

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

CAT. NO. HE1532 / HS2611

LOT NO. 696UE

SIZE: 20 x 5ml / 5 x 5ml

EXP: 2018-03

INTENDED USE

This product is intended for *in vitro* diagnostic use in the quality control of diagnostic assays. The Human Assayed Multi-sera is for the control of accuracy.

DEVICE DESCRIPTION

The Human Assayed Multi-sera is supplied at 2 levels, level 2 and 3. Target values and ranges are supplied for the analytes listed in the values section at both levels.

SAFETY PRECAUTIONS AND 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 NON-REACTIVE. FDA approved methods have been used to conduct these tests.

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 Sheets are available on request.

STORAGE AND STABILITY

OPENED: Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 8 hours at +15°C to +25°C or 7 days at +2°C to +8°C, and 28 days when frozen once at -20°C (See Limitations).

UNOPENED: Store refrigerated (+2°C to +8°C). Stable to expiration date printed on individual vials.

LIMITATIONS

For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25-30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at -20°C.

Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.

Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

NEFA is stable for 1 day at +2°C to +8°C.

Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at -20°C.

Bacterial contamination of the reconstituted 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

The Human Assayed Multi-sera is supplied lyophilised.

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml 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.
2. Refer to the Control section of the individual analyser application.
3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

MATERIALS PROVIDED

Human Assayed Multi-sera - Level 3 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

Each batch of assayed human serum is submitted to reference laboratories for assignment against international Reference Standards. Where international Reference Standards are unavailable, Reference Methods are used. Values are also collected from approx. 3000 laboratories worldwide and using a unique statistical analysis a value is assigned.

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean $\pm 2S.D.$ This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

If an instrument specific value is not available, refer to the Mean of all Instruments section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com

NOTES

® All trademarks recognised.

- (1) Applies only in Germany. Ranges established according to the Guidelines of the Federal Chamber of Physicians in Germany.
- (2) Values established by reference laboratories officially recognised by the Federal Chamber of Physicians in Germany.
- (3) DGKC: German Society for Clinical Chemistry.
- (4) IFCC: International Federation of Clinical Chemistry.
- (5) SCE: Scandinavian Committee on Enzymes.

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ABBOTT AEROSET®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Green
	g/dl	2.91	2.47	3.35	0.22	0.44	
Alkaline Phosphatase	U/l	356	303	409	26.50	53.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	86.4	68.2	105	9.10	18.20	Diazo with Dichloroaniline (DCA)
	mg/dl	5.05	3.99	6.11	0.53	1.06	
Calcium	mmol/l	3.04	2.73	3.35	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.2	10.9	13.5	0.65	1.30	
	mmol/l	3.02	2.71	3.33	0.16	0.31	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.34	6.39	8.29	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	247	319	18.00	36.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct
CK Total	U/l	539	442	636	48.50	97.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	353	283	423	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.99	3.20	4.78	0.40	0.79	
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.9	13.6	18.2	1.15	2.30	Glucose oxidase
	mg/dl	287	245	329	21.00	42.00	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
LD (LDH)	U/l	377	321	433	28.00	56.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Potassium	mmol/l	6.07	5.58	6.56	0.25	0.49	ISE method - direct
Protein Total	g/l	47.2	37.8	56.6	4.70	9.40	Biuret reaction end point
	g/dl	4.72	3.78	5.66	0.47	0.94	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.49	8.27	10.7	0.61	1.22	
Urea	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease hypochlorite
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Green
	g/dl	2.89	2.46	3.32	0.22	0.43	
	g/l	27.5	23.4	31.6	2.05	4.10	Bromocresol Purple
	g/dl	2.75	2.34	3.16	0.21	0.41	
Alkaline Phosphatase	U/l	481	408	554	36.50	73.00	Diethanolamine buffer DEA 37°C
	U/l	320	272	368	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	318	271	365	23.50	47.00	AMP non-optimised 37°C
ALT (GPT)	U/l	124	100	148	12.00	24.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	262	223	301	19.50	39.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	176	141	211	17.50	35.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	50.3	40.2	60.4	5.05	10.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Bilirubin Total	µmol/l	94.5	74.7	114	9.90	19.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.53	4.37	6.69	0.58	1.16	
	µmol/l	95.2	75.2	115	10.00	20.00	Diazo with Sulphanilic Acid
	mg/dl	5.57	4.40	6.74	0.59	1.17	
	µmol/l	95.8	75.7	116	10.05	20.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.60	4.43	6.77	0.59	1.17	
	µmol/l	94.7	74.8	115	9.95	19.90	Diazonium ion
	mg/dl	5.54	4.38	6.70	0.58	1.16	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Cholesterol	mmol/l	7.22	6.28	8.16	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	242	316	18.50	37.00	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholinesterase	U/l	6213	4970	7456	621.50	1243.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	547	449	645	49.00	98.00	CK-NAC substrate start (DGKC) 37°C
	U/l	536	440	632	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	391	313	469	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	402	322	482	40.00	80.00	Randox Enzymatic UV method
	mg/dl	4.54	3.64	5.44	0.45	0.90	
	µmol/l	394	315	473	39.50	79.00	Jaffe rate blanked
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	393	315	471	39.00	78.00	IDMS traceable
	mg/dl	4.44	3.56	5.32	0.44	0.88	
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	179	152	206	13.50	27.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	
HDL - Cholesterol	mmol/l	2.66	2.26	3.06	0.20	0.40	Direct HDL PPD
	mg/dl	103	87.2	119	7.90	15.80	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	2.63	2.23	3.03	0.20	0.40	Direct Clearance Method
	mg/dl	102	86.1	118	7.95	15.90	
	mmol/l	2.65	2.25	3.05	0.20	0.40	HDL - Ultra
	mg/dl	102	86.9	117	7.55	15.10	
Iron	µmol/l	40.5	33.2	47.8	3.65	7.30	Colorimetric with ppt.
	µg/dl	226	186	266	20.00	40.00	
	µmol/l	40.4	33.2	47.6	3.60	7.20	Colorimetric without ppt.
	µg/dl	226	186	266	20.00	40.00	
Lactate	mmol/l	5.38	4.41	6.35	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.5	39.7	57.3	4.40	8.80	
LD (LDH)	U/l	384	326	442	29.00	58.00	L->P 37°C
	U/l	391	332	450	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.12	1.86	2.38	0.13	0.26	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Arsenazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Enzymatic
	mg/dl	4.25	3.74	4.76	0.26	0.51	
Osmolality	mOsm/kg	343	274	412	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.12	1.80	2.44	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.57	5.58	7.56	0.50	0.99	
	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	

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		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.15	5.66	6.64	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.7	38.2	57.2	4.75	9.50	Biuret reaction end point
	g/dl	4.77	3.82	5.72	0.48	0.95	
	g/l	48.5	38.8	58.2	4.85	9.70	Biuret reaction kinetic
	g/dl	4.85	3.88	5.82	0.49	0.97	
PSA Total	ng/ml =	33.2	24.9	41.5	4.15	8.30	Abbott Architect
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.82	0.65	0.98	0.08	0.16	Abbott Architect
TIBC	µmol/l	44.0	34.7	53.3	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	246	194	298	26.00	52.00	
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	3.03	2.54	3.52	0.25	0.49	Lipase/Glycerol Dehydrogenase
	mg/dl	268	225	311	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.71	8.45	11.0	0.63	1.26	
	mmol/l	0.58	0.50	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.73	8.45	11.0	0.64	1.28	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease end point
	mg/dl	114	96.8	131	8.60	17.20	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	

Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	30.8	26.2	35.4	2.30	4.60	Bromocresol Green
	g/dl	3.08	2.62	3.54	0.23	0.46	
Alkaline Phosphatase	U/l	326	277	375	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	254	216	292	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	208	177	239	15.50	31.00	AMP optimised to IFCC 25°C
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
Creatinine	µmol/l	356	285	427	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.02	3.22	4.82	0.40	0.80	
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Protein Total	g/l	51.0	40.8	61.2	5.10	10.20	Biuret reaction end point
	g/dl	5.10	4.08	6.12	0.51	1.02	
Triglycerides	mmol/l	2.92	2.46	3.38	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	258	218	298	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.41	8.18	10.6	0.62	1.23	

Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Bromocresol Green
	g/dl	2.86	2.43	3.29	0.22	0.43	
Alkaline Phosphatase	U/l	390	331	449	29.50	59.00	p-Nitrophenylphosphate AMP 37°C
	U/l	523	445	601	39.00	78.00	Diethanolamine buffer DEA 37°C
	U/l	393	334	452	29.50	59.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
Amylase Total	U/l	291	248	334	21.50	43.00	pNP Maltotrioxide substrates 37°C
	U/l	286	243	329	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	189	151	227	19.00	38.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	27.6	21.8	33.4	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Bilirubin Total	µmol/l	87.9	69.4	106	9.25	18.50	Diazo with Dichloroaniline (DCA)
	mg/dl	5.14	4.06	6.22	0.54	1.08	
	µmol/l	96.6	76.3	117	10.15	20.30	Diazo with Sulphanilic Acid
	mg/dl	5.65	4.46	6.84	0.60	1.19	
	µmol/l	96.1	75.9	116	10.10	20.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.62	4.44	6.80	0.59	1.18	
	µmol/l	91.2	72.1	110	9.55	19.10	Oxidation to Biliverdin
	mg/dl	5.34	4.22	6.46	0.56	1.12	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholinesterase	U/l	4632	3706	5558	463.00	926.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	544	446	642	49.00	98.00	CK-NAC substrate start (DGKC) 37°C
	U/l	573	470	676	51.50	103.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	27.3	21.8	32.8	2.75	5.50	Colorimetric
	µg/dl	174	139	209	17.50	35.00	
Creatinine	µmol/l	363	290	436	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	384	307	461	38.50	77.00	Randox Enzymatic UV method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	380	304	456	38.00	76.00	Creatinine PAP method
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	382	305	459	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	369	296	442	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.17	3.34	5.00	0.42	0.83	
	µmol/l	378	303	453	37.50	75.00	IDMS traceable
	mg/dl	4.27	3.42	5.12	0.43	0.85	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
D-3-Hydroxybutyrate	mmol/l	1.18	1.00	1.36	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	187	159	215	14.00	28.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	36	29	43	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	2.78	2.36	3.20	0.21	0.42	Direct Clearance Method
	mg/dl	107	91.1	123	7.95	15.90	
	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct HDL Roche 3rd generation
	mg/dl	105	89.2	121	7.90	15.80	
Iron	µmol/l	40.7	33.4	48.0	3.65	7.30	Colorimetric with ppt.
	µg/dl	228	187	269	20.50	41.00	
	µmol/l	40.6	33.3	47.9	3.65	7.30	Colorimetric without ppt.
	µg/dl	227	186	268	20.50	41.00	
Lactate	mmol/l	5.44	4.46	6.42	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.0	40.2	57.8	4.40	8.80	
LD (LDH)	U/l	391	332	450	29.50	59.00	L->P 37°C
	U/l	881	749	1013	66.00	132.00	P->L Scandinavian & Dutch 37°C
	U/l	749	637	861	56.00	112.00	P->L German methods 37°C
	U/l	398	338	458	30.00	60.00	L->P IFCC 37°C
Lipase	U/l	68	54	82	7.00	14.00	Other Colorimetric 37°C

