RANDOX 0086 CE

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

CAT. NO. HE1532 **LOT NO.** 852UE
GTIN: 05055273203608
CAT. NO. HS2611
GTIN: 05055273203813
SIZE: 20 x 5ml / 5 x 5ml **EXPIRY:** 2020-01-28

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 –18°C to –24°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 –18°C to –24°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 –18°C to –24°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 ±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
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(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. 852UE Cat No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.0	24.6	33.4	2.20	4.40	Bromocresol Green
	g/dl	2.90	2.46	3.34	0.22	0.44	
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
Calcium	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	
Creatinine	µmol/l	394	316	472	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.45	3.57	5.33	0.44	0.88	
Phosphate Inorganic	mmol/l	2.25	1.92	2.58	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.98	5.95	8.01	0.52	1.03	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - direct
Protein Total	g/l	44.4	35.6	53.2	4.40	8.80	Biuret reaction end point
	g/dl	4.44	3.56	5.32	0.44	0.88	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.2	24.0	32.4	2.10	4.20	Bromocresol Green
	g/dl	2.82	2.40	3.24	0.21	0.42	
	g/l	26.0	22.1	29.9	1.95	3.90	Bromocresol Purple
	g/dl	2.60	2.21	2.99	0.20	0.39	
Alkaline Phosphatase	U/l	388	330	446	29.00	58.00	Diethanolamine buffer DEA 37°C
	U/l	300	255	345	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	299	254	344	22.50	45.00	AMP optimised to NVKC/SFBC 37°C
	U/l	292	248	336	22.00	44.00	AMP non-optimised 37°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	316	269	363	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	348	296	400	26.00	52.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bile Acids	µmol/l	44.7	35.7	53.7	4.50	9.00	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	86.9	68.6	105	9.15	18.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.08	4.01	6.15	0.54	1.07	
	µmol/l	88.2	69.7	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.16	4.08	6.24	0.54	1.08	
	µmol/l	87.3	68.9	106	9.20	18.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.11	4.03	6.19	0.54	1.08	
	µmol/l	85.5	67.6	103	8.95	17.90	Diazonium ion
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	mmol/l	3.06	2.76	3.36	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.27	6.32	8.22	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	
Cholinesterase	U/l	5964	4772	7156	596.00	1192.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5501	4400	6602	550.50	1101.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	547	448	646	49.50	99.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	21.2	16.9	25.5	2.15	4.30	Colorimetric
	µg/dl	135	107	163	14.00	28.00	
Creatinine	µmol/l	409	327	491	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.62	3.70	5.54	0.46	0.92	
	µmol/l	399	319	479	40.00	80.00	Enzymatic UV method
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	408	326	490	41.00	82.00	Creatinine PAP method
	mg/dl	4.61	3.68	5.54	0.47	0.93	
	µmol/l	408	326	490	41.00	82.00	Jaffe rate blanked
	mg/dl	4.61	3.68	5.54	0.47	0.93	

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Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	406	325	487	40.50	81.00	IDMS traceable
	mg/dl	4.59	3.67	5.51	0.46	0.92	
Free T4	pmol/l	52.3	39.2	65.4	6.55	13.10	Abbott Architect
	ng/dl	4.08	3.06	5.10	0.51	1.02	
	pg/ml	40.8	30.6	51.0	5.10	10.20	Abbott Architect
gamma-GT	U/l	163	139	187	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	162	138	186	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	154	131	177	11.50	23.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 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	
	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	2.62	2.23	3.01	0.20	0.39	Direct HDL PPD
	mg/dl	101	86.1	116	7.45	14.90	
	mmol/l	2.60	2.21	2.99	0.20	0.39	Direct Clearance Method
	mg/dl	100	85.3	115	7.35	14.70	
	mmol/l	2.63	2.23	3.03	0.20	0.40	HDL - Ultra
	mg/dl	102	86.1	118	7.95	15.90	
Iron	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric with ppt.
	µg/dl	202	165	239	18.50	37.00	
	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
Lactate	mmol/l	5.46	4.48	6.44	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.2	40.4	58.0	4.40	8.80	

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Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	358	304	412	27.00	54.00	L->P 37°C
	U/l	720	612	828	54.00	108.00	P->L German methods 37°C
	U/l	359	305	413	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	56	45	67	5.50	11.00	Other Colorimetric 37°C
Lithium	mmol/l	2.03	1.79	2.27	0.12	0.24	Spectrophotometric
	mg/dl	1.41	1.24	1.58	0.09	0.17	
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Arsenazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
	mmol/l	1.65	1.46	1.84	0.10	0.19	Enzymatic
	mg/dl	4.01	3.55	4.47	0.23	0.46	
Osmolality	mOsm/kg	362	289	435	36.50	73.00	Calculated
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.82	5.80	7.84	0.51	1.02	
	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	6.20	5.70	6.70	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction kinetic
	g/dl	4.40	3.52	5.28	0.44	0.88	
PSA Total	ng/ml =	30.7	23.0	38.4	3.85	7.70	Abbott Architect
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.96	0.77	1.15	0.10	0.19	Abbott Architect
TIBC	µmol/l	57.9	45.7	70.1	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	324	255	393	34.50	69.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	262	220	304	21.00	42.00	
	mmol/l	2.92	2.45	3.39	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	255	214	296	20.50	41.00	
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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.25	10.7	0.62	1.24	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	8.30	10.8	0.62	1.24	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.3	24.0	32.6	2.15	4.30	Bromocresol Green
	g/dl	2.83	2.40	3.26	0.22	0.43	
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	158	127	189	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Bilirubin Total	µmol/l	89.7	70.9	109	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.25	4.15	6.35	0.55	1.10	
Calcium	mmol/l	3.07	2.77	3.37	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.57	6.58	8.56	0.50	0.99	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
CK Total	U/l	535	438	632	48.50	97.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	410	328	492	41.00	82.00	Creatinine PAP method
	mg/dl	4.63	3.71	5.55	0.46	0.92	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
Iron	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	

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Lipase	U/l	54	43	65	5.50	11.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	mmol/l	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.50	6.39	8.61	0.56	1.11	
Potassium	mmol/l	5.94	5.46	6.42	0.24	0.48	ISE method - direct
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	157	149	165	4.00	8.00	ISE method - direct
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	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	

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

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	7.10	6.17	8.03	0.47	0.93	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
Triglycerides	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	259	218	300	20.50	41.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	

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

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	389	308	470	40.50	81.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	27.0	22.9	31.1	2.05	4.10	Bromocresol Green
	g/dl	2.70	2.29	3.11	0.21	0.41	
	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	
Alkaline Phosphatase	U/l	459	390	528	34.50	69.00	Diethanolamine buffer DEA 37°C
	U/l	359	305	413	27.00	54.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
Amylase Total	U/l	280	238	322	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	276	234	318	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	281	239	323	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	287	244	330	21.50	43.00	Beckman Olympus - blocked pNPG7 37°C
AST (GOT)	U/l	156	124	188	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.7	14.0	21.4	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	23.1	18.2	28.0	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Bilirubin Total	µmol/l	85.2	67.3	103	8.95	17.90	Diazo with Dichloroaniline (DCA)
	mg/dl	4.98	3.94	6.02	0.52	1.04	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	87.0	68.7	105	9.15	18.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.09	4.02	6.16	0.54	1.07	
	µmol/l	87.1	68.8	105	9.15	18.30	Oxidation to Biliverdin/Vanadate
	mg/dl	5.10	4.02	6.18	0.54	1.08	
	µmol/l	87.9	69.5	106	9.20	18.40	DPD (Beckman AU)
	mg/dl	5.14	4.07	6.21	0.54	1.07	
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	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.35	6.40	8.30	0.48	0.95	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	4552	3642	5462	455.00	910.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	544	446	642	49.00	98.00	CK-NAC serum start (DGKC) 37°C
	U/l	554	454	654	50.00	100.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	27.2	21.8	32.6	2.70	5.40	Colorimetric
	µg/dl	173	139	207	17.00	34.00	
Creatinine	µmol/l	382	306	458	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	404	324	484	40.00	80.00	Creatinine PAP method
	mg/dl	4.57	3.66	5.48	0.46	0.91	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	388	310	466	39.00	78.00	Jaffe rate blanked
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	392	313	471	39.50	79.00	IDMS traceable
	mg/dl	4.43	3.54	5.32	0.45	0.89	
D-3-Hydroxybutyrate	mmol/l	1.17	0.99	1.35	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	171	145	197	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	170	144	196	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	37	29	45	4.00	8.00	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	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.84	2.41	3.27	0.22	0.43	Direct HDL Immunoseparation
	mg/dl	110	93.0	127	8.50	17.00	
	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct Clearance Method
	mg/dl	105	89.6	120	7.70	15.40	
	mmol/l	2.63	2.24	3.02	0.20	0.39	HDL - Ultra
	mg/dl	102	86.5	118	7.75	15.50	
Iron	µmol/l	37.5	30.7	44.3	3.40	6.80	Colorimetric with ppt.
	µg/dl	210	172	248	19.00	38.00	
	µmol/l	37.3	30.6	44.0	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	171	247	19.00	38.00	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	354	301	407	26.50	53.00	L->P 37°C
	U/l	804	684	924	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	358	305	411	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	62	49	75	6.50	13.00	Other Colorimetric 37°C
	U/l	76	61	91	7.50	15.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.01	1.77	2.25	0.12	0.24	Spectrophotometric
	mg/dl	1.40	1.23	1.57	0.09	0.17	
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.10	6.05	8.15	0.53	1.05	
	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.17	5.67	6.67	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction end point
	g/dl	4.48	3.58	5.38	0.45	0.90	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction kinetic
	g/dl	4.40	3.52	5.28	0.44	0.88	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	57.9	45.7	70.1	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	324	255	393	34.50	69.00	
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	2.97	2.50	3.44	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	263	221	305	21.00	42.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.81	8.53	11.1	0.64	1.28	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.71	8.45	11.0	0.63	1.26	
Zinc	µmol/l	33.1	26.5	39.7	3.30	6.60	Colorimetric with deproteinisation
	µg/dl	216	173	259	21.50	43.00	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	28.0	23.8	32.2	2.10	4.20	Bromocresol Purple
	g/dl	2.80	2.38	3.22	0.21	0.42	
Alkaline Phosphatase	U/l	330	281	379	24.50	49.00	p-Nitrophenylphosphate AMP 37°C
	U/l	330	280	380	25.00	50.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	126	101	151	12.50	25.00	Tris buffer SCE 37°C
Amylase Total	U/l	297	253	341	22.00	44.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	17.2	13.7	20.7	1.75	3.50	Differential rate pH change
	mmol/l	17.0	13.4	20.6	1.80	3.60	Ion selective electrode
Bilirubin Direct	µmol/l	16.5	13.0	20.0	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Bilirubin Total	µmol/l	85.5	67.5	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.49	6.52	8.46	0.49	0.97	Cholesterol Oxidase
	mg/dl	289	252	326	18.50	37.00	
Cholinesterase	U/l	4669	3735	5603	467.00	934.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	565	463	667	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	560	460	660	50.00	100.00	Monothioglycerol 37°C
Creatinine	µmol/l	396	317	475	39.50	79.00	Alkaline picrate no deproteinization
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	400	320	480	40.00	80.00	Enzymatic UV method
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	399	319	479	40.00	80.00	Jaffe rate blanked
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	399	319	479	40.00	80.00	IDMS traceable
	mg/dl	4.51	3.60	5.42	0.46	0.91	
gamma-GT	U/l	137	116	158	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
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	15.2	13.0	17.4	1.10	2.20	Glucose oxidase
	mg/dl	274	234	314	20.00	40.00	
HDL - Cholesterol	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct HDL PPD
	mg/dl	105	89.6	120	7.70	15.40	
	mmol/l	2.84	2.42	3.26	0.21	0.42	HDL - Ultra
	mg/dl	110	93.4	127	8.30	16.60	
Iron	µmol/l	37.6	30.9	44.3	3.35	6.70	Colorimetric without ppt.
	µg/dl	210	173	247	18.50	37.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.16	4.23	6.09	0.47	0.93	Colorimetric Lactate Oxidase
	mg/dl	46.5	38.1	54.9	4.20	8.40	
LD (LDH)	U/l	303	257	349	23.00	46.00	L->P 37°C
	U/l	909	773	1045	68.00	136.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	58	47	69	5.50	11.00	Other Colorimetric 37°C
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
Magnesium	mmol/l	1.62	1.42	1.82	0.10	0.20	Calmagite
	mg/dl	3.94	3.45	4.43	0.25	0.49	
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.13	6.05	8.21	0.54	1.08	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.18	5.69	6.67	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction CX4/5/7
	g/dl	4.49	3.59	5.39	0.45	0.90	
	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction end point
	g/dl	4.45	3.56	5.34	0.45	0.89	
	g/l	42.8	34.2	51.4	4.30	8.60	Biuret reaction kinetic
	g/dl	4.28	3.42	5.14	0.43	0.86	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.03	2.54	3.52	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	268	225	311	21.50	43.00	
	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	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease end point
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.00	7.83	10.2	0.59	1.17	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.1	23.9	32.3	2.10	4.20	Bromocresol Green
	g/dl	2.81	2.39	3.23	0.21	0.42	
Alkaline Phosphatase	U/l	297	252	342	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	231	196	266	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	190	161	219	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	177	141	213	18.00	36.00	Tris buffer without P5P 37°C
	U/l	120	95	145	12.50	25.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Bilirubin Total	µmol/l	88.4	69.9	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.17	4.09	6.25	0.54	1.08	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	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	
CK Total	U/l	575	471	679	52.00	104.00	CK-NAC (IFCC) 37°C
	U/l	360	295	425	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	244	200	288	22.00	44.00	CK-NAC (IFCC) 25°C

