.25 - 0.37	10.70	7.49 - 13.91	28.10	19.67 - 35.13
Progesterone (ST AIA-PACK, PROGIII) (Cal Lot G33CC359)	ng/mL	0.62	0.50 - 0.74	13.00	9.10 - 16.90	31.50	22.07 - 40.93
Prolactin (PRL, ST AIA-PACK)	ng/mL	<1.0	-	6.50	4.55 - 8.45	7.10	4.90 - 9.20
Prostatic Acid Phosphatase (PAP) (ST AIA-PACK)	ng/mL	1.70	1.36 - 2.04	24.90	17.43 - 32.37	>40.0	-
PSA (Total) (ST AIA-PACK)	ng/mL	0.83	0.66 - 1.00	2.82	1.97 - 3.67	14.10	9.87 - 18.33
T3 (Free) (ST AIA-PACK)	pg/mL	3.00	2.40 - 3.60	9.46	6.62 - 12.30	24.70	17.01 - 25.62
T3 (Total) (ST AIA-PACK)	ng/mL	0.81	0.65 - 0.97	1.94	1.36 - 2.52	3.52	2.46 - 4.58
T3 Uptake/T Uptake (ST AIA-PACK)	% Uptake	34.60	27.68 - 41.52	41.50	29.05 - 53.95	49.20	34.34 - 61.50
T4 (Free) (ST AIA-PACK)	ng/dL	0.90	0.72 - 1.08	2.20	1.54 - 2.86	5.52	3.86 - 7.16
T4 (Total) (ST AIA-PACK)	µg/dL	4.30	3.44 - 5.16	8.30	5.81 - 10.79	14.30	9.98 - 18.62
Testosterone (ST AIA-PACK)	ng/dL	126.00	100.80 - 151.20	469.00	328.30 - 609.70	1365.00	955.59 - 1775.27
Thyroid Stimulating Hormone (TSH) (ST AIA-PACK)	µIU/mL	0.43	0.34 - 0.52	5.83	4.08 - 7.58	34.80	24.35 - 45.14
Thyroid Stimulating Hormone (TSH) (TSH3G, AIA-PACK)	µIU/mL	0.44	0.35 - 0.53	6.03	4.22 - 7.84	36.70	25.64 - 47.76
Vitamin B12 (AIA-PACK)	pg/mL	466.00	372.80 - 559.20	668.00	467.60 - 868.40	934.00	654.38 - 1214.45



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