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Lipase	U/l	79	63	95	8.00	16.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Osmolality	mOsm/kg	342	274	410	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.88	5.83	7.93	0.53	1.05	
	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Potassium	mmol/l	6.18	5.68	6.68	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.6	37.3	55.9	4.65	9.30	Biuret reaction end point
	g/dl	4.66	3.73	5.59	0.47	0.93	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	46.2	36.5	55.9	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	258	204	312	27.00	54.00	
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	2.98	2.51	3.45	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	264	222	306	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.58	8.33	10.8	0.63	1.25	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.25	10.7	0.62	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Purple
	g/dl	2.91	2.47	3.35	0.22	0.44	
Alkaline Phosphatase	U/l	349	297	401	26.00	52.00	p-Nitrophenylphosphate AMP 37°C
	U/l	358	305	411	26.50	53.00	AMP optimised to IFCC 37°C
	U/l	348	296	400	26.00	52.00	AMP reduced interference 37°C
ALT (GPT)	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 37°C
	U/l	116	93	139	11.50	23.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	213	181	245	16.00	32.00	Immunoinhibition EPS substrate 37°C
	U/l	223	189	257	17.00	34.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	308	262	354	23.00	46.00	Beckman maltotetraose 37°C
	U/l	304	258	350	23.00	46.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	174	140	208	17.00	34.00	Tris buffer without P5P 37°C
	U/l	168	134	202	17.00	34.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Differential rate pH change
	mmol/l	14.3	11.4	17.2	1.45	2.90	Ion selective electrode
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	93.9	74.1	114	9.90	19.80	Diazo with Sulphanilic Acid
	mg/dl	5.49	4.33	6.65	0.58	1.16	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	2.99	2.70	3.28	0.15	0.29	Ion selective electrode
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	3.04	2.73	3.35	0.16	0.31	Arsenazo III
	mg/dl	12.2	10.9	13.5	0.65	1.30	
Cholesterol	mmol/l	3.02	2.71	3.33	0.16	0.31	NM-BAPTA
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.15	6.22	8.08	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholinesterase	U/l	5361	4289	6433	536.00	1072.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	557	457	657	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	544	446	642	49.00	98.00	Monothioglycerol 37°C
Creatinine	µmol/l	375	300	450	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	371	296	446	37.50	75.00	Randox Enzymatic UV method
	mg/dl	4.19	3.34	5.04	0.43	0.85	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	375	300	450	37.50	75.00	IDMS traceable
	mg/dl	4.24	3.39	5.09	0.43	0.85	
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	150	127	173	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Oxygen electrode
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	3.48	2.96	4.00	0.26	0.52	Direct HDL PPD
	mg/dl	134	114	154	10.00	20.00	
Iron	µmol/l	40.5	33.2	47.8	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	186	266	20.00	40.00	
Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.6	39.0	56.2	4.30	8.60	
LD (LDH)	U/l	318	271	365	23.50	47.00	L->P 37°C
	U/l	1048	891	1205	78.50	157.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	368	313	423	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	52	42	62	5.00	10.00	Other Colorimetric 37°C
Lithium	mmol/l	2.23	1.97	2.49	0.13	0.26	Spectrophotometric
	mg/dl	1.55	1.37	1.73	0.09	0.18	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Calmagite
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Osmolality	mOsm/kg	345	276	414	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.11	1.79	2.43	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.54	5.55	7.53	0.50	0.99	
	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.3	37.1	55.5	4.60	9.20	Biuret reaction CX4/5/7
	g/dl	4.63	3.71	5.55	0.46	0.92	
	g/l	45.9	36.8	55.0	4.55	9.10	Biuret reaction end point
	g/dl	4.59	3.68	5.50	0.46	0.91	
	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction kinetic
	g/dl	4.48	3.58	5.38	0.45	0.90	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	μmol/l	47.5	37.5	57.5	5.00	10.00	Removal of excess free iron
	μg/dl	266	210	322	28.00	56.00	
	μmol/l	46.3	36.6	56.0	4.85	9.70	FE+UIBC(saturation with iron)
	μg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.85	7.71	9.99	0.57	1.14	
Urea	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease end point
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.5	24.2	32.8	2.15	4.30	Bromocresol Green
	g/dl	2.85	2.42	3.28	0.22	0.43	
ALT (GPT)	U/l	133	107	159	13.00	26.00	Tris buffer without P5P 37°C
	U/l	98	79	117	9.50	19.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	199	159	239	20.00	40.00	Tris buffer without P5P 37°C
	U/l	135	107	163	14.00	28.00	Tris buffer without P5P 30°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	35.7	28.2	43.2	3.75	7.50	Diazo with Sulphanilic Acid
	mg/dl	2.09	1.65	2.53	0.22	0.44	
Bilirubin Total	µmol/l	95.2	75.2	115	10.00	20.00	Diazo with Sulphanilic Acid
	mg/dl	5.57	4.40	6.74	0.59	1.17	
Cholesterol	mmol/l	7.46	6.49	8.43	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	251	325	18.50	37.00	
CK Total	U/l	588	482	694	53.00	106.00	CK-NAC (IFCC) 37°C
	U/l	368	302	434	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	250	205	295	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	330	264	396	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.73	2.98	4.48	0.38	0.75	
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.25	10.7	0.62	1.23	
Urea	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
Alkaline Phosphatase	U/l	322	274	370	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	251	213	289	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	91.9	72.6	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.38	4.25	6.51	0.57	1.13	
Cholesterol	mmol/l	7.39	6.43	8.35	0.48	0.96	Cholesterol Oxidase
	mg/dl	285	248	322	18.50	37.00	
CK Total	U/l	570	467	673	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	357	292	422	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	338	271	405	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.82	3.06	4.58	0.38	0.76	
gamma-GT	U/l	190	162	218	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	128	172	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	100	134	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	2.98	2.53	3.43	0.23	0.45	Direct Clearance Method
	mg/dl	115	97.7	132	8.65	17.30	
Protein Total	g/l	46.7	37.4	56.0	4.65	9.30	Biuret reaction end point
	g/dl	4.67	3.74	5.60	0.47	0.93	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.27	8.06	10.5	0.61	1.21	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.8	26.2	35.4	2.30	4.60	Bromocresol Green
	g/dl	3.08	2.62	3.54	0.23	0.46	
	g/l	27.7	23.6	31.8	2.05	4.10	Bromocresol Purple
	g/dl	2.77	2.36	3.18	0.21	0.41	
Alkaline Phosphatase	U/l	256	217	295	19.50	39.00	Roche Integra AMP buffer 37°C
	U/l	199	169	229	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	164	139	189	12.50	25.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	267	227	307	20.00	40.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	281	239	323	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	283	240	326	21.50	43.00	Saccharogenic 37°C
	U/l	283	240	326	21.50	43.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	284	241	327	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	178	143	213	17.50	35.00	Tris buffer without P5P 37°C
	U/l	120	97	143	11.50	23.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	μmol/l	35.1	27.7	42.5	3.70	7.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.05	1.62	2.48	0.22	0.43	

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			low	high			
Bilirubin Total	μmol/l	88.9	70.2	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.20	4.11	6.29	0.55	1.09	
	μmol/l	88.0	69.5	107	9.25	18.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.15	4.07	6.23	0.54	1.08	
	μmol/l	88.1	69.6	107	9.25	18.50	Diazonium ion
	mg/dl	5.15	4.07	6.23	0.54	1.08	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	NM-BAPTA
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase
Cholesterol	mg/dl	285	248	322	18.50	37.00	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
Cholinesterase	U/l	5321	4257	6385	532.00	1064.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	567	465	669	51.00	102.00	CK-NAC substrate start (DGKC) 37°C
	U/l	355	291	419	32.00	64.00	CK-NAC substrate start (DGKC) 30°C
	U/l	241	198	284	21.50	43.00	CK-NAC substrate start (DGKC) 25°C
	U/l	581	476	686	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	364	298	430	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	247	202	292	22.50	45.00	CK-NAC (IFCC) 25°C
	U/l	247	202	292	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	351	281	421	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.97	3.18	4.76	0.40	0.79	
	μmol/l	360	288	432	36.00	72.00	Roche Creatinine Plus
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	μmol/l	352	282	422	35.00	70.00	Jaffe rate blanked
	mg/dl	3.98	3.19	4.77	0.40	0.79	
	μmol/l	352	282	422	35.00	70.00	Jaffe rate blanked
	mg/dl	3.98	3.19	4.77	0.40	0.79	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	373	298	448	37.50	75.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	μmol/l	356	284	428	36.00	72.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	4.02	3.21	4.83	0.41	0.81	
gamma-GT	U/l	168	143	193	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	113	151	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	191	162	220	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	151	128	174	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	118	100	136	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	16.2	13.7	18.7	1.25	2.50	Glucose oxidase
HDL - Cholesterol	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	113	96.5	130	8.25	16.50	
Iron	μmol/l	41.1	33.7	48.5	3.70	7.40	Colorimetric with ppt.
	μg/dl	230	188	272	21.00	42.00	
	μmol/l	41.3	33.8	48.8	3.75	7.50	Colorimetric without ppt.
	μg/dl	231	189	273	21.00	42.00	
Lactate	mmol/l	5.70	4.68	6.72	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	51.4	42.2	60.6	4.60	9.20	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	749	636	862	56.50	113.00	P->L German methods 37°C
	U/l	541	459	623	41.00	82.00	P->L German methods 30°C
	U/l	380	322	438	29.00	58.00	P->L German methods 25°C
	U/l	406	345	467	30.50	61.00	L->P IFCC 37°C
	U/l	293	249	337	22.00	44.00	L->P IFCC 30°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 25°C
Lipase	U/l	71	57	85	7.00	14.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.18	1.92	2.44	0.13	0.26	Ion selective electrode
	mg/dl	1.51	1.33	1.69	0.09	0.18	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Methylthymol blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.88	5.83	7.93	0.53	1.05	
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.4	36.4	54.4	4.50	9.00	Biuret reaction end point
	g/dl	4.54	3.64	5.44	0.45	0.90	
	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction kinetic
	g/dl	4.54	3.63	5.45	0.46	0.91	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.6	36.0	55.2	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	255	201	309	27.00	54.00	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
Uric Acid (Urate)	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	8.15	10.6	0.61	1.22	
Urea	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease end point
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

ELITech/Vitalab Selectra Pro/E/XL

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	31.7	26.9	36.5	2.40	4.80	Bromocresol Green
	g/dl	3.17	2.69	3.65	0.24	0.48	
Alkaline Phosphatase	U/l	503	428	578	37.50	75.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	181	145	217	18.00	36.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	84.1	66.4	102	8.85	17.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.92	3.88	5.96	0.52	1.04	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Cholesterol	mmol/l	7.46	6.49	8.43	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	251	325	18.50	37.00	
CK Total	U/l	525	431	619	47.00	94.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	339	271	407	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.83	3.06	4.60	0.39	0.77	
	µmol/l	354	283	425	35.50	71.00	Jaffe rate blanked
	mg/dl	4.00	3.20	4.80	0.40	0.80	
gamma-GT	U/l	170	144	196	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	

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Range

Analyte	unit	target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.71	2.31	3.11	0.20	0.40	HDL - Ultra
	mg/dl	105	89.2	121	7.90	15.80	
LD (LDH)	U/l	430	365	495	32.50	65.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.15	1.82	2.48	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.67	5.64	7.70	0.52	1.03	
Protein Total	g/l	51.4	41.1	61.7	5.15	10.30	Biuret reaction end point
	g/dl	5.14	4.11	6.17	0.52	1.03	
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.94	7.78	10.1	0.58	1.16	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

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Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.4	25.9	34.9	2.25	4.50	Bromocresol Green
	g/dl	3.04	2.59	3.49	0.23	0.45	
	g/l	27.5	23.4	31.6	2.05	4.10	Bromocresol Purple
	g/dl	2.75	2.34	3.16	0.21	0.41	
Alkaline Phosphatase	U/l	230	195	265	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	179	152	206	13.50	27.00	Roche Integra AMP buffer 30°C
	U/l	147	125	169	11.00	22.00	Roche Integra AMP buffer 25°C
	U/l	336	285	387	25.50	51.00	AMP optimised to IFCC 37°C
	U/l	262	222	302	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	215	182	248	16.50	33.00	AMP optimised to IFCC 25°C
	U/l	334	284	384	25.00	50.00	Randox AMP 37°C
	U/l	260	221	299	19.50	39.00	Randox AMP 30°C
ALT (GPT)	U/l	123	98	148	12.50	25.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Roche liquid stable pNPG7 37°C
	U/l	290	247	333	21.50	43.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	309	263	355	23.00	46.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	9.81	6.57	13.1	1.62	3.24	1-Naphthyl Phosphate substrate Kinetic 37°C