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	349	280	418	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.16	4.72	0.39	0.78	
gamma-GT	U/l	170	144	196	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	113	155	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	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	
HDL - Cholesterol	mmol/l	2.57	2.19	2.95	0.19	0.38	HDL - Ultra
	mg/dl	99.2	84.5	114	7.35	14.70	
LD (LDH)	U/l	785	668	902	58.50	117.00	P->L Scandinavian & Dutch 37°C
	U/l	567	482	652	42.50	85.00	P->L Scandinavian & Dutch 30°C
	U/l	398	339	457	29.50	59.00	P->L Scandinavian & Dutch 25°C
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Protein Total	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction end point
	g/dl	4.44	3.55	5.33	0.45	0.89	
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	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Urease kinetic
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	17.5	14.9	20.1	1.30	2.60	BUN
	mg/dl	49.1	41.7	56.5	3.70	7.40	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.69	8.43	11.0	0.63	1.26	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	9.37	8.15	10.6	0.61	1.22	

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Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.2	32.6	2.10	4.20	Bromocresol Green
	g/dl	2.84	2.42	3.26	0.21	0.42	
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.2	66.5	102	8.85	17.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.93	3.89	5.97	0.52	1.04	
Calcium	mmol/l	2.93	2.64	3.22	0.15	0.29	Arsenazo III
	mg/dl	11.7	10.6	12.8	0.55	1.10	
Cholesterol	mmol/l	7.20	6.27	8.13	0.47	0.93	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
Creatinine	µmol/l	362	290	434	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.28	4.90	0.41	0.81	
	µmol/l	390	312	468	39.00	78.00	Creatinine PAP method
	mg/dl	4.41	3.53	5.29	0.44	0.88	
gamma-GT	U/l	163	139	187	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	128	110	146	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	101	86	116	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	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	2.55	2.17	2.93	0.19	0.38	Direct HDL Immunoseparation
	mg/dl	98.4	83.8	113	7.30	14.60	
	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct Clearance Method
	mg/dl	105	89.2	121	7.90	15.80	
LD (LDH)	U/l	727	618	836	54.50	109.00	P->L SFBC 37°C
	U/l	525	446	604	39.50	79.00	P->L SFBC 30°C
	U/l	369	313	425	28.00	56.00	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
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	
Triglycerides	mmol/l	2.72	2.28	3.16	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	241	202	280	19.50	39.00	
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	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	25.4	21.6	29.2	1.90	3.80	Turbidimetric Assays
	g/dl	2.54	2.16	2.92	0.19	0.38	
Alkaline Phosphatase	U/l	249	211	287	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	194	164	224	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	159	135	183	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	253	215	291	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	257	219	295	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	278	237	319	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	277	236	318	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.5	13.8	21.2	1.85	3.70	Colorimetric
	mmol/l	17.0	13.5	20.5	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.36	2.10	0.19	0.37	

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Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	29.9	23.6	36.2	3.15	6.30	Roche JG factored
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Bilirubin Total	µmol/l	80.2	63.3	97.1	8.45	16.90	Diazo with Dichloroaniline (DCA)
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	80.5	63.6	97.4	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.71	3.72	5.70	0.50	0.99	
	µmol/l	80.4	63.5	97.3	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.70	3.71	5.69	0.50	0.99	
	µmol/l	80.2	63.3	97.1	8.45	16.90	Diazonium ion
	mg/dl	4.69	3.70	5.68	0.50	0.99	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
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	564	462	666	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	353	289	417	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	240	196	284	22.00	44.00	CK-NAC (IFCC) 25°C
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	
	µmol/l	402	321	483	40.50	81.00	Enzymatic UV method
	mg/dl	4.54	3.63	5.45	0.46	0.91	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	398	318	478	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	367	293	441	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.15	3.31	4.99	0.42	0.84	
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	119	101	137	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	93	79	107	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	116	156	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	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	3.76	3.19	4.33	0.29	0.57	Direct HDL Roche 3rd generation
	mg/dl	145	123	167	11.00	22.00	
Iron	µmol/l	37.3	30.6	44.0	3.35	6.70	Colorimetric with ppt.
	µg/dl	209	171	247	19.00	38.00	
	µmol/l	37.4	30.7	44.1	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	172	246	18.50	37.00	
Lactate	mmol/l	5.66	4.64	6.68	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	51.0	41.8	60.2	4.60	9.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	672	572	772	50.00	100.00	P->L German methods 37°C
	U/l	485	413	557	36.00	72.00	P->L German methods 30°C
	U/l	341	290	392	25.50	51.00	P->L German methods 25°C
	U/l	371	315	427	28.00	56.00	L->P IFCC 37°C
	U/l	268	227	309	20.50	41.00	L->P IFCC 30°C
	U/l	188	160	216	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	58	47	69	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.06	1.82	2.30	0.12	0.24	Ion selective electrode
	mg/dl	1.43	1.26	1.60	0.09	0.17	
Magnesium	mmol/l	1.63	1.43	1.83	0.10	0.20	Chlorphosphonazo III
	mg/dl	3.96	3.47	4.45	0.25	0.49	
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.13	6.05	8.21	0.54	1.08	
	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.13	6.05	8.21	0.54	1.08	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	43.5	34.8	52.2	4.35	8.70	Biuret reaction end point
	g/dl	4.35	3.48	5.22	0.44	0.87	
	g/l	43.4	34.7	52.1	4.35	8.70	Biuret reaction kinetic
	g/dl	4.34	3.47	5.21	0.44	0.87	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	57.9	45.7	70.1	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	324	255	393	34.50	69.00	
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	

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	247	207	287	20.00	40.00	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease hypochlorite
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
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	0.56	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	0.57	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	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	
Alkaline Phosphatase	U/l	447	380	514	33.50	67.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	69.8	55.1	84.5	7.35	14.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.08	3.22	4.94	0.43	0.86	
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	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
CK Total	U/l	559	458	660	50.50	101.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	358	286	430	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.05	3.23	4.87	0.41	0.82	
	µmol/l	386	309	463	38.50	77.00	Enzymatic UV method
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	351	281	421	35.00	70.00	Jaffe rate blanked
	mg/dl	3.97	3.18	4.76	0.40	0.79	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
LD (LDH)	U/l	370	314	426	28.00	56.00	L->P IFCC 37°C

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Protein Total	g/l	50.7	40.5	60.9	5.10	10.20	Biuret reaction end point
	g/dl	5.07	4.05	6.09	0.51	1.02	
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	
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	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.79	8.52	11.1	0.64	1.27	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.05	10.5	0.61	1.21	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	435	344	526	45.50	91.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	328	260	396	34.00	68.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	246	195	297	25.50	51.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	33.7	22.6	44.8	5.55	11.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	25.1	16.8	33.4	4.15	8.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	43.9	29.4	58.4	7.25	14.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	39.6	26.5	52.7	6.55	13.10	1-Naphthyl Phosphate substrate Kinetic 37°C
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	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	226	192	260	17.00	34.00	Roche Integra AMP buffer 37°C
	U/l	176	150	202	13.00	26.00	Roche Integra AMP buffer 30°C
	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 25°C
	U/l	334	284	384	25.00	50.00	AMP optimised to IFCC 37°C
	U/l	260	221	299	19.50	39.00	AMP optimised to IFCC 30°C
	U/l	213	181	245	16.00	32.00	AMP optimised to IFCC 25°C
	U/l	324	275	373	24.50	49.00	Randox AMP 37°C
	U/l	252	214	290	19.00	38.00	Randox AMP 30°C
	U/l	207	176	238	15.50	31.00	Randox AMP 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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
Amylase Pancreatic	U/l	286	243	329	21.50	43.00	Randox liquid stable pNPG7 37°C
	U/l	247	210	284	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	266	226	306	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	312	265	359	23.50	47.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.9	13.4	20.4	1.75	3.50	Enzymatic
Bile Acids	µmol/l	44.7	35.8	53.6	4.45	8.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Bilirubin Total	µmol/l	80.1	63.3	96.9	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	78.9	62.3	95.5	8.30	16.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.62	3.64	5.60	0.49	0.98	
	µmol/l	79.1	62.5	95.7	8.30	16.60	Diazonium ion
	mg/dl	4.63	3.66	5.60	0.49	0.97	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	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	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	
Cholinesterase	U/l	4952	3961	5943	495.50	991.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	535	439	631	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	335	275	395	30.00	60.00	CK-NAC substrate start (DGKC) 30°C
	U/l	227	187	267	20.00	40.00	CK-NAC substrate start (DGKC) 25°C
	U/l	508	417	599	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	318	261	375	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	406	325	487	40.50	81.00	Creatinine PAP method
	mg/dl	4.59	3.67	5.51	0.46	0.92	
	µmol/l	399	319	479	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	391	313	469	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.42	3.54	5.30	0.44	0.88	
D-3-Hydroxybutyrate	mmol/l	1.12	0.96	1.29	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	146	124	168	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	115	98	132	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	90	77	103	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	161	137	185	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	127	108	146	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	99	85	113	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	178	151	205	13.50	27.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	140	119	161	10.50	21.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	93	127	8.50	17.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°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	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.21	2.73	3.69	0.24	0.48	Direct HDL PEGME
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	3.57	3.04	4.10	0.27	0.53	Direct HDL Roche 3rd generation
	mg/dl	138	117	159	10.50	21.00	
Iron	µmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.47	4.49	6.45	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.3	40.5	58.1	4.40	8.80	
LD (LDH)	U/l	687	584	790	51.50	103.00	P->L German methods 37°C
	U/l	496	422	570	37.00	74.00	P->L German methods 30°C
	U/l	348	296	400	26.00	52.00	P->L German methods 25°C
	U/l	343	292	394	25.50	51.00	L->P IFCC 37°C
	U/l	248	211	285	18.50	37.00	L->P IFCC 30°C
	U/l	174	148	200	13.00	26.00	L->P IFCC 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	53	43	63	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.26	1.62	0.09	0.18	
Magnesium	mmol/l	1.64	1.45	1.83	0.10	0.19	Xylidyl Blue
	mg/dl	3.99	3.52	4.46	0.24	0.47	
Phosphate Inorganic	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	6.27	5.77	6.77	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.3	35.5	53.1	4.40	8.80	Biuret reaction end point
	g/dl	4.43	3.55	5.31	0.44	0.88	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.6	41.6	63.6	5.50	11.00	FE+UIBC(saturation with iron)
	µg/dl	294	233	355	30.50	61.00	
Triglycerides	mmol/l	2.77	2.32	3.22	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	245	205	285	20.00	40.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.00	10.4	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.08	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	9.26	8.05	10.5	0.61	1.21	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Green
	g/dl	2.83	2.41	3.25	0.21	0.42	
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
ALT (GPT)	U/l	123	99	147	12.00	24.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C
Amylase Total	U/l	288	245	331	21.50	43.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.6	34.8	52.4	4.40	8.80	Enzymatic Colorimetric
Bilirubin Total	µmol/l	90.0	71.1	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.27	4.16	6.38	0.56	1.11	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.41	6.45	8.37	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
CK Total	U/l	490	401	579	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	307	251	363	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 25°C

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RANDOX

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	368	295	441	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.33	4.99	0.42	0.83	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.32	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	151	128	174	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	119	101	137	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	93	79	107	7.00	14.00	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	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.38	2.02	2.74	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	91.9	78.0	106	6.95	13.90	
Iron	µmol/l	35.2	28.9	41.5	3.15	6.30	Colorimetric without ppt.
	µg/dl	197	162	232	17.50	35.00	
Lipase	U/l	83	66	100	8.50	17.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Enzymatic
	mg/dl	4.16	3.67	4.65	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	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.33	5.82	6.84	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction end point
	g/dl	4.56	3.65	5.47	0.46	0.91	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
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	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease end point
	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	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	26.9	22.8	31.0	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.69	2.28	3.10	0.21	0.41	
	g/l	26.2	22.3	30.1	1.95	3.90	Vitros DT60/DT60 II/DTSC II
	g/dl	2.62	2.23	3.01	0.20	0.39	
Alkaline Phosphatase	U/l	222	189	255	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	221	188	254	16.50	33.00	Vitros DT60/DT60 II/DTSC II 37°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	138	110	166	14.00	28.00	Vitros DT60/DT60 II/DTSC II 37°C
Amylase Total	U/l	169	144	194	12.50	25.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	190	152	228	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
	U/l	192	154	230	19.00	38.00	Vitros DT60/DT60 II/DTSC II 37°C
Bicarbonate	mmol/l	19.2	15.2	23.2	2.00	4.00	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	77.9	61.5	94.3	8.20	16.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	79.2	62.6	95.8	8.30	16.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.63	3.66	5.60	0.49	0.97	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	Vitros DT60/DT60 II/DTSC II
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	116	106	126	5.00	10.00	Ortho Vitros Microslide Systems

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	117	108	126	4.50	9.00	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	6.74	5.86	7.62	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
	mmol/l	6.74	5.86	7.62	0.44	0.88	Vitros DT60/DT60 II
	mg/dl	260	226	294	17.00	34.00	
Cholinesterase	U/l	4707	3765	5649	471.00	942.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	457	375	539	41.00	82.00	Ortho Vitros Microslide Systems 37°C
	U/l	430	352	508	39.00	78.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	394	316	472	39.00	78.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.45	3.57	5.33	0.44	0.88	
	µmol/l	400	320	480	40.00	80.00	Vitros IDMS Traceable
	mg/dl	4.52	3.62	5.42	0.45	0.90	
gamma-GT	U/l	198	168	228	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	203	173	233	15.00	30.00	Vitros DT60/DT60 II/DTSC II 37°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
	mmol/l	14.2	12.1	16.3	1.05	2.10	Vitros DT60/DT60 II
	mg/dl	256	218	294	19.00	38.00	
HDL - Cholesterol	mmol/l	2.52	2.14	2.90	0.19	0.38	Vitros Magnetic HDL
	mg/dl	97.3	82.6	112	7.35	14.70	
	mmol/l	2.64	2.24	3.04	0.20	0.40	Vitros 5.1 FS microtip assay
	mg/dl	102	86.5	118	7.75	15.50	
	mmol/l	2.49	2.12	2.86	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	96.1	81.8	110	7.15	14.30	
Iron	µmol/l	38.7	31.8	45.6	3.45	6.90	Ortho Vitros Microslide Systems
	µg/dl	216	178	254	19.00	38.00	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Vitros DT60/DT60 II/DTSC II
	µg/dl	217	178	256	19.50	39.00	
Lactate	mmol/l	5.07	4.16	5.98	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.7	37.5	53.9	4.10	8.20	
LD (LDH)	U/l	1069	909	1229	80.00	160.00	Ortho Vitros Microslide Systems 37°C
	U/l	1130	961	1299	84.50	169.00	Vitros DT60/DT60 II/DTSC II 37°C
Lipase	U/l	639	512	766	63.50	127.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.44	2.14	2.74	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.69	1.49	1.89	0.10	0.20	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.70	1.49	1.91	0.11	0.21	Vitros DT60/DT60 II
	mg/dl	4.13	3.62	4.64	0.26	0.51	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	7.01	5.95	8.07	0.53	1.06	
	mmol/l	2.16	1.84	2.48	0.16	0.32	Vitros DT60/DT60 II
	mg/dl	6.70	5.70	7.70	0.50	1.00	
Potassium	mmol/l	6.16	5.67	6.65	0.25	0.49	Ortho Vitros Microslide Systems
	mmol/l	6.09	5.60	6.58	0.25	0.49	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	45.8	36.6	55.0	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	46.4	37.1	55.7	4.65	9.30	Vitros DT60/DT60 II
	g/dl	4.64	3.71	5.57	0.47	0.93	
PSA Total	ng/ml =	37.1	27.8	46.4	4.65	9.30	Ortho Vitros 3600/5600/ECi PSA II