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Acid Phosphatase (non-prostatic)	U/l	8.25	5.53	11.0	1.36	2.72	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	48.1	32.2	64.0	7.95	15.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	30.1	20.2	40.0	4.95	9.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	56.3	37.7	74.9	9.30	18.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	39.9	26.7	53.1	6.60	13.20	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	177	142	212	17.50	35.00	Tris buffer without P5P 37°C
	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	49.1	39.3	58.9	4.90	9.80	5th Generation Colorimetric
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	30.8	24.3	37.3	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	33.4	26.4	40.4	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.95	1.54	2.36	0.21	0.41	
Bilirubin Total	µmol/l	93.1	73.6	113	9.75	19.50	Diazo with Dichloroaniline (DCA)
	mg/dl	5.45	4.31	6.59	0.57	1.14	
	µmol/l	87.7	69.3	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.13	4.05	6.21	0.54	1.08	
	µmol/l	87.4	69.0	106	9.20	18.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.11	4.04	6.18	0.54	1.07	
	µmol/l	88.5	69.9	107	9.30	18.60	Diazonium ion
	mg/dl	5.18	4.09	6.27	0.55	1.09	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Calcium	mmol/l	3.04	2.74	3.34	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.06	2.75	3.37	0.16	0.31	NM-BAPTA
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	7.21	6.27	8.15	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholinesterase	U/l	5200	4160	6240	520.00	1040.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	522	428	616	47.00	94.00	CK-NAC serum start (DGKC) 37°C
	U/l	327	268	386	29.50	59.00	CK-NAC serum start (DGKC) 30°C
	U/l	222	182	262	20.00	40.00	CK-NAC serum start (DGKC) 25°C
	U/l	526	431	621	47.50	95.00	CK-NAC substrate start (DGKC) 37°C
	U/l	329	270	388	29.50	59.00	CK-NAC substrate start (DGKC) 30°C
	U/l	224	183	265	20.50	41.00	CK-NAC substrate start (DGKC) 25°C
	U/l	541	444	638	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	339	278	400	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	230	189	271	20.50	41.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	376	301	451	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	388	310	466	39.00	78.00	Randox Enzymatic UV method
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	389	311	467	39.00	78.00	Creatinine PAP method
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	386	309	463	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.36	3.49	5.23	0.44	0.87	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Creatinine	μmol/l	381	305	457	38.00	76.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	μmol/l	357	285	429	36.00	72.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	4.03	3.22	4.84	0.41	0.81	
D-3-Hydroxybutyrate	mmol/l	1.11	0.94	1.28	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	161	137	185	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	127	108	146	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	85	113	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	141	120	162	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	94	126	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	188	160	216	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	148	126	170	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
GLDH	U/l	38	30	46	4.00	8.00	Triethanolamine buffer 50 mmol 37°C
	U/l	29	23	35	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	24	19	29	2.50	5.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
alpha-HBDH	U/l	490	387	593	51.50	103.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	370	292	448	39.00	78.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	277	219	335	29.00	58.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	109	93.0	125	8.00	16.00	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	2.95	2.51	3.39	0.22	0.44	Direct HDL PEGME
	mg/dl	114	96.9	131	8.55	17.10	
	mmol/l	2.92	2.48	3.36	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	113	95.7	130	8.65	17.30	
Iron	µmol/l	39.8	32.6	47.0	3.60	7.20	Colorimetric without ppt.
	µg/dl	222	182	262	20.00	40.00	
Lactate	mmol/l	5.40	4.42	6.38	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.8	57.6	4.45	8.90	
LD (LDH)	U/l	747	635	859	56.00	112.00	P->L German methods 37°C
	U/l	539	458	620	40.50	81.00	P->L German methods 30°C
	U/l	379	322	436	28.50	57.00	P->L German methods 25°C
	U/l	385	327	443	29.00	58.00	L->P IFCC 37°C
	U/l	278	236	320	21.00	42.00	L->P IFCC 30°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	66	53	79	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.22	1.96	2.48	0.13	0.26	Spectrophotometric
	mg/dl	1.54	1.36	1.72	0.09	0.18	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Enzymatic
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.5	33.6	51.4	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	251	212	290	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.49	8.27	10.7	0.61	1.22	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.01	10.4	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.03	10.5	0.61	1.21	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.6	26.1	35.1	2.25	4.50	Bromocresol Green
	g/dl	3.06	2.61	3.51	0.23	0.45	
Alkaline Phosphatase	U/l	344	292	396	26.00	52.00	AMP optimised to IFCC 37°C
	U/l	268	227	309	20.50	41.00	AMP optimised to IFCC 30°C
	U/l	220	187	253	16.50	33.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	119	95	143	12.00	24.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	299	254	344	22.50	45.00	I.L. - blocked pNPG7 37°C
AST (GOT)	U/l	172	138	206	17.00	34.00	Tris buffer without P5P 37°C
	U/l	116	93	139	11.50	23.00	Tris buffer without P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	47.9	38.3	57.5	4.80	9.60	Enzymatic Colorimetric
Bilirubin Total	µmol/l	98.3	77.7	119	10.30	20.60	Diazo with Sulphanilic Acid
	mg/dl	5.75	4.55	6.95	0.60	1.20	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
CK Total	U/l	494	405	583	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	309	254	364	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 25°C