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	159	151	167	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	158	150	166	4.00	8.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Vitros ECi
Total T3	nmol/l	7.61	5.71	9.51	0.95	1.90	Vitros ECi
	ng/ml	4.95	3.72	6.18	0.62	1.23	
	ng/dl	495	372	618	61.50	123.00	Vitros ECi
Total T4	nmol/l	224	168	280	28.00	56.00	Vitros ECi
	µg/dl	17.5	13.1	21.9	2.20	4.40	
	ng/ml	175	131	219	22.00	44.00	Vitros ECi
Triglycerides	mmol/l	3.23	2.71	3.75	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	286	240	332	23.00	46.00	
	mmol/l	3.33	2.80	3.86	0.27	0.53	Vitros DT60/DT60 II
	mg/dl	295	248	342	23.50	47.00	
Urea	mmol/l	17.6	15.0	20.2	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	106	90.2	122	7.90	15.80	
	mmol/l	17.8	15.1	20.5	1.35	2.70	Vitros DT60/DT60 II
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	17.6	15.0	20.2	1.30	2.60	BUN
	mg/dl	49.4	42.0	56.8	3.70	7.40	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.94	7.78	10.1	0.58	1.16	
	mmol/l	0.51	0.45	0.58	0.03	0.07	Vitros DT60/DT60 II
	mg/dl	8.64	7.51	9.77	0.57	1.13	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.0	23.8	32.2	2.10	4.20	Bromocresol Green
	g/dl	2.80	2.38	3.22	0.21	0.42	
Alkaline Phosphatase	U/l	316	268	364	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	246	209	283	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	202	171	233	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
Amylase Total	U/l	266	226	306	20.00	40.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	161	129	193	16.00	32.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	33.1	26.2	40.0	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.94	1.53	2.35	0.21	0.41	
Bilirubin Total	µmol/l	84.3	66.6	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.90	5.96	0.52	1.03	
	µmol/l	82.4	65.1	99.7	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.82	3.81	5.83	0.51	1.01	
	µmol/l	81.4	64.3	98.5	8.55	17.10	Nitrobenzenediazonium salt
	mg/dl	4.76	3.76	5.76	0.50	1.00	
Calcium	mmol/l	3.21	2.89	3.53	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	117	107	127	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.12	6.20	8.04	0.46	0.92	Cholesterol Oxidase
	mg/dl	275	239	311	18.00	36.00	
CK Total	U/l	532	436	628	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	333	273	393	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	226	185	267	20.50	41.00	CK-NAC (IFCC) 25°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	394	315	473	39.50	79.00	Enzymatic UV method
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	404	323	485	40.50	81.00	Creatinine PAP method
	mg/dl	4.57	3.65	5.49	0.46	0.92	
D-3-Hydroxybutyrate	mmol/l	1.16	0.99	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	132	112	152	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	103	88	118	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	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	3.24	2.75	3.73	0.25	0.49	Direct HDL PEGME
	mg/dl	125	106	144	9.50	19.00	
Iron	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.60	1.40	1.80	0.10	0.20	Calmagite
	mg/dl	3.89	3.40	4.38	0.25	0.49	
	mmol/l	1.48	1.30	1.66	0.09	0.18	Xylidyl Blue
	mg/dl	3.60	3.16	4.04	0.22	0.44	
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.10	5.61	6.59	0.25	0.49	ISE method - direct
Protein Total	g/l	45.1	36.0	54.2	4.55	9.10	Biuret reaction end point
	g/dl	4.51	3.60	5.42	0.46	0.91	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
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	
Urea	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.73	8.47	11.0	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.54	8.30	10.8	0.62	1.24	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.61	8.37	10.9	0.62	1.24	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	435	344	526	45.50	91.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	328	260	396	34.00	68.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	246	195	297	25.50	51.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	25.1	16.8	33.4	4.15	8.30	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	33.7	22.6	44.8	5.55	11.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	39.6	26.5	52.7	6.55	13.10	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	43.9	29.4	58.4	7.25	14.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	28.9	24.5	33.3	2.20	4.40	Bromocresol Green
	g/dl	2.89	2.45	3.33	0.22	0.44	
	g/l	26.9	22.9	30.9	2.00	4.00	Bromocresol Purple
	g/dl	2.69	2.29	3.09	0.20	0.40	
	g/l	26.9	22.8	31.0	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.69	2.28	3.10	0.21	0.41	
	g/l	25.6	21.8	29.4	1.90	3.80	Turbidimetric Assays
	g/dl	2.56	2.18	2.94	0.19	0.38	
Alkaline Phosphatase	U/l	222	189	255	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	463	394	532	34.50	69.00	Diethanolamine buffer DEA 37°C
	U/l	361	307	415	27.00	54.00	Diethanolamine buffer DEA 30°C
	U/l	296	252	340	22.00	44.00	Diethanolamine buffer DEA 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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
	U/l	292	248	336	22.00	44.00	AMP optimised to NVKC/SFBC 37°C
	U/l	227	193	261	17.00	34.00	AMP optimised to NVKC/SFBC 30°C
	U/l	187	158	216	14.50	29.00	AMP optimised to NVKC/SFBC 25°C
	U/l	305	260	350	22.50	45.00	AMP non-optimised 37°C
	U/l	238	203	273	17.50	35.00	AMP non-optimised 30°C
	U/l	195	166	224	14.50	29.00	AMP non-optimised 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	165	132	198	16.50	33.00	Tris buffer with P5P 37°C
	U/l	122	98	146	12.00	24.00	Tris buffer with P5P 30°C
	U/l	93	74	112	9.50	19.00	Tris buffer with P5P 25°C
	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
	U/l	126	101	151	12.50	25.00	Tris buffer SCE 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer SCE 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	249	212	286	18.50	37.00	Roche liquid stable pNPG7 37°C
	U/l	286	243	329	21.50	43.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	281	239	323	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	282	240	324	21.00	42.00	Siemens - blocked pNPG7 37°C
	U/l	276	234	318	21.00	42.00	Biotrol - blocked pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	234	199	269	17.50	35.00	Randox - Ethylidene pNPG7 37°C
	U/l	304	259	349	22.50	45.00	Randox liquid stable pNPG7 37°C
	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	286	243	329	21.50	43.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	335	285	385	25.00	50.00	Siemens - maltopenta/hexaoside 37°C
	U/l	277	235	319	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	169	144	194	12.50	25.00	Ortho Vitros Microslide Systems 37°C
	U/l	269	228	310	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	271	230	312	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	335	285	385	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
	U/l	273	232	314	20.50	41.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	287	244	330	21.50	43.00	Beckman Olympus - blocked pNPG7 37°C
	U/l	297	253	341	22.00	44.00	Beckman Synchron AMY7 37°C
	U/l	294	250	338	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
	U/l	316	269	363	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	340	289	391	25.50	51.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	0.98	0.80	1.16	0.09	0.18	Immunoturbidimetric
	mg/dl	98.0	80.4	116	8.80	17.60	
Apolipoprotein B	g/l	0.55	0.45	0.65	0.05	0.10	Immunoturbidimetric
	mg/dl	54.9	45.0	64.8	4.95	9.90	
AST (GOT)	U/l	190	152	228	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
	U/l	208	166	250	21.00	42.00	Tris buffer with P5P 37°C
	U/l	141	112	170	14.50	29.00	Tris buffer with P5P 30°C
	U/l	99	79	119	10.00	20.00	Tris buffer with P5P 25°C
	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	160	128	192	16.00	32.00	Phosphate buffer DGKC 37°C
	U/l	108	87	129	10.50	21.00	Phosphate buffer DGKC 30°C
	U/l	76	61	91	7.50	15.00	Phosphate buffer DGKC 25°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
	U/l	97	77	117	10.00	20.00	Tris buffer SCE 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	17.5	13.9	21.1	1.80	3.60	Colorimetric
	mmol/l	19.2	15.2	23.2	2.00	4.00	Ortho Vitros Microslide Systems
	mmol/l	17.2	13.7	20.7	1.75	3.50	Differential rate pH change
	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
	mmol/l	17.6	14.0	21.2	1.80	3.60	Ion selective electrode
Bile Acids	µmol/l	44.7	35.8	53.6	4.45	8.90	5th Generation Colorimetric
	µmol/l	43.3	34.6	52.0	4.35	8.70	4th Generation Colorimetric
Bilirubin Direct	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Roche JG factored
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	32.3	25.5	39.1	3.40	6.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.89	1.49	2.29	0.20	0.40	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	31.4	24.8	38.0	3.30	6.60	Modified Jendrassik
	mg/dl	1.84	1.45	2.23	0.20	0.39	
Bilirubin Total	µmol/l	77.9	61.5	94.3	8.20	16.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	79.2	62.6	95.8	8.30	16.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.63	3.66	5.60	0.49	0.97	
	µmol/l	97.2	76.8	118	10.20	20.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.69	4.49	6.89	0.60	1.20	
	µmol/l	84.8	67.0	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.96	3.92	6.00	0.52	1.04	
	µmol/l	96.8	76.5	117	10.15	20.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.66	4.48	6.84	0.59	1.18	
	µmol/l	82.3	65.0	99.6	8.65	17.30	Nitrobenzenediazonium salt
	mg/dl	4.81	3.80	5.82	0.51	1.01	
	µmol/l	80.6	63.7	97.5	8.45	16.90	Diazonium ion
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	93.0	73.4	113	9.80	19.60	Oxidation to Biliverdin/Vanadate
	mg/dl	5.44	4.29	6.59	0.58	1.15	
	µmol/l	98.7	78.0	119	10.35	20.70	Modified Jendrassik
	mg/dl	5.77	4.56	6.98	0.61	1.21	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Atomic absorption
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.08	2.77	3.39	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.08	2.77	3.39	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.04	2.74	3.34	0.15	0.30	Methylthymol blue
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	Colorimetric
	mmol/l	116	106	126	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	115	105	125	5.00	10.00	ISE indirect
	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.74	5.86	7.62	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
	mmol/l	7.30	6.35	8.25	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
Cholinesterase	U/l	4923	3938	5908	492.50	985.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	457	375	539	41.00	82.00	Ortho Vitros Microslide Systems 37°C
	U/l	552	453	651	49.50	99.00	CK-NAC serum start (DGKC) 37°C
	U/l	346	284	408	31.00	62.00	CK-NAC serum start (DGKC) 30°C
	U/l	235	193	277	21.00	42.00	CK-NAC serum start (DGKC) 25°C
	U/l	534	438	630	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	334	274	394	30.00	60.00	CK-NAC substrate start (DGKC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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
	U/l	560	460	660	50.00	100.00	Monothioglycerol 37°C
	U/l	351	288	414	31.50	63.00	Monothioglycerol 30°C
	U/l	238	196	280	21.00	42.00	Monothioglycerol 25°C
	U/l	516	423	609	46.50	93.00	Dithioerythritol 37°C
	U/l	323	265	381	29.00	58.00	Dithioerythritol 30°C
	U/l	219	180	258	19.50	39.00	Dithioerythritol 25°C
	U/l	506	415	597	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	317	260	374	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
Copper	µmol/l	27.7	22.1	33.3	2.80	5.60	Atomic absorption
	µg/dl	176	141	211	17.50	35.00	
	µmol/l	27.3	21.8	32.8	2.75	5.50	Colorimetric
	µg/dl	174	139	209	17.50	35.00	
Cortisol	nmol/l	1091	818	1364	136.50	273.00	Roche Cobas E411
	µg/dl	39.3	29.4	49.2	4.95	9.90	
Creatinine	µmol/l	340	272	408	34.00	68.00	Alkaline picrate with deproteinization
	mg/dl	3.84	3.07	4.61	0.39	0.77	
	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	396	316	476	40.00	80.00	Enzymatic UV method
	mg/dl	4.47	3.57	5.37	0.45	0.90	
	µmol/l	399	319	479	40.00	80.00	Creatinine PAP method
	mg/dl	4.51	3.60	5.42	0.46	0.91	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	401	321	481	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.53	3.63	5.43	0.45	0.90	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	400	320	480	40.00	80.00	Vitros IDMS Traceable
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	398	318	478	40.00	80.00	IDMS traceable
	mg/dl	4.50	3.59	5.41	0.46	0.91	
D-3-Hydroxybutyrate	mmol/l	1.16	0.98	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.51	2.81	4.21	0.35	0.70	Immunoturbidimetric
	ng/ml	2.74	2.19	3.29	0.28	0.55	
Folate	nmol/l	16.4	12.5	20.3	1.95	3.90	Roche Cobas E411
	ng/ml	7.23	5.51	8.95	0.86	1.72	
Free T4	pmol/l	53.1	39.9	66.3	6.60	13.20	Abbott Architect
	ng/dl	4.14	3.11	5.17	0.52	1.03	
	pg/ml	41.4	31.1	51.7	5.15	10.30	Abbott Architect
	pmol/l	69.7	52.3	87.1	8.70	17.40	Siemens Centaur XP/XPT/Classic
	ng/dl	5.44	4.08	6.80	0.68	1.36	
	pg/ml	54.4	40.8	68.0	6.80	13.60	Siemens Centaur XP/XPT/Classic
	pmol/l	66.7	50.0	83.4	8.35	16.70	Beckman DxI800
	ng/dl	5.20	3.90	6.50	0.65	1.30	
	pg/ml	52.0	39.0	65.0	6.50	13.00	Beckman DxI800

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
An:alyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	90.8	68.1	114	11.35	22.70	Diasorin Liaison
	ng/dl	7.08	5.31	8.85	0.89	1.77	
	pg/ml	70.8	53.1	88.5	8.85	17.70	Diasorin Liaison
	pmol/l	74.7	56.1	93.3	9.30	18.60	Siemens Immulite 2000/2500
	ng/dl	5.83	4.38	7.28	0.73	1.45	
	pg/ml	58.3	43.8	72.8	7.25	14.50	Siemens Immulite 2000/2500
	pmol/l	82.6	61.9	103	10.35	20.70	Roche Elecsys
	ng/dl	6.44	4.83	8.05	0.81	1.61	
	pg/ml	64.4	48.3	80.5	8.05	16.10	Roche Elecsys
	pmol/l	81.4	61.1	102	10.15	20.30	Roche Modular E170
	ng/dl	6.35	4.77	7.93	0.79	1.58	
	pg/ml	63.5	47.7	79.3	7.90	15.80	Roche Modular E170
	pmol/l	77.4	58.0	96.8	9.70	19.40	Roche Cobas E411
	ng/dl	6.04	4.52	7.56	0.76	1.52	
	pg/ml	60.4	45.2	75.6	7.60	15.20	Roche Cobas E411
	pmol/l	79.0	59.3	98.7	9.85	19.70	Roche Cobas 6000/8000
	ng/dl	6.16	4.63	7.69	0.77	1.53	
	pg/ml	61.6	46.3	76.9	7.65	15.30	Roche Cobas 6000/8000
	pmol/l	73.0	54.8	91.2	9.10	18.20	Biomerieux Vidas FT4N Kit
	ng/dl	5.69	4.27	7.11	0.71	1.42	
	pg/ml	56.9	42.7	71.1	7.10	14.20	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	17.9	14.3	21.6	1.82	3.63	Immunoturbidimetric
	µg/ml	8.57	6.84	10.3	0.87	1.73	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	158	134	182	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	106	144	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	97	83	111	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	198	168	228	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	137	116	158	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	108	91	125	8.50	17.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	85	72	98	6.50	13.00	Gamma glutamyl-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
	U/l	178	151	205	13.50	27.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	140	119	161	10.50	21.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	93	127	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	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose dehydrogenase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.69	2.29	3.09	0.20	0.40	Direct HDL Immunoseparation
	mg/dl	104	88.4	120	7.80	15.60	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.52	2.14	2.90	0.19	0.38	Vitros Magnetic HDL
	mg/dl	97.3	82.6	112	7.35	14.70	
	mmol/l	3.44	2.93	3.95	0.26	0.51	Direct HDL PEGME
	mg/dl	133	113	153	10.00	20.00	
	mmol/l	2.76	2.35	3.17	0.21	0.41	Direct Clearance Method
	mg/dl	107	90.7	123	8.15	16.30	
	mmol/l	2.64	2.24	3.04	0.20	0.40	Vitros 5.1 FS microtip assay
	mg/dl	102	86.5	118	7.75	15.50	
	mmol/l	2.49	2.12	2.86	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	96.1	81.8	110	7.15	14.30	
	mmol/l	3.61	3.07	4.15	0.27	0.54	Direct HDL Roche 3rd generation
	mg/dl	139	119	159	10.00	20.00	
	mmol/l	2.65	2.25	3.05	0.20	0.40	HDL - Ultra
	mg/dl	102	86.9	117	7.55	15.10	
Immunoglobulin A	g/l	1.18	0.89	1.48	0.15	0.30	Immunoturbidimetric
	mg/dl	118	88.5	148	14.75	29.50	
Immunoglobulin G	g/l	6.05	4.96	7.14	0.55	1.09	Immunoturbidimetric
	mg/dl	605	496	714	54.50	109.00	
Immunoglobulin M	g/l	0.73	0.59	0.88	0.07	0.15	Immunoturbidimetric
	mg/dl	73.1	58.5	87.7	7.30	14.60	
Iron	µmol/l	36.9	30.2	43.6	3.35	6.70	Colorimetric with ppt.
	µg/dl	206	169	243	18.50	37.00	
	µmol/l	36.9	30.3	43.5	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	38.7	31.8	45.6	3.45	6.90	Ortho Vitros Microslide Systems
	µg/dl	216	178	254	19.00	38.00	
Lactate	mmol/l	5.19	4.26	6.12	0.47	0.93	Ion selective electrode
	mg/dl	46.8	38.4	55.2	4.20	8.40	
	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	
	mmol/l	5.07	4.16	5.98	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.7	37.5	53.9	4.10	8.20	
	mmol/l	5.43	4.45	6.41	0.49	0.98	UV LDH
	mg/dl	48.9	40.1	57.7	4.40	8.80	
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1069	909	1229	80.00	160.00	Ortho Vitros Microslide Systems 37°C
	U/l	329	280	378	24.50	49.00	L->P 37°C
	U/l	238	202	274	18.00	36.00	L->P 30°C
	U/l	167	142	192	12.50	25.00	L->P 25°C
	U/l	798	678	918	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	576	490	662	43.00	86.00	P->L Scandinavian & Dutch 30°C
	U/l	405	344	466	30.50	61.00	P->L Scandinavian & Dutch 25°C
	U/l	693	589	797	52.00	104.00	P->L German methods 37°C
	U/l	500	425	575	37.50	75.00	P->L German methods 30°C
	U/l	351	299	403	26.00	52.00	P->L German methods 25°C
	U/l	696	592	800	52.00	104.00	P->L SFBC 37°C
	U/l	503	427	579	38.00	76.00	P->L SFBC 30°C
	U/l	353	300	406	26.50	53.00	P->L SFBC 25°C
	U/l	355	302	408	26.50	53.00	L->P IFCC 37°C
	U/l	256	218	294	19.00	38.00	L->P IFCC 30°C
	U/l	180	153	207	13.50	27.00	L->P IFCC 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
	U/l	639	512	766	63.50	127.00	Ortho Vitros Microslide Systems 37°C
	U/l	53	42	64	5.50	11.00	Roche Colorimetric 37°C
	U/l	78	62	94	8.00	16.00	Randox Colorimetric 37°C
	U/l	430	345	515	42.50	85.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.44	2.14	2.74	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.69	1.49	1.89	0.10	0.20	
	mmol/l	1.97	1.73	2.21	0.12	0.24	Flame photometry
	mg/dl	1.37	1.20	1.54	0.09	0.17	
	mmol/l	2.12	1.87	2.37	0.13	0.25	Ion selective electrode
	mg/dl	1.47	1.30	1.64	0.09	0.17	
	mmol/l	2.04	1.79	2.29	0.13	0.25	Spectrophotometric
	mg/dl	1.42	1.24	1.60	0.09	0.18	
	mmol/l	2.06	1.81	2.31	0.13	0.25	Randox Colorimetric
	mg/dl	1.43	1.26	1.60	0.09	0.17	
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Arsenazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.62	1.43	1.81	0.10	0.19	Calmagite
	mg/dl	3.94	3.47	4.41	0.24	0.47	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.65	1.46	1.84	0.10	0.19	Methylthymol blue
	mg/dl	4.01	3.55	4.47	0.23	0.46	
	mmol/l	1.64	1.44	1.84	0.10	0.20	Chlorphosphonazo III
	mg/dl	3.99	3.50	4.48	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Enzymatic
	mg/dl	4.03	3.55	4.51	0.24	0.48	
NEFA	mmol/l	0.58	0.49	0.67	0.04	0.09	Colorimetric
Osmolality	mOsm/kg	344	276	412	34.00	68.00	Calculated
	mOsm/kg	382	305	459	38.50	77.00	Freezing point depression
Paracetamol	mmol/l	0.61	0.49	0.74	0.06	0.12	Colorimetric
	mg/l	92.8	74.3	111	9.25	18.50	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	7.01	5.95	8.07	0.53	1.06	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.01	5.95	8.07	0.53	1.06	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.16	5.67	6.65	0.25	0.49	Ortho Vitros Microslide Systems
	mmol/l	6.30	5.80	6.80	0.25	0.50	Enzymatic
	mmol/l	5.93	5.46	6.40	0.24	0.47	Flame photometry
	mmol/l	6.15	5.66	6.64	0.25	0.49	ISE method - direct
	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.8	36.6	55.0	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	44.7	35.8	53.6	4.45	8.90	Biuret reaction end point
	g/dl	4.47	3.58	5.36	0.45	0.89	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction kinetic
	g/dl	4.41	3.53	5.29	0.44	0.88	
PSA Total	ng/ml =	36.5	27.3	45.7	4.60	9.20	Roche Elecsys Modular E170
	ng/ml =	32.0	24.0	40.0	4.00	8.00	Beckman Access standardised to Hybritech
	ng/ml =	32.9	24.7	41.1	4.10	8.20	bioMerieux VIDAS TPSA
	ng/ml =	24.9	18.7	31.1	3.10	6.20	Siemens Centaur XP/XPT/Classic
	ng/ml =	29.7	22.3	37.1	3.70	7.40	Abbott Architect
	ng/ml =	38.2	28.6	47.8	4.80	9.60	Cobas E411
	ng/ml =	37.4	28.0	46.8	4.70	9.40	Roche Cobas 6000/8000
	ng/ml =	32.0	24.0	40.0	4.00	8.00	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.85	0.68	1.02	0.09	0.17	Enzymatic
	mg/dl	11.7	9.37	14.0	1.17	2.33	
Sodium	mmol/l	159	151	167	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	156	148	164	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry
	mmol/l	158	150	166	4.00	8.00	ISE method - direct
	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	115	92.3	139	11.55	23.10	Immunoturbidimetric
	µg/ml	20.8	16.6	25.0	2.10	4.20	
Thyroid Stimulating Hormone	µU/ml =	0.97	0.77	1.16	0.10	0.19	Abbott Architect
	µU/ml =	1.25	1.00	1.50	0.13	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.30	1.04	1.56	0.13	0.26	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.27	1.01	1.53	0.13	0.26	Diasorin Liaison
	µU/ml =	1.21	0.97	1.45	0.12	0.24	Siemens Immulite 1000

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Vitros ECi
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Roche Elecsys
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Modular E170
	µU/ml =	1.12	0.89	1.35	0.11	0.23	Tosoh AIA360
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Roche Cobas E411
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Roche Cobas 6000/8000
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Monobind Inc. ELISA / CLIA
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	51.3	40.5	62.1	5.40	10.80	Removal of excess free iron
	µg/dl	287	226	348	30.50	61.00	
	µmol/l	56.3	44.5	68.1	5.90	11.80	FE+UIBC(saturation with iron)
	µg/dl	315	249	381	33.00	66.00	
	µmol/l	54.1	42.7	65.5	5.70	11.40	Direct Colorimetric
	µg/dl	302	239	365	31.50	63.00	
	µmol/l	39.9	31.5	48.3	4.20	8.40	Calculated from Transferrin
	µg/dl	223	176	270	23.50	47.00	
	µmol/l	57.9	45.7	70.1	6.10	12.20	Randox Direct
	µg/dl	324	255	393	34.50	69.00	
Tobramycin	µmol/l	13.1	10.5	15.7	1.29	2.58	Immunoturbidimetric
	µg/ml	6.12	4.91	7.33	0.61	1.21	
Total T3	nmol/l	3.70	2.78	4.62	0.46	0.92	Abbott Architect
	ng/ml	2.41	1.81	3.01	0.30	0.60	
	ng/dl	241	181	301	30.00	60.00	Abbott Architect
	nmol/l	5.67	4.25	7.09	0.71	1.42	Siemens Centaur XP/XPT/Classic
	ng/ml	3.69	2.77	4.61	0.46	0.92	
	ng/dl	369	277	461	46.00	92.00	Siemens Centaur XP/XPT/Classic