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	344	276	412	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.89	3.12	4.66	0.39	0.77	
D-3-Hydroxybutyrate	mmol/l	1.17	1.00	1.34	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	168	143	193	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	113	151	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	169	144	194	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	133	113	153	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	104	89	119	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.36	2.01	2.71	0.18	0.35	Direct HDL Immunoseparation
	mg/dl	91.1	77.6	105	6.75	13.50	
LD (LDH)	U/l	775	659	891	58.00	116.00	P->L German methods 37°C
	U/l	560	476	644	42.00	84.00	P->L German methods 30°C
	U/l	393	334	452	29.50	59.00	P->L German methods 25°C
Lipase	U/l	80	64	96	8.00	16.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.87	1.64	2.10	0.12	0.23	Enzymatic
	mg/dl	4.54	3.99	5.09	0.28	0.55	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.31	5.80	6.82	0.26	0.51	ISE method - indirect
Protein Total	g/l	48.0	38.4	57.6	4.80	9.60	Biuret reaction end point
	g/dl	4.80	3.84	5.76	0.48	0.96	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.94	2.47	3.41	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	260	219	301	20.50	41.00	
	mmol/l	3.02	2.53	3.51	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	267	224	310	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease end point
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	28.3	24.0	32.6	2.15	4.30	Ortho Vitros Microslide Systems
	g/dl	2.83	2.40	3.26	0.22	0.43	
	g/l	30.0	25.5	34.5	2.25	4.50	Vitros DT60/DT60 II/DTSC II
	g/dl	3.00	2.55	3.45	0.23	0.45	
Alkaline Phosphatase	U/l	230	195	265	17.50	35.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	168	143	193	12.50	25.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	227	181	273	23.00	46.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	81.4	64.3	98.5	8.55	17.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	µmol/l	82.2	65.0	99.4	8.60	17.20	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.04	2.73	3.35	0.16	0.31	Vitros DT60/DT60 II/DTSC II
	mg/dl	12.2	10.9	13.5	0.65	1.30	
Cholesterol	mmol/l	6.64	5.78	7.50	0.43	0.86	Ortho Vitros Microslide Systems
	mg/dl	256	223	289	16.50	33.00	
	mmol/l	6.72	5.84	7.60	0.44	0.88	Vitros DT60/DT60 II
	mg/dl	259	225	293	17.00	34.00	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Chloride	mmol/l	117	108	126	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	116	107	125	4.50	9.00	Vitros DT60/DT60 II/DTE II
Cholinesterase	U/l	4984	3988	5980	498.00	996.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	445	365	525	40.00	80.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	380	304	456	38.00	76.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	380	304	456	38.00	76.00	Vitros IDMS Traceable
	mg/dl	4.29	3.44	5.14	0.43	0.85	
gamma-GT	U/l	221	188	254	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.5	12.3	16.7	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	261	222	300	19.50	39.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Vitros DT60/DT60 II
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.45	2.08	2.82	0.19	0.37	Vitros Magnetic HDL
	mg/dl	94.6	80.3	109	7.15	14.30	
	mmol/l	2.41	2.05	2.77	0.18	0.36	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	93.0	79.1	107	6.95	13.90	
Iron	µmol/l	40.7	33.4	48.0	3.65	7.30	Ortho Vitros Microslide Systems
	µg/dl	228	187	269	20.50	41.00	
Lactate	mmol/l	5.05	4.14	5.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.5	37.3	53.7	4.10	8.20	
LD (LDH)	U/l	1125	956	1294	84.50	169.00	Ortho Vitros Microslide Systems 37°C
	U/l	1144	972	1316	86.00	172.00	Vitros DT60/DT60 II/DTSC II 37°C
Lipase	U/l	739	593	885	73.00	146.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.50	2.20	2.80	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.74	1.53	1.95	0.11	0.21	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.65	1.45	1.85	0.10	0.20	Vitros DT60/DT60 II
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Vitros DT60/DT60 II
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.17	5.68	6.66	0.25	0.49	Ortho Vitros Microslide Systems
	mmol/l	6.20	5.70	6.70	0.25	0.50	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	47.2	37.7	56.7	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.72	3.77	5.67	0.48	0.95	
PSA Total	ng/ml =	38.8	29.1	48.5	4.85	9.70	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	157	149	165	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	157	149	165	4.00	8.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.20	0.96	1.44	0.12	0.24	Vitros ECi
TIBC	µmol/l	53.7	42.4	65.0	5.65	11.30	Ortho Vitros Microslide Systems
	µg/dl	300	237	363	31.50	63.00	
Total T3	nmol/l	8.71	6.53	10.9	1.09	2.18	Vitros ECi
	ng/ml	5.67	4.25	7.09	0.71	1.42	
	ng/dl	567	425	709	71.00	142.00	Vitros ECi
Triglycerides	mmol/l	3.50	2.94	4.06	0.28	0.56	Ortho Vitros Microslide Systems
	mg/dl	310	260	360	25.00	50.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.59	9.89	0.58	1.15	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Vitros DT60/DT60 II
	mg/dl	8.99	7.81	10.2	0.59	1.18	
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Ortho Vitros Microslide Systems
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Green
	g/dl	2.90	2.47	3.33	0.22	0.43	
Alkaline Phosphatase	U/l	515	438	592	38.50	77.00	Diethanolamine buffer DEA 37°C
	U/l	401	341	461	30.00	60.00	Diethanolamine buffer DEA 30°C
	U/l	329	280	378	24.50	49.00	Diethanolamine buffer DEA 25°C
	U/l	335	284	386	25.50	51.00	AMP optimised to IFCC 37°C
	U/l	261	221	301	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	214	181	247	16.50	33.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	314	267	361	23.50	47.00	Randox - Ethylidene pNPG7 37°C
	U/l	273	232	314	20.50	41.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	191	153	229	19.00	38.00	Tris buffer without P5P 37°C
	U/l	129	103	155	13.00	26.00	Tris buffer without P5P 30°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	50.9	40.7	61.1	5.10	10.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	34.7	27.4	42.0	3.65	7.30	Diazo with Sulphanilic Acid
	mg/dl	2.03	1.60	2.46	0.22	0.43	
Bilirubin Total	µmol/l	88.8	70.1	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.19	4.10	6.28	0.55	1.09	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	88.0	69.5	107	9.25	18.50	Nitrobenzenediazonium salt
	mg/dl	5.15	4.07	6.23	0.54	1.08	
Calcium	mmol/l	3.14	2.82	3.46	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.05	6.14	7.96	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct
CK Total	U/l	531	435	627	48.00	96.00	CK-NAC serum start (DGKC) 37°C
	U/l	332	272	392	30.00	60.00	CK-NAC serum start (DGKC) 30°C
	U/l	226	185	267	20.50	41.00	CK-NAC serum start (DGKC) 25°C
	U/l	555	455	655	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	347	285	409	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	236	193	279	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	375	300	450	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	386	309	463	38.50	77.00	Randox Enzymatic UV method
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	375	300	450	37.50	75.00	Creatinine PAP method
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked
	mg/dl	4.11	3.29	4.93	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.18	1.00	1.36	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	185	157	213	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	146	124	168	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	97	131	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	3.10	2.64	3.56	0.23	0.46	Direct HDL PPD
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	2.69	2.28	3.10	0.21	0.41	Direct HDL PEGME
	mg/dl	104	88.0	120	8.00	16.00	
Iron	µmol/l	41.6	34.1	49.1	3.75	7.50	Colorimetric without ppt.
	µg/dl	233	191	275	21.00	42.00	
LD (LDH)	U/l	790	672	908	59.00	118.00	P->L Scandinavian & Dutch 37°C
	U/l	570	485	655	42.50	85.00	P->L Scandinavian & Dutch 30°C
	U/l	401	341	461	30.00	60.00	P->L Scandinavian & Dutch 25°C
Lipase	U/l	59	47	71	6.00	12.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Calmagite
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.62	1.42	1.82	0.10	0.20	Xylidyl Blue
	mg/dl	3.94	3.45	4.43	0.25	0.49	
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	ISE method - direct
Protein Total	g/l	48.0	38.4	57.6	4.80	9.60	Biuret reaction end point
	g/dl	4.80	3.84	5.76	0.48	0.96	
Sodium	mmol/l	155	148	162	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	2.91	2.45	3.37	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.19	8.00	10.4	0.60	1.19	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.68	8.42	10.9	0.63	1.26	
Urea	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease kinetic
	mg/dl	111	93.8	128	8.60	17.20	
	mmol/l	18.4	15.6	21.2	1.40	2.80	BUN
	mg/dl	51.6	43.9	59.3	3.85	7.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.23	0.45	
	g/l	28.3	24.0	32.6	2.15	4.30	Bromocresol Purple
	g/dl	2.83	2.40	3.26	0.22	0.43	
	g/l	28.3	24.0	32.6	2.15	4.30	Ortho Vitros Microslide Systems
	g/dl	2.83	2.40	3.26	0.22	0.43	
	g/l	27.7	23.5	31.9	2.10	4.20	Turbidimetric Assays
	g/dl	2.77	2.35	3.19	0.21	0.42	
Alkaline Phosphatase	U/l	352	299	405	26.50	53.00	p-Nitrophenylphosphate AMP 37°C
	U/l	274	233	315	20.50	41.00	p-Nitrophenylphosphate AMP 30°C
	U/l	225	191	259	17.00	34.00	p-Nitrophenylphosphate AMP 25°C
	U/l	230	195	265	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	496	422	570	37.00	74.00	Diethanolamine buffer DEA 37°C
	U/l	386	329	443	28.50	57.00	Diethanolamine buffer DEA 30°C
	U/l	317	270	364	23.50	47.00	Diethanolamine buffer DEA 25°C
	U/l	344	293	395	25.50	51.00	AMP optimised to IFCC 37°C
	U/l	268	228	308	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	220	187	253	16.50	33.00	AMP optimised to IFCC 25°C
	U/l	343	292	394	25.50	51.00	AMP reduced interference 37°C
	U/l	267	227	307	20.00	40.00	AMP reduced interference 30°C
	U/l	219	187	251	16.00	32.00	AMP reduced interference 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
ALT (GPT)	U/l	131	105	157	13.00	26.00	Ortho Vitros Microslide Systems 37°C
	U/l	149	119	179	15.00	30.00	Tris buffer with P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer with P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer with P5P 25°C
	U/l	123	98	148	12.50	25.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
	U/l	120	96	144	12.00	24.00	Tris buffer SCE 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer SCE 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	251	214	288	18.50	37.00	Immunoinhibition EPS substrate 37°C
	U/l	257	218	296	19.50	39.00	Roche liquid stable pNPG7 37°C
	U/l	290	247	333	21.50	43.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	293	249	337	22.00	44.00	pNP Maltotriose substrates 37°C
	U/l	288	245	331	21.50	43.00	Siemens - blocked pNPG7 37°C
	U/l	296	252	340	22.00	44.00	I.L. - blocked pNPG7 37°C
	U/l	239	203	275	18.00	36.00	Randox - Ethylidene pNPG7 37°C
	U/l	302	256	348	23.00	46.00	Randox liquid stable pNPG7 37°C
	U/l	280	238	322	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	301	256	346	22.50	45.00	Beckman maltotetraose 37°C
	U/l	312	265	359	23.50	47.00	Siemens - maltopenta/hexaose 37°C
	U/l	283	240	326	21.50	43.00	Saccharogenic 37°C
	U/l	280	238	322	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	168	143	193	12.50	25.00	Ortho Vitros Microslide Systems 37°C
	U/l	277	235	319	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	278	236	320	21.00	42.00	Roche liquid stable pNPG7 37°C
	U/l	331	281	381	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
	U/l	271	230	312	20.50	41.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	286	243	329	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	303	258	348	22.50	45.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	0.89	0.73	1.05	0.08	0.16	Immunoturbidimetric
	mg/dl	89.1	73.1	105	8.00	16.00	
Apolipoprotein B	g/l	0.59	0.49	0.70	0.05	0.11	Immunoturbidimetric
	mg/dl	59.2	48.5	69.9	5.35	10.70	
Acid Phosphatase (non-prostatic)	U/l	9.81	6.57	13.1	1.62	3.24	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	8.25	5.53	11.0	1.36	2.72	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	30.1	20.2	40.0	4.95	9.90	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	48.1	32.2	64.0	7.95	15.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	39.9	26.7	53.1	6.60	13.20	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	56.3	37.7	74.9	9.30	18.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	227	181	273	23.00	46.00	Ortho Vitros Microslide visible slide 37°C
	U/l	250	200	300	25.00	50.00	Tris buffer with P5P 37°C
	U/l	169	135	203	17.00	34.00	Tris buffer with P5P 30°C
	U/l	119	95	143	12.00	24.00	Tris buffer with P5P 25°C
	U/l	179	143	215	18.00	36.00	Tris buffer without P5P 37°C
	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
	U/l	169	135	203	17.00	34.00	Tris buffer SCE 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer SCE 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer SCE 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bile Acids	μmol/l	49.1	39.3	58.9	4.90	9.80	5th Generation Colorimetric
	μmol/l	47.9	38.3	57.5	4.80	9.60	4th Generation Colorimetric
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Colorimetric
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	14.2	11.3	17.1	1.45	2.90	Differential rate pH change
	mmol/l	14.4	11.4	17.4	1.50	3.00	Enzymatic
	mmol/l	14.1	11.2	17.0	1.45	2.90	Ion selective electrode
Bilirubin Direct	μmol/l	33.1	26.1	40.1	3.50	7.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.94	1.53	2.35	0.21	0.41	
	μmol/l	36.6	28.9	44.3	3.85	7.70	Diazo with Sulphanilic Acid
	mg/dl	2.14	1.69	2.59	0.23	0.45	
	μmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	μmol/l	33.9	26.8	41.0	3.55	7.10	Oxidation to Biliverdin
	mg/dl	1.98	1.57	2.39	0.21	0.41	
Bilirubin Total	μmol/l	35.6	28.1	43.1	3.75	7.50	Modified Jendrassik
	mg/dl	2.08	1.64	2.52	0.22	0.44	
	μmol/l	81.4	64.3	98.5	8.55	17.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	μmol/l	82.2	65.0	99.4	8.60	17.20	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.81	3.80	5.82	0.51	1.01	
	μmol/l	111	87.7	134	11.65	23.30	Diazo with Dichloroaniline (DCA)
	mg/dl	6.49	5.13	7.85	0.68	1.36	
	μmol/l	90.7	71.6	110	9.55	19.10	Diazo with Sulphanilic Acid
	mg/dl	5.31	4.19	6.43	0.56	1.12	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	91.1	72.0	110	9.55	19.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.33	4.21	6.45	0.56	1.12	
	µmol/l	87.8	69.4	106	9.20	18.40	Nitrobenzenediazonium salt
	mg/dl	5.14	4.06	6.22	0.54	1.08	
	µmol/l	88.0	69.5	107	9.25	18.50	Diazonium ion
	mg/dl	5.15	4.07	6.23	0.54	1.08	
	µmol/l	101	79.4	123	10.80	21.60	Oxidation to Biliverdin
	mg/dl	5.91	4.64	7.18	0.64	1.27	
Calcium	µmol/l	109	86.1	132	11.45	22.90	Modified Jendrassik
	mg/dl	6.38	5.04	7.72	0.67	1.34	
	mmol/l	3.04	2.74	3.34	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	2.99	2.70	3.28	0.15	0.29	Ion selective electrode
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	2.72	2.45	2.99	0.14	0.27	Methylthymol blue
	mg/dl	10.9	9.82	12.0	0.54	1.08	
	mmol/l	3.06	2.75	3.37	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	3.05	2.75	3.35	0.15	0.30	NM-BAPTA
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	6.64	5.78	7.50	0.43	0.86	Ortho Vitros Microslide Systems
	mg/dl	256	223	289	16.50	33.00	
	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Chloride	mmol/l	116	107	125	4.50	9.00	Colorimetric
	mmol/l	117	108	126	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	115	106	124	4.50	9.00	ISE indirect
	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholinesterase	U/l	5322	4258	6386	532.00	1064.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	445	365	525	40.00	80.00	Ortho Vitros Microslide Systems 37°C
	U/l	544	446	642	49.00	98.00	CK-NAC serum start (DGKC) 37°C
	U/l	341	279	403	31.00	62.00	CK-NAC serum start (DGKC) 30°C
	U/l	231	190	272	20.50	41.00	CK-NAC serum start (DGKC) 25°C
	U/l	549	450	648	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	344	282	406	31.00	62.00	CK-NAC substrate start (DGKC) 30°C
	U/l	233	191	275	21.00	42.00	CK-NAC substrate start (DGKC) 25°C
	U/l	562	461	663	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC (IFCC) 25°C
	U/l	544	446	642	49.00	98.00	Monothioglycerol 37°C
	U/l	341	279	403	31.00	62.00	Monothioglycerol 30°C
	U/l	231	190	272	20.50	41.00	Monothioglycerol 25°C
	U/l	522	428	616	47.00	94.00	Dithioerythritol 37°C
	U/l	327	268	386	29.50	59.00	Dithioerythritol 30°C
	U/l	222	182	262	20.00	40.00	Dithioerythritol 25°C
	U/l	505	414	596	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	316	259	373	28.50	57.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	215	176	254	19.50	39.00	Dithioerythritol (DTE) IFCC correlated 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Copper	μmol/l	26.7	21.4	32.0	2.65	5.30	Atomic absorption
	μg/dl	170	136	204	17.00	34.00	
	μmol/l	26.1	20.9	31.3	2.60	5.20	Colorimetric
	μg/dl	166	133	199	16.50	33.00	
Cortisol	nmol/l	961	721	1201	120.00	240.00	Roche Cobas E411
	μg/dl	34.6	26.0	43.2	4.30	8.60	
Creatinine	μmol/l	347	278	416	34.50	69.00	Alkaline picrate with deproteinization
	mg/dl	3.92	3.14	4.70	0.39	0.78	
	μmol/l	360	288	432	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	μmol/l	380	304	456	38.00	76.00	Vitros 250/500/700/950/5.1FS single slide
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	μmol/l	383	307	459	38.00	76.00	Randox Enzymatic UV method
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	μmol/l	382	306	458	38.00	76.00	Creatinine PAP method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	μmol/l	383	306	460	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	μmol/l	374	300	448	37.00	74.00	Jaffe rate blanked
	mg/dl	4.23	3.39	5.07	0.42	0.84	
	μmol/l	378	302	454	38.00	76.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	μmol/l	365	292	438	36.50	73.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	μmol/l	380	304	456	38.00	76.00	Vitros IDMS Traceable
	mg/dl	4.29	3.44	5.14	0.43	0.85	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	376	301	451	37.50	75.00	IDMS traceable
	mg/dl	4.25	3.40	5.10	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.18	1.00	1.36	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.53	2.82	4.24	0.36	0.71	Immunoturbidimetric
	ng/ml	2.76	2.20	3.32	0.28	0.56	
Folate	nmol/l	27.2	20.7	33.7	3.25	6.50	Roche Cobas E411
	ng/ml	12.0	9.13	14.9	1.44	2.87	
Free T4	pmol/l	50.8	38.1	63.5	6.35	12.70	Abbott Architect
	ng/dl	3.96	2.97	4.95	0.50	0.99	
	pg/ml	39.6	29.7	49.5	4.95	9.90	Abbott Architect
	pmol/l	60.5	45.4	75.6	7.55	15.10	Siemens Centaur XP/Classic
	ng/dl	4.72	3.54	5.90	0.59	1.18	
	pg/ml	47.2	35.4	59.0	5.90	11.80	Siemens Centaur XP/Classic
	pmol/l	56.0	42.0	70.0	7.00	14.00	Beckman Access
	ng/dl	4.37	3.28	5.46	0.55	1.09	
	pg/ml	43.7	32.8	54.6	5.45	10.90	Beckman Access
	pmol/l	59.6	44.7	74.5	7.45	14.90	Beckman Dxl800
	ng/dl	4.65	3.49	5.81	0.58	1.16	
	pg/ml	46.5	34.9	58.1	5.80	11.60	Beckman Dxl800
	pmol/l	64.4	48.3	80.5	8.05	16.10	BioMerieux Vidas
	ng/dl	5.02	3.77	6.27	0.63	1.25	
	pg/ml	50.2	37.7	62.7	6.25	12.50	BioMerieux Vidas
	pmol/l	63.8	47.9	79.7	7.95	15.90	Siemens Immulite 2000/2500
	ng/dl	4.98	3.74	6.22	0.62	1.24	
	pg/ml	49.8	37.4	62.2	6.20	12.40	Siemens Immulite 2000/2500