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	4.30	3.22	5.38	0.54	1.08	BioMerieux Vidas
	ng/ml	2.80	2.10	3.50	0.35	0.70	
	ng/dl	280	210	350	35.00	70.00	BioMerieux Vidas
	nmol/l	4.40	3.30	5.50	0.55	1.10	Roche Modular E170
	ng/ml	2.86	2.15	3.57	0.36	0.71	
	ng/dl	286	215	357	35.50	71.00	Roche Modular E170
	nmol/l	7.61	5.71	9.51	0.95	1.90	Vitros ECi
	ng/ml	4.95	3.72	6.18	0.62	1.23	
	ng/dl	495	372	618	61.50	123.00	Vitros ECi
	nmol/l	4.61	3.46	5.76	0.58	1.15	Roche Cobas E411
	ng/ml	3.00	2.25	3.75	0.38	0.75	
	ng/dl	300	225	375	37.50	75.00	Roche Cobas E411
	nmol/l	4.89	3.67	6.11	0.61	1.22	Roche Cobas 6000/8000
	ng/ml	3.18	2.39	3.97	0.40	0.79	
	ng/dl	318	239	397	39.50	79.00	Roche Cobas 6000/8000
	nmol/l	4.88	3.66	6.10	0.61	1.22	Monobind Inc. ELISA / CLIA
	ng/ml	3.18	2.38	3.98	0.40	0.80	
	ng/dl	318	238	398	40.00	80.00	Monobind Inc. ELISA / CLIA
Total T4	nmol/l	242	181	303	30.50	61.00	Abbott Architect
	µg/dl	18.9	14.1	23.7	2.40	4.80	
	ng/ml	189	141	237	24.00	48.00	Abbott Architect
	nmol/l	237	178	296	29.50	59.00	Siemens Centaur XP/XPT/Classic
	µg/dl	18.5	13.9	23.1	2.30	4.60	
	ng/ml	185	139	231	23.00	46.00	Siemens Centaur XP/XPT/Classic

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	218	163	273	27.50	55.00	BioMerieux Vidas
	µg/dl	17.0	12.7	21.3	2.15	4.30	
	ng/ml	170	127	213	21.50	43.00	BioMerieux Vidas
	nmol/l	226	169	283	28.50	57.00	Siemens Immulite 1000
	µg/dl	17.6	13.2	22.0	2.20	4.40	
	ng/ml	176	132	220	22.00	44.00	Siemens Immulite 1000
	nmol/l	219	164	274	27.50	55.00	Siemens Immulite 2000/2500
	µg/dl	17.1	12.8	21.4	2.15	4.30	
	ng/ml	171	128	214	21.50	43.00	Siemens Immulite 2000/2500
	nmol/l	224	168	280	28.00	56.00	Vitros ECi
	µg/dl	17.5	13.1	21.9	2.20	4.40	
	ng/ml	175	131	219	22.00	44.00	Vitros ECi
	nmol/l	184	138	230	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	201	151	251	25.00	50.00	Roche Cobas E411
	µg/dl	15.7	11.8	19.6	1.95	3.90	
	ng/ml	157	118	196	19.50	39.00	Roche Cobas E411
	nmol/l	216	162	270	27.00	54.00	Roche Cobas 6000/8000
	µg/dl	16.8	12.6	21.0	2.10	4.20	
	ng/ml	168	126	210	21.00	42.00	Roche Cobas 6000/8000
	nmol/l	214	161	267	26.50	53.00	Microgenics DRI assay
	µg/dl	16.7	12.6	20.8	2.05	4.10	
	ng/ml	167	126	208	20.50	41.00	Microgenics DRI assay
Transferrin	g/l	1.60	1.28	1.92	0.16	0.32	Immunoturbidimetric
	mg/dl	160	128	192	16.00	32.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	212	290	19.50	39.00	
	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	3.01	2.53	3.49	0.24	0.48	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	3.23	2.71	3.75	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	286	240	332	23.00	46.00	
Urea	mmol/l	17.6	15.0	20.2	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	106	90.2	122	7.90	15.80	
	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease end point
	mg/dl	111	94.4	128	8.30	16.60	
	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	18.4	15.6	21.2	1.40	2.80	Urease hypochlorite
	mg/dl	111	93.8	128	8.60	17.20	
	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	
	mmol/l	17.6	15.0	20.2	1.30	2.60	Urease Berthelot
	mg/dl	106	90.2	122	7.90	15.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.94	7.78	10.1	0.58	1.16	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	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	0.56	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	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.32	8.11	10.5	0.61	1.21	
Vitamin B12	pmol/l	235	188	283	23.70	47.40	Roche Cobas E411
	pg/ml	319	255	383	32.00	64.00	
Zinc	µmol/l	35.0	28.0	42.0	3.50	7.00	Colorimetric with deproteinisation
	µg/dl	229	183	275	23.00	46.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin (electrophoresis)		62.0	55.9	68.1	3.05	6.10	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.8	5.2	8.4	0.82	1.63	% of total Protein (Beckman Capillary)
alpha-2-globulin		5.9	4.5	7.3	0.71	1.42	% of total Protein (Beckman Capillary)
beta-globulin		14.0	10.6	17.4	1.70	3.40	% of total Protein (Beckman Capillary)
gamma-globulin		11.3	8.6	14.0	1.36	2.71	% of total Protein (Beckman Capillary)

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.7	25.3	34.1	2.20	4.40	Bromocresol Green
	g/dl	2.97	2.53	3.41	0.22	0.44	
Alkaline Phosphatase	U/l	329	280	378	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	256	218	294	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	210	179	241	15.50	31.00	AMP optimised to IFCC 25°C
	U/l	446	379	513	33.50	67.00	Agappe - DGKC-SCE 37°C
	U/l	347	295	399	26.00	52.00	Agappe - DGKC-SCE 30°C
	U/l	285	242	328	21.50	43.00	Agappe - DGKC-SCE 25°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	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
	U/l	140	112	168	14.00	28.00	Agappee - IFCC 37°C
	U/l	104	83	125	10.50	21.00	Agappee - IFCC 30°C
	U/l	79	63	95	8.00	16.00	Agappee - IFCC 25°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
	U/l	148	118	178	15.00	30.00	Agappee - IFCC 37°C
	U/l	100	80	120	10.00	20.00	Agappee - IFCC 30°C
	U/l	70	56	84	7.00	14.00	Agappee - IFCC 25°C
Bilirubin Direct	µmol/l	26.0	20.5	31.5	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Direct	µmol/l	31.0	24.5	37.5	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	90.6	71.6	110	9.50	19.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.30	4.19	6.41	0.56	1.11	
	µmol/l	87.2	68.9	106	9.15	18.30	Oxidation to Biliverdin/Vanadate
	mg/dl	5.10	4.03	6.17	0.54	1.07	
Calcium	mmol/l	2.89	2.61	3.17	0.14	0.28	Cresolphthalein complexone
	mg/dl	11.6	10.5	12.7	0.55	1.10	
	mmol/l	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.28	6.33	8.23	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	
CK Total	U/l	543	446	640	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	340	279	401	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	231	190	272	20.50	41.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	331	265	397	33.00	66.00	Alkaline picrate with deproteinization
	mg/dl	3.74	2.99	4.49	0.38	0.75	
	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	Enzymatic UV method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	331	264	398	33.50	67.00	Jaffe rate blanked
	mg/dl	3.74	2.98	4.50	0.38	0.76	
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	158	134	182	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	125	106	144	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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	
Iron	µmol/l	36.9	30.2	43.6	3.35	6.70	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
LD (LDH)	U/l	732	622	842	55.00	110.00	P->L German methods 37°C
	U/l	529	449	609	40.00	80.00	P->L German methods 30°C
	U/l	371	315	427	28.00	56.00	P->L German methods 25°C
	U/l	718	610	826	54.00	108.00	P->L SFBC 37°C
	U/l	518	440	596	39.00	78.00	P->L SFBC 30°C
	U/l	364	309	419	27.50	55.00	P->L SFBC 25°C
	U/l	354	301	407	26.50	53.00	L->P IFCC 37°C
	U/l	256	217	295	19.50	39.00	L->P IFCC 30°C
	U/l	179	153	205	13.00	26.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.08	5.59	6.57	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.5	38.0	57.0	4.75	9.50	Biuret reaction end point
	g/dl	4.75	3.80	5.70	0.48	0.95	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	251	211	291	20.00	40.00	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	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	
Urea	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease end point
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	18.9	16.0	21.8	1.45	2.90	Urease kinetic
	mg/dl	114	96.2	132	8.90	17.80	
	mmol/l	18.5	15.8	21.2	1.35	2.70	Urease hypochlorite
	mg/dl	111	95.0	127	8.00	16.00	
	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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	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	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.29	8.10	10.5	0.60	1.19	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	425	361	489	32.00	64.00	Diethanolamine buffer DEA 37°C
	U/l	331	281	381	25.00	50.00	Diethanolamine buffer DEA 30°C
	U/l	272	231	313	20.50	41.00	Diethanolamine buffer DEA 25°C
	U/l	316	269	363	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	246	210	282	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	202	172	232	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	151	120	182	15.50	31.00	Tris buffer without P5P 37°C
	U/l	102	81	123	10.50	21.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Bilirubin Total	µmol/l	83.1	65.7	101	8.70	17.40	Diazo with Dichloroaniline (DCA)
	mg/dl	4.86	3.84	5.88	0.51	1.02	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Cholesterol	mmol/l	7.52	6.55	8.49	0.49	0.97	Cholesterol Oxidase
	mg/dl	290	253	327	18.50	37.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	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	388	310	466	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.38	3.50	5.26	0.44	0.88	
Glucose	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	2.20	1.87	2.53	0.17	0.33	Direct HDL Immunoseparation
	mg/dl	84.9	72.2	97.6	6.35	12.70	
LD (LDH)	U/l	631	537	725	47.00	94.00	P->L German methods 37°C
	U/l	456	388	524	34.00	68.00	P->L German methods 30°C
	U/l	320	272	368	24.00	48.00	P->L German methods 25°C
Protein Total	g/l	45.5	36.4	54.6	4.55	9.10	Biuret reaction end point
	g/dl	4.55	3.64	5.46	0.46	0.91	
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	
Urea	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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.7	25.3	34.1	2.20	4.40	Bromocresol Green
	g/dl	2.97	2.53	3.41	0.22	0.44	
	g/l	25.9	22.1	29.7	1.90	3.80	Bromocresol Purple
	g/dl	2.59	2.21	2.97	0.19	0.38	
	g/l	26.0	22.1	29.9	1.95	3.90	Turbidimetric Assays
	g/dl	2.60	2.21	2.99	0.20	0.39	
Alkaline Phosphatase	U/l	245	208	282	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	191	162	220	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	157	133	181	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	246	209	283	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	271	230	312	20.50	41.00	Randox liquid stable pNPG7 37°C
	U/l	265	225	305	20.00	40.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	270	230	310	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	270	230	310	20.00	40.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	268	228	308	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	17.4	13.8	21.0	1.80	3.60	Colorimetric
	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bile Acids	µmol/l	46.1	36.9	55.3	4.60	9.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.8	22.8	34.8	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Bilirubin Total	µmol/l	80.2	63.3	97.1	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	80.4	63.5	97.3	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.70	3.71	5.69	0.50	0.99	
	µmol/l	80.1	63.2	97.0	8.45	16.90	Diazonium ion
	mg/dl	4.69	3.70	5.68	0.50	0.99	
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	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.30	6.35	8.25	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
Cholinesterase	U/l	4826	3861	5791	482.50	965.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	547	449	645	49.00	98.00	CK-NAC substrate start (DGKC) 37°C
	U/l	342	281	403	30.50	61.00	CK-NAC substrate start (DGKC) 30°C
	U/l	232	191	273	20.50	41.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	571	468	674	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	357	293	421	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	243	199	287	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	386	308	464	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.36	3.48	5.24	0.44	0.88	
	µmol/l	405	324	486	40.50	81.00	Enzymatic UV method
	mg/dl	4.58	3.66	5.50	0.46	0.92	
	µmol/l	402	322	482	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.54	3.64	5.44	0.45	0.90	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	389	311	467	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.14	0.97	1.31	0.08	0.17	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	79.0	59.3	98.7	9.85	19.70	Roche Cobas 6000/8000
	ng/dl	6.16	4.63	7.69	0.77	1.53	
	pg/ml	61.6	46.3	76.9	7.65	15.30	Roche Cobas 6000/8000
gamma-GT	U/l	150	128	172	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	118	101	135	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	93	79	107	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	145	195	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	114	154	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
GLDH	U/l	34	27	41	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	26	21	31	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	21	17	25	2.00	4.00	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	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	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	3.64	3.09	4.19	0.28	0.55	Direct HDL PEGME
	mg/dl	141	119	163	11.00	22.00	
	mmol/l	3.69	3.14	4.24	0.28	0.55	Direct HDL Roche 3rd generation
	mg/dl	142	121	163	10.50	21.00	
Iron	µmol/l	36.8	30.1	43.5	3.35	6.70	Colorimetric with ppt.
	µg/dl	206	168	244	19.00	38.00	
	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
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	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	682	580	784	51.00	102.00	P->L German methods 37°C
	U/l	492	419	565	36.50	73.00	P->L German methods 30°C
	U/l	346	294	398	26.00	52.00	P->L German methods 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	351	298	404	26.50	53.00	L->P IFCC 37°C
	U/l	253	215	291	19.00	38.00	L->P IFCC 30°C
	U/l	178	151	205	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	52	42	62	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.04	1.80	2.28	0.12	0.24	Spectrophotometric
	mg/dl	1.42	1.25	1.59	0.09	0.17	
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.65	1.45	1.85	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Osmolality	mOsm/kg	346	277	415	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.91	5.86	7.96	0.53	1.05	
	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	6.29	5.79	6.79	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	43.7	35.0	52.4	4.35	8.70	Biuret reaction kinetic
	g/dl	4.37	3.50	5.24	0.44	0.87	
PSA Total	ng/ml =	37.4	28.0	46.8	4.70	9.40	Roche Cobas 6000/8000
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.30	1.04	1.56	0.13	0.26	Roche Cobas 6000/8000
TIBC	µmol/l	54.7	43.2	66.2	5.75	11.50	FE+UIBC(saturation with iron)
	µg/dl	306	241	371	32.50	65.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	39.9	31.5	48.3	4.20	8.40	Calculated from Transferrin
	µg/dl	223	176	270	23.50	47.00	
Total T3	nmol/l	4.89	3.67	6.11	0.61	1.22	Roche Cobas 6000/8000
	ng/ml	3.18	2.39	3.97	0.40	0.79	
	ng/dl	318	239	397	39.50	79.00	Roche Cobas 6000/8000
Total T4	nmol/l	216	162	270	27.00	54.00	Roche Cobas 6000/8000
	µg/dl	16.8	12.6	21.0	2.10	4.20	
	ng/ml	168	126	210	21.00	42.00	Roche Cobas 6000/8000
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	
	mmol/l	2.72	2.29	3.15	0.22	0.43	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	241	203	279	19.00	38.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	246	206	286	20.00	40.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease end point
	mg/dl	112	95.6	128	8.20	16.40	
	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	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.00	10.4	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	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	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.21	8.00	10.4	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Bromocresol Green
	g/dl	2.98	2.54	3.42	0.22	0.44	
Alkaline Phosphatase	U/l	246	209	283	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	192	163	221	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	157	134	180	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	276	234	318	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.2	13.7	20.7	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	29.6	23.4	35.8	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	79.6	62.9	96.3	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.66	3.68	5.64	0.49	0.98	
	µmol/l	79.9	63.1	96.7	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.67	3.69	5.65	0.49	0.98	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	80.9	63.9	97.9	8.50	17.00	Diazonium ion
	mg/dl	4.73	3.74	5.72	0.50	0.99	
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	3.10	2.79	3.41	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.45	6.48	8.42	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	250	326	19.00	38.00	
CK Total	U/l	564	463	665	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	353	290	416	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	240	197	283	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	345	276	414	34.50	69.00	Alkaline picrate with deproteinization
	mg/dl	3.90	3.12	4.68	0.39	0.78	
	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	
	µmol/l	394	315	473	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	370	296	444	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.18	3.34	5.02	0.42	0.84	
gamma-GT	U/l	163	139	187	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	110	146	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	164	140	188	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	129	110	148	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	101	86	116	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	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	3.41	2.90	3.92	0.26	0.51	Direct HDL Roche 3rd generation
	mg/dl	132	112	152	10.00	20.00	
LD (LDH)	U/l	365	310	420	27.50	55.00	L->P IFCC 37°C
	U/l	264	224	304	20.00	40.00	L->P IFCC 30°C
	U/l	185	157	213	14.00	28.00	L->P IFCC 25°C
Magnesium	mmol/l	1.57	1.38	1.76	0.10	0.19	Chlorphosphonazo III
	mg/dl	3.82	3.35	4.29	0.24	0.47	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.15	5.66	6.64	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.2	36.1	54.3	4.55	9.10	Biuret reaction end point
	g/dl	4.52	3.61	5.43	0.46	0.91	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
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	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	211	291	20.00	40.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	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	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.05	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	26.5	22.6	30.4	1.95	3.90	Bromocresol Purple
	g/dl	2.65	2.26	3.04	0.20	0.39	
Alkaline Phosphatase	U/l	242	206	278	18.00	36.00	Roche Integra AMP buffer 37°C
	U/l	189	160	218	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 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	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.9	13.4	20.4	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	27.8	22.0	33.6	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.7	63.0	96.4	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.66	3.69	5.63	0.49	0.97	
	µmol/l	79.8	63.0	96.6	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.67	3.69	5.65	0.49	0.98	
	µmol/l	81.5	64.4	98.6	8.55	17.10	Diazonium ion
	mg/dl	4.77	3.77	5.77	0.50	1.00	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.13	2.81	3.45	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.15	2.84	3.46	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.34	6.39	8.29	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	247	319	18.00	36.00	
Cholinesterase	U/l	4912	3930	5894	491.00	982.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	576	472	680	52.00	104.00	CK-NAC (IFCC) 37°C
	U/l	361	295	427	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	245	201	289	22.00	44.00	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	393	315	471	39.00	78.00	Enzymatic UV method
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	406	325	487	40.50	81.00	Roche Creatinine Plus
	mg/dl	4.59	3.67	5.51	0.46	0.92	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	395	316	474	39.50	79.00	Jaffe rate blanked
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	394	316	472	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.45	3.57	5.33	0.44	0.88	
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	145	195	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	114	154	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	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	3.39	2.88	3.90	0.26	0.51	Direct HDL Roche 3rd generation
	mg/dl	131	111	151	10.00	20.00	
Iron	µmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.54	4.55	6.53	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.9	41.0	58.8	4.45	8.90	
LD (LDH)	U/l	682	579	785	51.50	103.00	P->L German methods 37°C
	U/l	492	418	566	37.00	74.00	P->L German methods 30°C
	U/l	346	294	398	26.00	52.00	P->L German methods 25°C
	U/l	349	297	401	26.00	52.00	L->P IFCC 37°C
	U/l	252	214	290	19.00	38.00	L->P IFCC 30°C
	U/l	177	151	203	13.00	26.00	L->P IFCC 25°C