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Free T4	pmol/l	76.5	57.4	95.6	9.55	19.10	Roche Elecsys
	ng/dl	5.97	4.48	7.46	0.75	1.49	
	pg/ml	59.7	44.8	74.6	7.45	14.90	Roche Elecsys
	pmol/l	70.2	52.6	87.8	8.80	17.60	Roche Modular E170
	ng/dl	5.48	4.10	6.86	0.69	1.38	
	pg/ml	54.8	41.0	68.6	6.90	13.80	Roche Modular E170
	pmol/l	70.4	52.8	88.0	8.80	17.60	Roche Cobas E411
	ng/dl	5.49	4.12	6.86	0.69	1.37	
	pg/ml	54.9	41.2	68.6	6.85	13.70	Roche Cobas E411
	pmol/l	70.5	52.9	88.1	8.80	17.60	Roche Cobas 6000/8000
	ng/dl	5.50	4.13	6.87	0.69	1.37	
	pg/ml	55.0	41.3	68.7	6.85	13.70	Roche Cobas 6000/8000
Gentamicin	µmol/l	17.5	14.0	20.9	1.73	3.45	Immunoturbidimetric
	µg/ml	8.34	6.69	9.99	0.83	1.65	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	133	113	153	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	221	188	254	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	150	127	173	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	118	100	136	9.00	18.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	93	78	108	7.50	15.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	188	160	216	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	148	126	170	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	116	99	133	8.50	17.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	35	28	42	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	27	22	32	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.5	12.3	16.7	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	261	222	300	19.50	39.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Oxygen electrode
	mg/dl	278	236	320	21.00	42.00	
alpha-HBDH	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
	U/l	490	387	593	51.50	103.00	Oxobutyrates < 10 mmol/l 37°C
	U/l	370	292	448	39.00	78.00	Oxobutyrates < 10 mmol/l 30°C
	U/l	277	219	335	29.00	58.00	Oxobutyrates < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	3.18	2.70	3.66	0.24	0.48	Direct HDL PPD
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	2.76	2.35	3.17	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	107	90.7	123	8.15	16.30	
	mmol/l	2.45	2.08	2.82	0.19	0.37	Vitros Magnetic HDL
	mg/dl	94.6	80.3	109	7.15	14.30	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL PEGME
	mg/dl	110	93.4	127	8.30	16.60	
	mmol/l	2.68	2.28	3.08	0.20	0.40	Direct Clearance Method
	mg/dl	103	88.0	118	7.50	15.00	
	mmol/l	2.41	2.05	2.77	0.18	0.36	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	93.0	79.1	107	6.95	13.90	
	mmol/l	2.88	2.44	3.32	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	2.67	2.27	3.07	0.20	0.40	HDL - Ultra
	mg/dl	103	87.6	118	7.70	15.40	
Immunoglobulin A	g/l	1.87	1.40	2.34	0.24	0.47	Immunoturbidimetric
	mg/dl	187	140	234	23.50	47.00	
Immunoglobulin G	g/l	6.14	5.03	7.25	0.56	1.11	Immunoturbidimetric
	mg/dl	614	503	725	55.50	111.00	
Immunoglobulin M	g/l	0.72	0.57	0.86	0.07	0.14	Immunoturbidimetric
	mg/dl	71.7	57.4	86.0	7.15	14.30	
Iron	μmol/l	40.3	33.1	47.5	3.60	7.20	Colorimetric with ppt.
	μg/dl	225	185	265	20.00	40.00	
	μmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	μg/dl	226	185	267	20.50	41.00	
	μmol/l	40.7	33.4	48.0	3.65	7.30	Ortho Vitros Microslide Systems
	μg/dl	228	187	269	20.50	41.00	
Lactate	mmol/l	5.55	4.55	6.55	0.50	1.00	Ion selective electrode
	mg/dl	50.0	41.0	59.0	4.50	9.00	
	mmol/l	5.45	4.47	6.43	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.1	40.3	57.9	4.40	8.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.05	4.14	5.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.5	37.3	53.7	4.10	8.20	
	mmol/l	5.22	4.28	6.16	0.47	0.94	UV LDH
	mg/dl	47.0	38.6	55.4	4.20	8.40	
LAP	U/l	15	13	17	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1125	956	1294	84.50	169.00	Ortho Vitros Microslide Systems 37°C
	U/l	344	292	396	26.00	52.00	L->P 37°C
	U/l	248	211	285	18.50	37.00	L->P 30°C
	U/l	174	148	200	13.00	26.00	L->P 25°C
	U/l	832	707	957	62.50	125.00	P->L Scandinavian & Dutch 37°C
	U/l	601	510	692	45.50	91.00	P->L Scandinavian & Dutch 30°C
	U/l	422	358	486	32.00	64.00	P->L Scandinavian & Dutch 25°C
	U/l	753	640	866	56.50	113.00	P->L German methods 37°C
	U/l	544	462	626	41.00	82.00	P->L German methods 30°C
	U/l	382	324	440	29.00	58.00	P->L German methods 25°C
	U/l	755	642	868	56.50	113.00	P->L SFBC 37°C
	U/l	545	464	626	40.50	81.00	P->L SFBC 30°C
	U/l	383	325	441	29.00	58.00	P->L SFBC 25°C
	U/l	390	331	449	29.50	59.00	L->P IFCC 37°C
	U/l	282	239	325	21.50	43.00	L->P IFCC 30°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
	U/l	739	593	885	73.00	146.00	Ortho Vitros Microslide Systems 37°C
	U/l	65	52	78	6.50	13.00	Roche Colorimetric 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Lipase	U/l	424	340	508	42.00	84.00	Randox Turbidimetric with colipase 37°C
	U/l	80	64	96	8.00	16.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.50	2.20	2.80	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.74	1.53	1.95	0.11	0.21	
	mmol/l	2.09	1.84	2.34	0.13	0.25	Flame photometry
	mg/dl	1.45	1.28	1.62	0.09	0.17	
	mmol/l	2.20	1.93	2.47	0.14	0.27	Ion selective electrode
	mg/dl	1.53	1.34	1.72	0.10	0.19	
	mmol/l	2.14	1.88	2.40	0.13	0.26	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	2.13	1.87	2.39	0.13	0.26	Randox Colorimetric
	mg/dl	1.48	1.30	1.66	0.09	0.18	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Arsenazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Atomic absorption
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Calmagite
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Methylthymol blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Enzymatic
	mg/dl	4.25	3.74	4.76	0.26	0.51	
NEFA	mmol/l	0.41	0.35	0.47	0.03	0.06	Colorimetric
Osmolality	mOsm/kg	340	272	408	34.00	68.00	Calculated
	mOsm/kg	377	302	452	37.50	75.00	Freezing point depression
Paracetamol	mmol/l	0.58	0.47	0.70	0.06	0.12	Colorimetric
	mg/l	87.9	70.4	105	8.75	17.50	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.76	5.74	7.78	0.51	1.02	
	mmol/l	2.16	1.83	2.49	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.70	5.67	7.73	0.52	1.03	
	mmol/l	6.17	5.68	6.66	0.25	0.49	Ortho Vitros Microslide Systems
	mmol/l	6.07	5.58	6.56	0.25	0.49	Enzymatic
Potassium	mmol/l	5.95	5.48	6.42	0.24	0.47	Flame photometry
	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - direct
	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
	g/l	47.2	37.7	56.7	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.72	3.77	5.67	0.48	0.95	
Protein Total	g/l	46.8	37.4	56.2	4.70	9.40	Biuret reaction end point
	g/dl	4.68	3.74	5.62	0.47	0.94	
	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction kinetic
	g/dl	4.53	3.62	5.44	0.46	0.91	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	39.2	29.4	49.0	4.90	9.80	Roche Cobas Core EIA
	ng/ml =	37.6	28.2	47.0	4.70	9.40	Roche Elecsys Modular E170
	ng/ml =	40.9	30.6	51.2	5.15	10.30	Beckman Access standardised to Hybritech
	ng/ml =	35.2	26.4	44.0	4.40	8.80	bioMerieux VIDAS TPSA
	ng/ml =	32.8	24.6	41.0	4.10	8.20	Siemens Centaur XP/Classic
	ng/ml =	33.7	25.3	42.1	4.20	8.40	Abbott Architect
	ng/ml =	39.1	29.3	48.9	4.90	9.80	Cobas E411
	ng/ml =	40.3	30.2	50.4	5.05	10.10	Roche Cobas 6000/8000
	ng/ml =	38.8	29.1	48.5	4.85	9.70	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.87	0.70	1.04	0.09	0.17	Enzymatic
	mg/dl	12.0	9.60	14.4	1.20	2.40	
Sodium	mmol/l	157	149	165	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	153	145	161	4.00	8.00	Enzymatic
	mmol/l	156	149	163	3.50	7.00	Flame photometry
	mmol/l	156	148	164	4.00	8.00	ISE method - direct
	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	136	109	163	13.50	27.00	Immunoturbidimetric
	µg/ml	24.5	19.6	29.4	2.45	4.90	
Thyroid Stimulating Hormone	µU/ml =	0.81	0.65	0.98	0.08	0.16	Abbott Architect
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Siemens Centaur XP/Classic
	µU/ml =	1.15	0.92	1.38	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.38	1.11	1.65	0.14	0.27	bioMerieux VIDAS TSH
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Siemens Immulite 1000
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Siemens Immulite 2000/2500
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Vitros ECi

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.37	1.09	1.65	0.14	0.28	Roche Elecsys
	µU/ml =	1.37	1.10	1.64	0.14	0.27	Roche Modular E170
	µU/ml =	1.36	1.09	1.63	0.14	0.27	Roche Cobas E411
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Cobas 6000/8000
	µU/ml =	1.08	0.86	1.30	0.11	0.22	Siemens Centaur XP/Classic TSH3-Ultra
TIBC	µmol/l	53.7	42.4	65.0	5.65	11.30	Ortho Vitros Microslide Systems
	µg/dl	300	237	363	31.50	63.00	
	µmol/l	44.2	34.9	53.5	4.65	9.30	Removal of excess free iron
	µg/dl	247	195	299	26.00	52.00	
	µmol/l	44.5	35.2	53.8	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	249	197	301	26.00	52.00	
Tobramycin	µmol/l	45.9	36.3	55.5	4.80	9.60	Randox Direct
	µg/dl	257	203	311	27.00	54.00	
Tobramycin	µmol/l	14.9	11.9	17.9	1.51	3.01	Immunoturbidimetric
	µg/ml	6.98	5.57	8.39	0.71	1.41	
Total T3	nmol/l	3.62	2.72	4.52	0.45	0.90	Abbott Architect
	ng/ml	2.36	1.77	2.95	0.30	0.59	
	ng/dl	236	177	295	29.50	59.00	Abbott Architect
	nmol/l	5.42	4.06	6.78	0.68	1.36	Siemens Centaur XP/Classic
	ng/ml	3.53	2.64	4.42	0.45	0.89	
	ng/dl	353	264	442	44.50	89.00	Siemens Centaur XP/Classic
	nmol/l	4.25	3.18	5.32	0.54	1.07	BioMerieux Vidas
	ng/ml	2.77	2.07	3.47	0.35	0.70	
	ng/dl	277	207	347	35.00	70.00	BioMerieux Vidas
	nmol/l	4.43	3.32	5.54	0.56	1.11	Roche Modular E170
Total T3	ng/ml	2.88	2.16	3.60	0.36	0.72	
	ng/dl	288	216	360	36.00	72.00	Roche Modular E170

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Total T3	nmol/l	3.94	2.95	4.93	0.50	0.99	Tosoh AIA360
	ng/ml	2.56	1.92	3.20	0.32	0.64	
	ng/dl	256	192	320	32.00	64.00	Tosoh AIA360
	nmol/l	8.71	6.53	10.9	1.09	2.18	Vitros ECI
	ng/ml	5.67	4.25	7.09	0.71	1.42	
	ng/dl	567	425	709	71.00	142.00	Vitros ECI
	nmol/l	4.78	3.59	5.97	0.60	1.19	Roche Cobas E411
	ng/ml	3.11	2.34	3.88	0.39	0.77	
	ng/dl	311	234	388	38.50	77.00	Roche Cobas E411
	nmol/l	4.47	3.35	5.59	0.56	1.12	Roche Cobas 6000/8000
	ng/ml	2.91	2.18	3.64	0.37	0.73	
	ng/dl	291	218	364	36.50	73.00	Roche Cobas 6000/8000
Total T4	nmol/l	232	174	290	29.00	58.00	Abbott Architect
	µg/dl	18.1	13.6	22.6	2.25	4.50	
	ng/ml	181	136	226	22.50	45.00	Abbott Architect
	nmol/l	203	152	254	25.50	51.00	Abbott AXSYM
	µg/dl	15.8	11.9	19.7	1.95	3.90	
	ng/ml	158	119	197	19.50	39.00	Abbott AXSYM
	nmol/l	206	154	258	26.00	52.00	Siemens Centaur XP/Classic
	µg/dl	16.1	12.0	20.2	2.05	4.10	
	ng/ml	161	120	202	20.50	41.00	Siemens Centaur XP/Classic
	nmol/l	202	151	253	25.50	51.00	BioMerieux Vidas
	µg/dl	15.8	11.8	19.8	2.00	4.00	
	ng/ml	158	118	198	20.00	40.00	BioMerieux Vidas

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	227	170	284	28.50	57.00	Siemens Immulite 1000
	µg/dl	17.7	13.3	22.1	2.20	4.40	
	ng/ml	177	133	221	22.00	44.00	Siemens Immulite 1000
	nmol/l	198	148	248	25.00	50.00	Siemens Immulite 2000/2500
	µg/dl	15.4	11.5	19.3	1.95	3.90	
	ng/ml	154	115	193	19.50	39.00	Siemens Immulite 2000/2500
	nmol/l	185	139	231	23.00	46.00	Roche Modular E170
	µg/dl	14.4	10.8	18.0	1.80	3.60	
	ng/ml	144	108	180	18.00	36.00	Roche Modular E170
	nmol/l	183	138	228	22.50	45.00	Tosoh AIA360
	µg/dl	14.3	10.8	17.8	1.75	3.50	
	ng/ml	143	108	178	17.50	35.00	Tosoh AIA360
	nmol/l	175	131	219	22.00	44.00	Roche Cobas E411
	µg/dl	13.7	10.2	17.2	1.75	3.50	
	ng/ml	137	102	172	17.50	35.00	Roche Cobas E411
	nmol/l	172	129	215	21.50	43.00	Roche Cobas 6000/8000
	µg/dl	13.4	10.1	16.7	1.65	3.30	
	ng/ml	134	101	167	16.50	33.00	Roche Cobas 6000/8000
Transferrin	g/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	mg/dl	187	150	224	18.50	37.00	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	258	216	300	21.00	42.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.93	2.46	3.40	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	3.50	2.94	4.06	0.28	0.56	Ortho Vitros Microslide Systems
	mg/dl	310	260	360	25.00	50.00	
	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.59	9.89	0.58	1.15	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.03	10.5	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Ortho Vitros Microslide Systems
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	19.5	16.5	22.5	1.50	3.00	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease hypochlorite
	mg/dl	111	93.8	128	8.60	17.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	16.3	13.9	18.7	1.20	2.40	Urease Berthelot
	mg/dl	98.0	83.5	113	7.25	14.50	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	
Vitamin B12	pmol/l	317	254	380	31.50	63.00	Roche Cobas E411
	pg/ml	430	344	516	43.00	86.00	
Zinc	µmol/l	33.8	27.0	40.6	3.40	6.80	Atomic absorption
	µg/dl	221	176	266	22.50	45.00	
	µmol/l	36.2	29.0	43.4	3.60	7.20	Colorimetric with deproteinisation
	µg/dl	236	189	283	23.50	47.00	

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
alpha-1-globulin		5.1	3.9	6.3	0.61	1.22	% of total Protein (Beckman Capillary)
alpha-2-globulin		8.3	6.3	10.3	1.00	1.99	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		60.8	54.8	66.8	3.00	6.00	% of total Protein (Beckman Capillary)
beta-globulin		14.2	10.8	17.6	1.70	3.40	% of total Protein (Beckman Capillary)
gamma-globulin		11.6	8.8	14.4	1.39	2.78	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	31.0	26.3	35.7	2.35	4.70	Bromocresol Green
	g/dl	3.10	2.63	3.57	0.24	0.47	
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	190	152	228	19.00	38.00	Tris buffer without P5P 37°C
	U/l	128	103	153	12.50	25.00	Tris buffer without P5P 30°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 25°C
Bilirubin Total	μmol/l	99.0	78.2	120	10.40	20.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.79	4.57	7.01	0.61	1.22	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.19	6.25	8.13	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	241	315	18.50	37.00	
CK Total	U/l	569	466	672	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	356	292	420	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	334	268	400	33.00	66.00	Alkaline picrate with deproteinization
	mg/dl	3.77	3.03	4.51	0.37	0.74	
	μmol/l	333	267	399	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.76	3.02	4.50	0.37	0.74	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Creatinine	μmol/l	366	293	439	36.50	73.00	Randox Enzymatic UV method
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	μmol/l	321	257	385	32.00	64.00	Jaffe rate blanked
	mg/dl	3.63	2.90	4.36	0.37	0.73	
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	119	101	137	9.00	18.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	93	79	107	7.00	14.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.90	2.46	3.34	0.22	0.44	Direct HDL PPD
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct Clearance Method
	mg/dl	111	94.6	127	8.20	16.40	
Iron	μmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	μg/dl	217	178	256	19.50	39.00	
LD (LDH)	U/l	787	669	905	59.00	118.00	P->L German methods 37°C
	U/l	568	483	653	42.50	85.00	P->L German methods 30°C
	U/l	399	339	459	30.00	60.00	P->L German methods 25°C
	U/l	756	643	869	56.50	113.00	P->L SFBC 37°C
	U/l	546	464	628	41.00	82.00	P->L SFBC 30°C
	U/l	383	326	440	28.50	57.00	P->L SFBC 25°C
	U/l	414	352	476	31.00	62.00	L->P IFCC 37°C
	U/l	299	254	344	22.50	45.00	L->P IFCC 30°C
	U/l	210	178	242	16.00	32.00	L->P IFCC 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Xylidyl Blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	5.76	5.30	6.22	0.23	0.46	ISE method - direct
Protein Total	g/l	49.6	39.7	59.5	4.95	9.90	Biuret reaction end point
	g/dl	4.96	3.97	5.95	0.50	0.99	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.79	8.52	11.1	0.64	1.27	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.63	8.38	10.9	0.63	1.25	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	
Urea	mmol/l	19.4	16.4	22.4	1.50	3.00	Urease end point
	mg/dl	117	98.6	135	9.20	18.40	
	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease hypochlorite
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.8	26.2	35.4	2.30	4.60	Bromocresol Green
	g/dl	3.08	2.62	3.54	0.23	0.46	
Alkaline Phosphatase	U/l	454	386	522	34.00	68.00	Diethanolamine buffer DEA 37°C
	U/l	354	301	407	26.50	53.00	Diethanolamine buffer DEA 30°C
	U/l	290	247	333	21.50	43.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	187	149	225	19.00	38.00	Tris buffer without P5P 37°C
	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 30°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Bilirubin Total	µmol/l	98.0	77.4	119	10.30	20.60	Diazo with Dichloroaniline (DCA)
	mg/dl	5.73	4.53	6.93	0.60	1.20	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.21	6.27	8.15	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE direct
CK Total	U/l	552	453	651	49.50	99.00	CK-NAC (IFCC) 37°C
	U/l	346	284	408	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	235	193	277	21.00	42.00	CK-NAC (IFCC) 25°C

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	387	309	465	39.00	78.00	Creatinine PAP method
	mg/dl	4.37	3.49	5.25	0.44	0.88	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	133	113	153	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.18	1.85	2.51	0.17	0.33	Direct HDL Immunoseparation
	mg/dl	84.1	71.4	96.8	6.35	12.70	
Protein Total	g/l	48.3	38.6	58.0	4.85	9.70	Biuret reaction end point
	g/dl	4.83	3.86	5.80	0.49	0.97	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.79	7.64	9.94	0.58	1.15	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
	g/l	27.6	23.5	31.7	2.05	4.10	Bromocresol Purple
	g/dl	2.76	2.35	3.17	0.21	0.41	
	g/l	27.6	23.5	31.7	2.05	4.10	Turbidimetric Assays
	g/dl	2.76	2.35	3.17	0.21	0.41	
Alkaline Phosphatase	U/l	258	219	297	19.50	39.00	Roche Integra AMP buffer 37°C
	U/l	201	171	231	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	165	140	190	12.50	25.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	119	96	142	11.50	23.00	Tris buffer without P5P 37°C
	U/l	88	71	105	8.50	17.00	Tris buffer without P5P 30°C
	U/l	67	54	80	6.50	13.00	Tris buffer without P5P 25°C
	U/l	124	99	149	12.50	25.00	Tris buffer SCE 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer SCE 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	253	215	291	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	280	238	322	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	276	235	317	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	177	142	212	17.50	35.00	Tris buffer without P5P 37°C
	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer without P5P 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bile Acids	μmol/l	52.0	41.6	62.4	5.20	10.40	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Colorimetric
	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Direct	μmol/l	34.7	27.4	42.0	3.65	7.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.03	1.60	2.46	0.22	0.43	
	μmol/l	34.9	27.6	42.2	3.65	7.30	Diazo with Sulphanilic Acid
	mg/dl	2.04	1.61	2.47	0.22	0.43	
	μmol/l	34.9	27.5	42.3	3.70	7.40	Diazo with Dichloroaniline (DCA)
	mg/dl	2.04	1.61	2.47	0.22	0.43	
Bilirubin Total	μmol/l	86.2	68.1	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.04	3.98	6.10	0.53	1.06	
	μmol/l	84.8	67.0	103	8.90	17.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.96	3.92	6.00	0.52	1.04	
	μmol/l	87.4	69.1	106	9.15	18.30	Diazonium ion
	mg/dl	5.11	4.04	6.18	0.54	1.07	
Calcium	mmol/l	3.05	2.74	3.36	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.06	2.75	3.37	0.16	0.31	NM-BAPTA
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	7.19	6.26	8.12	0.47	0.93	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
Cholinesterase	U/l	5249	4199	6299	525.00	1050.00	Colorimetric Butyrylthiocholine 37°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
CK Total	U/l	586	481	691	52.50	105.00	CK-NAC substrate start (DGKC) 37°C
	U/l	367	301	433	33.00	66.00	CK-NAC substrate start (DGKC) 30°C
	U/l	249	204	294	22.50	45.00	CK-NAC substrate start (DGKC) 25°C
	U/l	584	478	690	53.00	106.00	CK-NAC (IFCC) 37°C
	U/l	366	299	433	33.50	67.00	CK-NAC (IFCC) 30°C
	U/l	248	203	293	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	370	296	444	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	393	314	472	39.50	79.00	Randox Enzymatic UV method
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	392	314	470	39.00	78.00	Creatinine PAP method
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	389	311	467	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	378	302	454	38.00	76.00	Jaffe rate blanked
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	377	301	453	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.26	3.40	5.12	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.18	1.01	1.35	0.09	0.17	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	70.5	52.9	88.1	8.80	17.60	Roche Cobas 6000/8000
	ng/dl	5.50	4.13	6.87	0.69	1.37	
	pg/ml	55.0	41.3	68.7	6.85	13.70	Roche Cobas 6000/8000
gamma-GT	U/l	165	140	190	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	110	150	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	86	118	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	188	160	216	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	148	126	170	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	116	99	133	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	105	89.2	121	7.90	15.80	
	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL PEGME
	mg/dl	110	93.4	127	8.30	16.60	
	mmol/l	2.85	2.43	3.27	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	110	93.8	126	8.10	16.20	
Iron	µmol/l	40.1	32.9	47.3	3.60	7.20	Colorimetric with ppt.
	µg/dl	224	184	264	20.00	40.00	
	µmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	185	267	20.50	41.00	
Lactate	mmol/l	5.41	4.44	6.38	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.7	40.0	57.4	4.35	8.70	
LD (LDH)	U/l	739	628	850	55.50	111.00	P->L German methods 37°C
	U/l	534	453	615	40.50	81.00	P->L German methods 30°C
	U/l	375	318	432	28.50	57.00	P->L German methods 25°C
	U/l	744	632	856	56.00	112.00	P->L SFBC 37°C
	U/l	537	456	618	40.50	81.00	P->L SFBC 30°C
	U/l	377	320	434	28.50	57.00	P->L SFBC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	385	327	443	29.00	58.00	L->P IFCC 37°C
	U/l	278	236	320	21.00	42.00	L->P IFCC 30°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	63	50	76	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.20	1.93	2.47	0.14	0.27	Ion selective electrode
	mg/dl	1.53	1.34	1.72	0.10	0.19	
	mmol/l	2.14	1.88	2.40	0.13	0.26	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.73	1.53	1.93	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.20	3.72	4.68	0.24	0.48	
Osmolality	mOsm/kg	337	269	405	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.16	1.83	2.49	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.70	5.67	7.73	0.52	1.03	
	mmol/l	2.13	1.81	2.45	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.60	5.61	7.59	0.50	0.99	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
	g/l	45.4	36.4	54.4	4.50	9.00	Biuret reaction kinetic
	g/dl	4.54	3.64	5.44	0.45	0.90	
PSA Total	ng/ml =	40.1	30.1	50.1	5.00	10.00	Roche Cobas 6000/8000