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	51	41	61	5.00	10.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.65	1.45	1.85	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.30	5.80	6.80	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction end point
	g/dl	4.44	3.55	5.33	0.45	0.89	
	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction kinetic
	g/dl	4.44	3.55	5.33	0.45	0.89	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.76	2.32	3.20	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	244	205	283	19.50	39.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	9.37	8.15	10.6	0.61	1.22	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	8.15	10.6	0.61	1.22	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.5	25.0	34.0	2.25	4.50	Bromocresol Green
	g/dl	2.95	2.50	3.40	0.23	0.45	
Alkaline Phosphatase	U/l	226	192	260	17.00	34.00	Roche Integra AMP buffer 37°C
	U/l	176	150	202	13.00	26.00	Roche Integra AMP buffer 30°C
	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	95	75	115	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	243	206	280	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	270	230	310	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	146	116	176	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	78	120	10.50	21.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	29.8	23.6	36.0	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Bilirubin Total	µmol/l	79.6	62.8	96.4	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.66	3.67	5.65	0.50	0.99	
	µmol/l	78.1	61.7	94.5	8.20	16.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.57	3.61	5.53	0.48	0.96	
	µmol/l	78.2	61.8	94.6	8.20	16.40	Diazonium ion
	mg/dl	4.57	3.62	5.52	0.48	0.95	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.28	6.33	8.23	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	
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	404	323	485	40.50	81.00	Enzymatic UV method
	mg/dl	4.57	3.65	5.49	0.46	0.92	
	µmol/l	408	326	490	41.00	82.00	Roche Creatinine Plus
	mg/dl	4.61	3.68	5.54	0.47	0.93	
	µmol/l	398	319	477	39.50	79.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	3.60	5.40	0.45	0.90	
gamma-GT	U/l	144	123	165	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	113	97	129	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	89	76	102	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	131	111	151	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	87	117	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.52	2.99	4.05	0.27	0.53	Direct HDL Roche 3rd generation
	mg/dl	136	115	157	10.50	21.00	
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.41	4.43	6.39	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.9	57.5	4.40	8.80	
LD (LDH)	U/l	352	299	405	26.50	53.00	L->P IFCC 37°C
	U/l	254	216	292	19.00	38.00	L->P IFCC 30°C
	U/l	178	152	204	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	51	41	61	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.06	1.82	2.30	0.12	0.24	Spectrophotometric
	mg/dl	1.43	1.26	1.60	0.09	0.17	
Magnesium	mmol/l	1.63	1.43	1.83	0.10	0.20	Xylidyl Blue
	mg/dl	3.96	3.47	4.45	0.25	0.49	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.33	5.82	6.84	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction end point
	g/dl	4.43	3.54	5.32	0.45	0.89	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	54.0	42.6	65.4	5.70	11.40	FE+UIBC(saturation with iron)
	µg/dl	302	238	366	32.00	64.00	
Triglycerides	mmol/l	2.74	2.31	3.17	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	248	208	288	20.00	40.00	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	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	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.12	7.95	10.3	0.59	1.17	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
Alkaline Phosphatase	U/l	504	428	580	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	324	275	373	24.50	49.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	286	243	329	21.50	43.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bile Acids	µmol/l	46.7	37.4	56.0	4.65	9.30	5th Generation Colorimetric
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Bilirubin Total	µmol/l	93.1	73.5	113	9.80	19.60	Diazo with Sulphanilic Acid
	mg/dl	5.45	4.30	6.60	0.58	1.15	
	µmol/l	92.2	72.8	112	9.70	19.40	Oxidation to Biliverdin/Vanadate
	mg/dl	5.39	4.26	6.52	0.57	1.13	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Cholesterol	mmol/l	7.49	6.52	8.46	0.49	0.97	Cholesterol Oxidase
	mg/dl	289	252	326	18.50	37.00	
CK Total	U/l	548	449	647	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	605	496	714	54.50	109.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	332	266	398	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.75	3.01	4.49	0.37	0.74	
	µmol/l	396	317	475	39.50	79.00	Enzymatic UV method
	mg/dl	4.47	3.58	5.36	0.45	0.89	
gamma-GT	U/l	178	151	205	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
Iron	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	5.37	4.40	6.34	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.4	39.6	57.2	4.40	8.80	
LD (LDH)	U/l	738	627	849	55.50	111.00	P->L German methods 37°C
	U/l	358	304	412	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	79	63	95	8.00	16.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.88	1.65	2.11	0.12	0.23	Colorimetric
	mg/dl	1.31	1.15	1.47	0.08	0.16	
Magnesium	mmol/l	1.64	1.44	1.84	0.10	0.20	Xylidyl Blue
	mg/dl	3.99	3.50	4.48	0.25	0.49	
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.34	5.83	6.85	0.26	0.51	Enzymatic
	mmol/l	6.23	5.73	6.73	0.25	0.50	ISE method - direct
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Biuret reaction end point
	g/dl	4.57	3.65	5.49	0.46	0.92	
Sodium	mmol/l	161	153	169	4.00	8.00	Enzymatic
	mmol/l	159	151	167	4.00	8.00	ISE method - direct
TIBC	µmol/l	57.9	45.7	70.1	6.10	12.20	Direct Colorimetric
	µg/dl	324	255	393	34.50	69.00	
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	
Urea	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	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.49	8.25	10.7	0.62	1.24	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.7	23.6	31.8	2.05	4.10	Bromocresol Green
	g/dl	2.77	2.36	3.18	0.21	0.41	
	g/l	26.6	22.6	30.6	2.00	4.00	Bromocresol Purple
	g/dl	2.66	2.26	3.06	0.20	0.40	
Alkaline Phosphatase	U/l	431	366	496	32.50	65.00	Diethanolamine buffer DEA 37°C
	U/l	286	243	329	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	315	268	362	23.50	47.00	AMP non-optimised 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	281	239	323	21.00	42.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.7	14.8	22.6	1.95	3.90	Enzymatic
Bile Acids	µmol/l	43.4	34.7	52.1	4.35	8.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	32.2	25.4	39.0	3.40	6.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.88	1.49	2.27	0.20	0.39	
Bilirubin Total	µmol/l	93.2	73.6	113	9.80	19.60	Oxidation to Biliverdin/Vanadate
	mg/dl	5.45	4.31	6.59	0.57	1.14	
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	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	5034	4027	6041	503.50	1007.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	532	436	628	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	381	305	457	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
gamma-GT	U/l	155	132	178	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	169	144	194	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
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	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.25	1.91	2.59	0.17	0.34	Direct Clearance Method
	mg/dl	86.9	73.7	100	6.60	13.20	
Iron	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	351	299	403	26.00	52.00	L->P 37°C
	U/l	703	597	809	53.00	106.00	P->L German methods 37°C
	U/l	367	312	422	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	74	59	89	7.50	15.00	Other Colorimetric 37°C
Lithium	mmol/l	1.99	1.75	2.23	0.12	0.24	Spectrophotometric
	mg/dl	1.38	1.22	1.54	0.08	0.16	
Magnesium	mmol/l	1.61	1.42	1.80	0.10	0.19	Xylidyl Blue
	mg/dl	3.91	3.45	4.37	0.23	0.46	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.2	36.9	55.5	4.65	9.30	Biuret reaction end point
	g/dl	4.62	3.69	5.55	0.47	0.93	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.4	46.2	70.6	6.10	12.20	Direct Colorimetric
	µg/dl	326	258	394	34.00	68.00	
Triglycerides	mmol/l	2.97	2.50	3.44	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	263	221	305	21.00	42.00	
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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	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	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	26.4	22.4	30.4	2.00	4.00	Bromocresol Purple
	g/dl	2.64	2.24	3.04	0.20	0.40	
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	Siemens Dimension AMP buffer 37°C
	U/l	284	241	327	21.50	43.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer with P5P 37°C
	U/l	148	119	177	14.50	29.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	333	283	383	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	181	145	217	18.00	36.00	Tris buffer with P5P 37°C
	U/l	183	146	220	18.50	37.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
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	
Calcium	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	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.95	6.04	7.86	0.46	0.91	Dimension-Siemens reagents
	mg/dl	268	233	303	17.50	35.00	
CK Total	U/l	514	422	606	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	498	408	588	45.00	90.00	Dithioerythritol (DTE) IFCC correlated 37°C

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	404	323	485	40.50	81.00	Alkaline picrate no deproteinization
	mg/dl	4.57	3.65	5.49	0.46	0.92	
	µmol/l	409	327	491	41.00	82.00	IDMS traceable
	mg/dl	4.62	3.70	5.54	0.46	0.92	
gamma-GT	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	204	174	234	15.00	30.00	Siemens Dimension (non 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	
HDL - Cholesterol	mmol/l	3.41	2.89	3.93	0.26	0.52	Direct HDL PPD
	mg/dl	132	112	152	10.00	20.00	
	mmol/l	3.42	2.90	3.94	0.26	0.52	Direct HDL PEGME
	mg/dl	132	112	152	10.00	20.00	
Iron	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric with ppt.
	µg/dl	201	165	237	18.00	36.00	
	µmol/l	35.4	29.1	41.7	3.15	6.30	Colorimetric without ppt.
	µg/dl	198	163	233	17.50	35.00	
Lactate	mmol/l	5.27	4.32	6.22	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.5	38.9	56.1	4.30	8.60	
	mmol/l	5.40	4.43	6.37	0.49	0.97	UV LDH
	mg/dl	48.7	39.9	57.5	4.40	8.80	
LD (LDH)	U/l	355	302	408	26.50	53.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	344	292	396	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	244	196	292	24.00	48.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.64	1.45	1.83	0.10	0.19	Methylthymol blue
	mg/dl	3.99	3.52	4.46	0.24	0.47	

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RANDOX

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction end point
	g/dl	4.56	3.65	5.47	0.46	0.91	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	49.6	39.2	60.0	5.20	10.40	Removal of excess free iron
	µg/dl	277	219	335	29.00	58.00	
Triglycerides	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	254	213	295	20.50	41.00	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	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	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.31	8.10	10.5	0.61	1.21	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.6	24.4	32.8	2.10	4.20	Bromocresol Green
	g/dl	2.86	2.44	3.28	0.21	0.42	
	g/l	26.5	22.5	30.5	2.00	4.00	Bromocresol Purple
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	276	235	317	20.50	41.00	Siemens Dimension AMP buffer 37°C
	U/l	285	243	327	21.00	42.00	AMP optimised to IFCC 37°C
	U/l	287	244	330	21.50	43.00	Randox AMP 37°C
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer with P5P 37°C
	U/l	146	117	175	14.50	29.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	338	287	389	25.50	51.00	Siemens - maltopenta/hexaoside 37°C
	U/l	337	286	388	25.50	51.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	180	144	216	18.00	36.00	Tris buffer with P5P 37°C
	U/l	182	146	218	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	84.3	66.6	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.90	5.96	0.52	1.03	
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	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.95	6.05	7.85	0.45	0.90	Dimension-Siemens reagents
	mg/dl	268	234	302	17.00	34.00	
Cholinesterase	U/l	4961	3969	5953	496.00	992.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	504	414	594	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	517	424	610	46.50	93.00	Dithioerythritol 37°C
Creatinine	µmol/l	407	325	489	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.60	3.67	5.53	0.47	0.93	
	µmol/l	391	313	469	39.00	78.00	Enzymatic UV method
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	392	313	471	39.50	79.00	Creatinine PAP method
	mg/dl	4.43	3.54	5.32	0.45	0.89	
	µmol/l	404	324	484	40.00	80.00	Jaffe rate blanked
	mg/dl	4.57	3.66	5.48	0.46	0.91	
	µmol/l	407	325	489	41.00	82.00	IDMS traceable
	mg/dl	4.60	3.67	5.53	0.47	0.93	
gamma-GT	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	202	171	233	15.50	31.00	Siemens Dimension (non IFCC) 37°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	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	3.44	2.92	3.96	0.26	0.52	Direct HDL PPD
	mg/dl	133	113	153	10.00	20.00	
	mmol/l	3.41	2.90	3.92	0.26	0.51	Direct HDL PEGME
	mg/dl	132	112	152	10.00	20.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	35.4	29.0	41.8	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	162	234	18.00	36.00	
LD (LDH)	U/l	347	295	399	26.00	52.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	346	294	398	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	242	194	290	24.00	48.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Methylthymol blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Phosphate Inorganic	mmol/l	2.19	1.87	2.51	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.79	5.80	7.78	0.50	0.99	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.18	5.68	6.68	0.25	0.50	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	46.1	36.9	55.3	4.60	9.20	Biuret reaction kinetic
	g/dl	4.61	3.69	5.53	0.46	0.92	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	Removal of excess free iron
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.92	2.46	3.38	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	258	218	298	20.00	40.00	
	mmol/l	2.89	2.42	3.36	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	256	214	298	21.00	42.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease end point
	mg/dl	114	97.4	131	8.30	16.60	
	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	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.11	10.6	0.62	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.29	8.08	10.5	0.61	1.21	

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VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			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	468	398	538	35.00	70.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	88.8	70.2	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.19	4.11	6.27	0.54	1.08	
Calcium	mmol/l	3.08	2.78	3.38	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	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	573	470	676	51.50	103.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	
LD (LDH)	U/l	342	291	393	25.50	51.00	L->P IFCC 37°C
Protein Total	g/l	49.2	39.3	59.1	4.95	9.90	Biuret reaction end point
	g/dl	4.92	3.93	5.91	0.50	0.99	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot No. 852UE Cat. No. HE1532 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2020-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	8.15	10.6	0.61	1.21	

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