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Cobas 6000/8000
TIBC	μmol/l	44.0	34.7	53.3	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	246	194	298	26.00	52.00	
	μmol/l	42.1	33.3	50.9	4.40	8.80	Direct Colorimetric
	μg/dl	235	186	284	24.50	49.00	
Total T3	nmol/l	4.47	3.35	5.59	0.56	1.12	Roche Cobas 6000/8000
	ng/ml	2.91	2.18	3.64	0.37	0.73	
	ng/dl	291	218	364	36.50	73.00	Roche Cobas 6000/8000
Total T4	nmol/l	172	129	215	21.50	43.00	Roche Cobas 6000/8000
	μg/dl	13.4	10.1	16.7	1.65	3.30	
	ng/ml	134	101	167	16.50	33.00	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.83	2.37	3.29	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	250	210	290	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.90	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease end point
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	30.6	26.0	35.2	2.30	4.60	Bromocresol Green
	g/dl	3.06	2.60	3.52	0.23	0.46	
Alkaline Phosphatase	U/l	248	211	285	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	193	164	222	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	158	135	181	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	281	238	324	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	176	141	211	17.50	35.00	Tris buffer without P5P 37°C
	U/l	119	95	143	12.00	24.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	35.4	28.0	42.8	3.70	7.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.07	1.64	2.50	0.22	0.43	
	µmol/l	35.0	27.6	42.4	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.05	1.61	2.49	0.22	0.44	
Bilirubin Total	µmol/l	85.7	67.7	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.01	3.96	6.06	0.53	1.05	
	µmol/l	90.4	71.4	109	9.50	19.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.29	4.18	6.40	0.56	1.11	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	88.2	69.7	107	9.25	18.50	Diazonium ion
	mg/dl	5.16	4.08	6.24	0.54	1.08	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.0	13.6	0.65	1.30	
	mmol/l	3.03	2.73	3.33	0.15	0.30	NM-BAPTA
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase
	mg/dl	285	248	322	18.50	37.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
CK Total	U/l	583	478	688	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	365	299	431	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	248	203	293	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
	µmol/l	372	297	447	37.50	75.00	Randox Enzymatic UV method
	mg/dl	4.20	3.36	5.04	0.42	0.84	
	µmol/l	359	287	431	36.00	72.00	Roche Creatinine Plus
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	356	285	427	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.02	3.22	4.82	0.40	0.80	
gamma-GT	U/l	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Glucose oxidase
	mg/dl	292	249	335	21.50	43.00	
HDL - Cholesterol	mmol/l	2.95	2.51	3.39	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	114	96.9	131	8.55	17.10	
Lactate	mmol/l	5.45	4.47	6.43	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.1	40.3	57.9	4.40	8.80	
LD (LDH)	U/l	401	340	462	30.50	61.00	L->P IFCC 37°C
	U/l	290	245	335	22.50	45.00	L->P IFCC 30°C
	U/l	203	172	234	15.50	31.00	L->P IFCC 25°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.25	1.92	2.58	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.98	5.95	8.01	0.52	1.03	
	mmol/l	2.23	1.90	2.56	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.91	5.89	7.93	0.51	1.02	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.6	38.1	57.1	4.75	9.50	Biuret reaction end point
	g/dl	4.76	3.81	5.71	0.48	0.95	
Sodium	mmol/l	153	145	161	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	256	215	297	20.50	41.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	254	213	295	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.24	8.05	10.4	0.60	1.19	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Green
	g/dl	3.03	2.58	3.48	0.23	0.45	
	g/l	27.9	23.7	32.1	2.10	4.20	Bromocresol Purple
	g/dl	2.79	2.37	3.21	0.21	0.42	
Alkaline Phosphatase	U/l	253	215	291	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	197	167	227	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	162	137	187	12.50	25.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	274	233	315	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	280	238	322	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	179	143	215	18.00	36.00	Tris buffer without P5P 37°C
	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	34.0	26.9	41.1	3.55	7.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.99	1.57	2.41	0.21	0.42	
	µmol/l	33.6	26.5	40.7	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.97	1.55	2.39	0.21	0.42	
Bilirubin Total	µmol/l	84.4	66.7	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.94	3.90	5.98	0.52	1.04	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	85.4	67.5	103	8.95	17.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.00	3.95	6.05	0.53	1.05	
	μmol/l	84.6	66.8	102	8.90	17.80	Diazonium ion
	mg/dl	4.95	3.91	5.99	0.52	1.04	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	2.98	2.68	3.28	0.15	0.30	Arsenazo III
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	3.06	2.76	3.36	0.15	0.30	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.25	6.30	8.20	0.48	0.95	Cholesterol Oxidase
	mg/dl	280	243	317	18.50	37.00	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
CK Total	U/l	587	482	692	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	367	302	432	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	249	205	293	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	360	288	432	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	μmol/l	390	312	468	39.00	78.00	Randox Enzymatic UV method
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	μmol/l	392	314	470	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	μmol/l	382	306	458	38.00	76.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.32	3.46	5.18	0.43	0.86	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	189	161	217	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	108	92.3	124	7.85	15.70	
Iron	µmol/l	39.8	32.6	47.0	3.60	7.20	Colorimetric without ppt.
	µg/dl	222	182	262	20.00	40.00	
Lactate	mmol/l	5.61	4.60	6.62	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	740	629	851	55.50	111.00	P->L German methods 37°C
	U/l	534	454	614	40.00	80.00	P->L German methods 30°C
	U/l	375	319	431	28.00	56.00	P->L German methods 25°C
	U/l	385	328	442	28.50	57.00	L->P IFCC 37°C
	U/l	278	237	319	20.50	41.00	L->P IFCC 30°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	67	54	80	6.50	13.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.74	1.54	1.94	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.23	3.74	4.72	0.25	0.49	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.16	1.84	2.48	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.70	5.70	7.70	0.50	1.00	
Potassium	mmol/l	6.27	5.76	6.78	0.26	0.51	ISE method - indirect
Protein Total	g/l	46.1	36.9	55.3	4.60	9.20	Biuret reaction end point
	g/dl	4.61	3.69	5.53	0.46	0.92	
	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction kinetic
	g/dl	4.64	3.71	5.57	0.47	0.93	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	44.2	34.9	53.5	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	247	195	299	26.00	52.00	
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.82	2.36	3.28	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	250	209	291	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.23	0.45	
Alkaline Phosphatase	U/l	229	194	264	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	178	151	205	13.50	27.00	Roche Integra AMP buffer 30°C
	U/l	146	124	168	11.00	22.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	254	216	292	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	178	143	213	17.50	35.00	Tris buffer without P5P 37°C
	U/l	120	97	143	11.50	23.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	48.2	38.6	57.8	4.80	9.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	35.1	27.7	42.5	3.70	7.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.05	1.62	2.48	0.22	0.43	
Bilirubin Total	µmol/l	86.0	68.0	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.03	3.98	6.08	0.53	1.05	
	µmol/l	84.8	67.0	103	8.90	17.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.96	3.92	6.00	0.52	1.04	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	86.1	68.0	104	9.05	18.10	Diazonium ion
	mg/dl	5.04	3.98	6.10	0.53	1.06	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.02	2.72	3.32	0.15	0.30	NM-BAPTA
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.11	6.18	8.04	0.47	0.93	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	506	415	597	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	317	260	374	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	390	312	468	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	μmol/l	381	304	458	38.50	77.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	4.31	3.44	5.18	0.44	0.87	
gamma-GT	U/l	160	136	184	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	126	107	145	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	84	114	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	182	155	209	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	122	164	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	96	128	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.76	2.34	3.18	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	107	90.3	124	8.35	16.70	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Iron	μmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric without ppt.
	μg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.44	4.46	6.42	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.0	40.2	57.8	4.40	8.80	
LD (LDH)	U/l	380	323	437	28.50	57.00	L->P IFCC 37°C
	U/l	274	233	315	20.50	41.00	L->P IFCC 30°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	63	51	75	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.13	1.87	2.39	0.13	0.26	Spectrophotometric
	mg/dl	1.48	1.30	1.66	0.09	0.18	
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.10	1.78	2.42	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.51	5.52	7.50	0.50	0.99	
Potassium	mmol/l	6.29	5.79	6.79	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	μmol/l	43.7	34.5	52.9	4.60	9.20	FE+UIBC(saturation with iron)
	μg/dl	244	193	295	25.50	51.00	
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.72	2.29	3.15	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	241	203	279	19.00	38.00	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.80	7.66	9.94	0.57	1.14	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.90	7.74	10.1	0.58	1.16	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	531	451	611	40.00	80.00	Diethanolamine buffer DEA 37°C
	U/l	334	284	384	25.00	50.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	290	247	333	21.50	43.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	309	263	355	23.00	46.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	202	162	242	20.00	40.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	49.1	39.3	58.9	4.90	9.80	5th Generation Colorimetric
Bicarbonate	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	35.1	27.7	42.5	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.05	1.62	2.48	0.22	0.43	
	µmol/l	32.7	25.8	39.6	3.45	6.90	Vanadate Oxidation
	mg/dl	1.91	1.51	2.31	0.20	0.40	
Bilirubin Total	µmol/l	96.9	76.6	117	10.15	20.30	Diazo with Sulphanilic Acid
	mg/dl	5.67	4.48	6.86	0.60	1.19	
	µmol/l	101	79.8	122	10.60	21.20	Vanadate Oxidation
	mg/dl	5.91	4.67	7.15	0.62	1.24	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Chloride	mmol/l	115	105	125	5.00	10.00	ISE direct
CK Total	U/l	548	449	647	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	559	458	660	50.50	101.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	328	262	394	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.71	2.96	4.46	0.38	0.75	
	μmol/l	382	306	458	38.00	76.00	Randox Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
gamma-GT	U/l	188	160	216	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	16.3	13.8	18.8	1.25	2.50	Glucose oxidase
	mg/dl	294	249	339	22.50	45.00	
Iron	μmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	μg/dl	226	185	267	20.50	41.00	
Lactate	mmol/l	5.36	4.40	6.32	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.3	39.6	57.0	4.35	8.70	
LD (LDH)	U/l	779	662	896	58.50	117.00	P->L German methods 37°C
	U/l	392	333	451	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	77	62	92	7.50	15.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.13	1.87	2.39	0.13	0.26	Colorimetric
	mg/dl	1.48	1.30	1.66	0.09	0.18	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.07	5.58	6.56	0.25	0.49	Enzymatic
	mmol/l	6.07	5.58	6.56	0.25	0.49	ISE method - direct
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	153	145	161	4.00	8.00	Enzymatic
	mmol/l	157	149	165	4.00	8.00	ISE method - direct
TIBC	μmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
	μg/dl	257	203	311	27.00	54.00	
Triglycerides	mmol/l	2.89	2.42	3.36	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	256	214	298	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
	g/l	28.3	24.0	32.6	2.15	4.30	Bromocresol Purple
	g/dl	2.83	2.40	3.26	0.22	0.43	
Alkaline Phosphatase	U/l	452	384	520	34.00	68.00	Diethanolamine buffer DEA 37°C
	U/l	344	292	396	26.00	52.00	AMP optimised to IFCC 37°C
	U/l	341	290	392	25.50	51.00	AMP non-optimised 37°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	266	226	306	20.00	40.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	289	245	333	22.00	44.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	186	149	223	18.50	37.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	49.7	39.7	59.7	5.00	10.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	33.4	26.4	40.4	3.50	7.00	Oxidation to Biliverdin
	mg/dl	1.95	1.54	2.36	0.21	0.41	
Bilirubin Total	µmol/l	102	80.3	124	10.85	21.70	Oxidation to Biliverdin
	mg/dl	5.97	4.70	7.24	0.64	1.27	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.17	6.24	8.10	0.47	0.93	Cholesterol Oxidase
	mg/dl	277	241	313	18.00	36.00	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
CK Total	U/l	531	435	627	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	541	443	639	49.00	98.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	µmol/l	375	300	450	37.50	75.00	Randox Enzymatic UV method
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	373	298	448	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.21	3.37	5.05	0.42	0.84	
gamma-GT	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.52	2.14	2.90	0.19	0.38	Direct HDL Immunoseparation
	mg/dl	97.3	82.6	112	7.35	14.70	
	mmol/l	2.43	2.07	2.79	0.18	0.36	Direct Clearance Method
	mg/dl	93.8	79.9	108	6.95	13.90	
Iron	µmol/l	41.1	33.7	48.5	3.70	7.40	Colorimetric without ppt.
	µg/dl	230	188	272	21.00	42.00	
Lactate	mmol/l	5.58	4.57	6.59	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.3	41.2	59.4	4.55	9.10	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
LD (LDH)	U/l	382	325	439	28.50	57.00	L->P 37°C
	U/l	772	656	888	58.00	116.00	P->L German methods 37°C
	U/l	387	329	445	29.00	58.00	L->P IFCC 37°C
Lipase	U/l	74	60	88	7.00	14.00	Other Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Potassium	mmol/l	6.27	5.77	6.77	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.6	38.1	57.1	4.75	9.50	Biuret reaction end point
	g/dl	4.76	3.81	5.71	0.48	0.95	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	μmol/l	46.0	36.3	55.7	4.85	9.70	Removal of excess free iron
	μg/dl	257	203	311	27.00	54.00	
	μmol/l	46.5	36.7	56.3	4.90	9.80	FE+UIBC(saturation with iron)
	μg/dl	260	205	315	27.50	55.00	
	μmol/l	47.2	37.3	57.1	4.95	9.90	Direct Colorimetric
	μg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	263	220	306	21.50	43.00	

SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	8.13	10.6	0.61	1.21	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	28.0	23.8	32.2	2.10	4.20	Bromocresol Purple
	g/dl	2.80	2.38	3.22	0.21	0.42	
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer with P5P 37°C
	U/l	137	110	164	13.50	27.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	334	284	384	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	215	172	258	21.50	43.00	Tris buffer with P5P 37°C
	U/l	219	175	263	22.00	44.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.20	0.948	1.45	0.13	0.25	
Bilirubin Total	µmol/l	92.1	72.8	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.39	4.26	6.52	0.57	1.13	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	6.81	5.93	7.69	0.44	0.88	Dimension-Siemens reagents
	mg/dl	263	229	297	17.00	34.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
CK Total	U/l	519	426	612	46.50	93.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	384	307	461	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	382	305	459	38.50	77.00	Jaffe rate blanked
	mg/dl	4.32	3.45	5.19	0.44	0.87	

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

		Range					
Analyte	unit	target	low	high	1SD	2SD	methods
gamma-GT	U/l	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	226	192	260	17.00	34.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	2.80	2.38	3.22	0.21	0.42	Direct HDL PEGME
	mg/dl	108	91.9	124	8.05	16.10	
Iron	µmol/l	38.5	31.5	45.5	3.50	7.00	Colorimetric without ppt.
	µg/dl	215	176	254	19.50	39.00	
Lactate	mmol/l	5.20	4.26	6.14	0.47	0.94	UV LDH
	mg/dl	46.9	38.4	55.4	4.25	8.50	
LD (LDH)	U/l	393	334	452	29.50	59.00	L->P IFCC 37°C
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Methylthymol blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.13	1.81	2.45	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.60	5.61	7.59	0.50	0.99	
Potassium	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
Protein Total	g/l	48.6	38.9	58.3	4.85	9.70	Biuret reaction end point
	g/dl	4.86	3.89	5.83	0.49	0.97	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	257	216	298	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.36	8.13	10.6	0.61	1.23	

Siemens/Dade Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	28.1	23.8	32.4	2.15	4.30	Bromocresol Green
	g/dl	2.81	2.38	3.24	0.22	0.43	
	g/l	28.2	24.0	32.4	2.10	4.20	Bromocresol Purple
	g/dl	2.82	2.40	3.24	0.21	0.42	
Alkaline Phosphatase	U/l	248	211	285	18.50	37.00	Siemens Dimension AMP buffer 37°C
	U/l	307	261	353	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	305	259	351	23.00	46.00	Randox AMP 37°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer with P5P 37°C
	U/l	134	107	161	13.50	27.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	319	271	367	24.00	48.00	Siemens - maltopenta/hexaoside 37°C
	U/l	329	280	378	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	217	173	261	22.00	44.00	Tris buffer with P5P 37°C
	U/l	219	175	263	22.00	44.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	91.7	72.4	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.36	4.24	6.48	0.56	1.12	
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Cholesterol	mmol/l	6.61	5.75	7.47	0.43	0.86	Dimension-Siemens reagents
	mg/dl	255	222	288	16.50	33.00	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
CK Total	U/l	506	415	597	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	524	429	619	47.50	95.00	Dithioerythritol 37°C
	U/l	511	419	603	46.00	92.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	387	309	465	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	371	297	445	37.00	74.00	Randox Enzymatic UV method
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	377	301	453	38.00	76.00	Creatinine PAP method
	mg/dl	4.26	3.40	5.12	0.43	0.86	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	392	314	470	39.00	78.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	367	294	440	36.50	73.00	IDMS traceable
	mg/dl	4.15	3.32	4.98	0.42	0.83	
gamma-GT	U/l	193	164	222	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	220	187	253	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.98	2.53	3.43	0.23	0.45	Direct HDL PPD
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	2.80	2.38	3.22	0.21	0.42	Direct HDL PEGME
	mg/dl	108	91.9	124	8.05	16.10	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct Clearance Method
	mg/dl	111	94.6	127	8.20	16.40	
Iron	µmol/l	39.2	32.1	46.3	3.55	7.10	Colorimetric with ppt.
	µg/dl	219	179	259	20.00	40.00	
	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.50	39.00	
Lactate	mmol/l	5.00	4.10	5.90	0.45	0.90	UV LDH
	mg/dl	45.1	36.9	53.3	4.10	8.20	
LD (LDH)	U/l	397	338	456	29.50	59.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	391	332	450	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	272	219	325	26.50	53.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.16	1.84	2.48	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.70	5.70	7.70	0.50	1.00	
	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.17	5.67	6.67	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.8	38.2	57.4	4.80	9.60	Biuret reaction end point
	g/dl	4.78	3.82	5.74	0.48	0.96	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.7	33.7	51.7	4.50	9.00	Removal of excess free iron
	µg/dl	239	188	290	25.50	51.00	
	µmol/l	40.3	31.8	48.8	4.25	8.50	Direct Colorimetric
	µg/dl	225	178	272	23.50	47.00	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	257	216	298	20.50	41.00	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.27	8.06	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease end point
	mg/dl	119	101	137	9.00	18.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Albumin	g/l	28.5	24.2	32.8	2.15	4.30	Bromocresol Purple
	g/dl	2.85	2.42	3.28	0.22	0.43	
Alkaline Phosphatase	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer with P5P 37°C
	U/l	130	104	156	13.00	26.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	331	281	381	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	217	173	261	22.00	44.00	Tris buffer with P5P 37°C
	U/l	217	173	261	22.00	44.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.8	11.8	17.8	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.25	0.983	1.52	0.13	0.27	
Bilirubin Total	µmol/l	89.5	70.7	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.24	4.14	6.34	0.55	1.10	
Calcium	mmol/l	2.99	2.69	3.29	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Cholesterol	mmol/l	6.57	5.71	7.43	0.43	0.86	Dimension-Siemens reagents
	mg/dl	254	220	288	17.00	34.00	
Chloride	mmol/l	119	109	129	5.00	10.00	ISE indirect
CK Total	U/l	516	423	609	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	520	426	614	47.00	94.00	Dithioerythritol 37°C
	U/l	511	419	603	46.00	92.00	Dithioerythritol (DTE) IFCC correlated 37°C

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Creatinine	μmol/l	392	314	470	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	μmol/l	388	310	466	39.00	78.00	Randox Enzymatic UV method
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	μmol/l	375	300	450	37.50	75.00	IDMS traceable
	mg/dl	4.24	3.39	5.09	0.43	0.85	
gamma-GT	U/l	208	177	239	15.50	31.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	219	186	252	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct HDL PEGME
	mg/dl	109	93.0	125	8.00	16.00	
Iron	μmol/l	39.9	32.7	47.1	3.60	7.20	Colorimetric without ppt.
	μg/dl	223	183	263	20.00	40.00	
Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	UV LDH
	mg/dl	47.6	39.0	56.2	4.30	8.60	
LD (LDH)	U/l	411	349	473	31.00	62.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	392	333	451	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	315	253	377	31.00	62.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.21	1.95	2.47	0.13	0.26	Spectrophotometric
	mg/dl	1.53	1.35	1.71	0.09	0.18	
Magnesium	mmol/l	1.70	1.49	1.91	0.11	0.21	Methylthymol blue
	mg/dl	4.13	3.62	4.64	0.26	0.51	
Phosphate Inorganic	mmol/l	2.10	1.79	2.41	0.16	0.31	Phosphomolybdate UV
	mg/dl	6.51	5.55	7.47	0.48	0.96	

Siemens/Dade Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.9	38.3	57.5	4.80	9.60	Biuret reaction end point
	g/dl	4.79	3.83	5.75	0.48	0.96	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.08	2.59	3.57	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	273	229	317	22.00	44.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.75	7.61	9.89	0.57	1.14	
	mmol/l	0.52	0.46	0.59	0.03	0.07	Spectrophotometric at 280-290
	mg/dl	8.80	7.66	9.94	0.57	1.14	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Analyte	unit	target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.7	26.1	35.3	2.30	4.60	Bromocresol Green
	g/dl	3.07	2.61	3.53	0.23	0.46	
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	187	149	225	19.00	38.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	93.6	74.0	113	9.80	19.60	Diazo with Sulphanilic Acid
	mg/dl	5.48	4.33	6.63	0.58	1.15	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	7.42	6.46	8.38	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
Creatinine	µmol/l	366	293	439	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.14	3.31	4.97	0.42	0.83	
Glucose	mmol/l	16.6	14.1	19.1	1.25	2.50	Glucose oxidase
	mg/dl	299	254	344	22.50	45.00	
Protein Total	g/l	52.9	42.3	63.5	5.30	10.60	Biuret reaction end point
	g/dl	5.29	4.23	6.35	0.53	1.06	
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.74	8.48	11.0	0.63	1.26	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	

**VITALAB FLEXOR®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 696UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2018-03

Range

Analyte	unit	target	low	high	1SD	2SD	methods
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	