RANDOX 0843 CE

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

CAT. NO. HE1532 / HS2611 **LOT NO.** 723UE
SIZE: 20 x 5ml / 5 x 5ml **EXP:** 2018-07

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

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

SAFETY PRECAUTIONS AND WARNINGS
For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.
However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

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

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

LIMITATIONS
For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25 - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at –20°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –20°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.

PREPARATION FOR USE
The Human Assayed Multi-sera is supplied lyophilised.

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid the 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. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Bilirubin Total	µmol/l	85.4	67.5	103	8.95	17.90	Diazo with Dichloroaniline (DCA)
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.41	6.45	8.37	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE direct
CK Total	U/l	574	471	677	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	
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase
	mg/dl	285	243	327	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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	343	292	394	25.50	51.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Potassium	mmol/l	5.95	5.47	6.43	0.24	0.48	ISE method - direct
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	
Sodium	mmol/l	156	149	163	3.50	7.00	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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.73	8.47	11.0	0.63	1.26	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	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	

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Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
	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	
Alkaline Phosphatase	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	166	141	191	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	168	143	193	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	244	208	280	18.00	36.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.4	13.8	21.0	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.10	4.02	6.18	0.54	1.08	
	µmol/l	90.5	71.5	110	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.29	4.18	6.40	0.56	1.11	
	µmol/l	91.2	72.0	110	9.60	19.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.34	4.21	6.47	0.57	1.13	
	µmol/l	91.1	71.9	110	9.60	19.20	Diazonium ion
	mg/dl	5.33	4.21	6.45	0.56	1.12	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.52	6.54	8.50	0.49	0.98	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
CK Total	U/l	555	455	655	50.00	100.00	CK-NAC substrate start (DGKC) 37°C
	U/l	557	457	657	50.00	100.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	396	316	476	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.47	3.57	5.37	0.45	0.90	
	µmol/l	410	328	492	41.00	82.00	Randox Enzymatic UV method
	mg/dl	4.63	3.71	5.55	0.46	0.92	
	µmol/l	392	313	471	39.50	79.00	Jaffe rate blanked
	mg/dl	4.43	3.54	5.32	0.45	0.89	
	µmol/l	395	316	474	39.50	79.00	IDMS traceable
	mg/dl	4.46	3.57	5.35	0.45	0.89	
gamma-GT	U/l	180	153	207	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	184	157	211	13.50	27.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct HDL PPD
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	2.74	2.33	3.15	0.21	0.41	Direct Clearance Method
	mg/dl	106	89.9	122	8.05	16.10	
	mmol/l	2.82	2.40	3.24	0.21	0.42	HDL - Ultra
	mg/dl	109	92.6	125	8.20	16.40	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	40.8	33.5	48.1	3.65	7.30	Colorimetric with ppt.
	µg/dl	228	187	269	20.50	41.00	
	µmol/l	39.5	32.4	46.6	3.55	7.10	Colorimetric without ppt.
	µg/dl	221	181	261	20.00	40.00	
Lactate	mmol/l	5.51	4.52	6.50	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.6	40.7	58.5	4.45	8.90	
LD (LDH)	U/l	370	314	426	28.00	56.00	L->P 37°C
	U/l	370	315	425	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	94	76	112	9.00	18.00	Other Colorimetric 37°C
Lithium	mmol/l	2.12	1.86	2.38	0.13	0.26	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.82	1.60	2.04	0.11	0.22	Arsenazo III
	mg/dl	4.42	3.89	4.95	0.27	0.53	
	mmol/l	1.81	1.59	2.03	0.11	0.22	Enzymatic
	mg/dl	4.40	3.86	4.94	0.27	0.54	
Osmolality	mOsm/kg	358	286	430	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.08	5.60	6.56	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.8	37.5	56.1	4.65	9.30	Biuret reaction end point
	g/dl	4.68	3.75	5.61	0.47	0.93	
	g/l	46.5	37.2	55.8	4.65	9.30	Biuret reaction kinetic
	g/dl	4.65	3.72	5.58	0.47	0.93	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	28.9	21.7	36.1	3.60	7.20	Abbott Architect
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.99	0.79	1.19	0.10	0.20	Abbott Architect
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	2.92	2.46	3.38	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	258	218	298	20.00	40.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.94	2.47	3.41	0.24	0.47	Agappe - GPO - TOPS
	mg/dl	260	219	301	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with 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 no ascorbate oxidase
	mg/dl	9.59	8.35	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	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Agappe - Uricase - PAP
	mg/dl	9.90	8.62	11.2	0.64	1.28	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease end point
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Agappe - Urease GLDH
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	127	108	146	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	104	89	119	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
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	
Cholesterol	mmol/l	7.46	6.49	8.43	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	251	325	18.50	37.00	
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
Phosphate Inorganic	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	5.91	5.43	6.39	0.24	0.48	ISE method - direct
Protein Total	g/l	49.6	39.7	59.5	4.95	9.90	Biuret reaction end point
	g/dl	4.96	3.97	5.95	0.50	0.99	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - direct
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.85	7.71	9.99	0.57	1.14	

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

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.23	0.45	
ALT (GPT)	U/l	162	129	195	16.50	33.00	Tris buffer without P5P 37°C
	U/l	120	95	145	12.50	25.00	Tris buffer without P5P 30°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	7.33	6.37	8.29	0.48	0.96	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.06	3.24	4.88	0.41	0.82	
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	8.13	10.6	0.61	1.23	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	

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Alfa Wassermann Alfa 600 / Analyticon Biolyzer 600

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	207	176	238	15.50	31.00	p-Nitrophenylphosphate AMP 37°C
	U/l	300	255	345	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	239	204	274	17.50	35.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	276	234	318	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	277	235	319	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Beckman maltotetraose 37°C
	U/l	263	223	303	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	275	234	316	20.50	41.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	158	126	190	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.2	15.3	23.1	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	22.6	17.8	27.4	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.32	1.04	1.60	0.14	0.28	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Bilirubin Total	µmol/l	82.5	65.2	99.8	8.65	17.30	Diazo with Dichloroaniline (DCA)
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.22	4.12	6.32	0.55	1.10	

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	87.9	69.4	106	9.25	18.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.14	4.06	6.22	0.54	1.08	
	µmol/l	80.0	63.2	96.8	8.40	16.80	Diazonium ion
	mg/dl	4.68	3.70	5.66	0.49	0.98	
	µmol/l	86.4	68.3	105	9.05	18.10	Oxidation to Biliverdin
	mg/dl	5.05	4.00	6.10	0.53	1.05	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.14	2.83	3.45	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.60	6.61	8.59	0.50	0.99	Cholesterol Oxidase
	mg/dl	293	255	331	19.00	38.00	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholinesterase	U/l	4807	3846	5768	480.50	961.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	560	459	661	50.50	101.00	CK-NAC serum start (DGKC) 37°C
	U/l	588	482	694	53.00	106.00	CK-NAC substrate start (DGKC) 37°C
	U/l	590	483	697	53.50	107.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	28.4	22.7	34.1	2.85	5.70	Colorimetric
	µg/dl	181	144	218	18.50	37.00	
Creatinine	µmol/l	373	298	448	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	µmol/l	387	309	465	39.00	78.00	Randox Enzymatic UV method
	mg/dl	4.37	3.49	5.25	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	389	311	467	39.00	78.00	Creatinine PAP method
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	388	310	466	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	384	307	461	38.50	77.00	IDMS traceable
	mg/dl	4.34	3.47	5.21	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.16	0.99	1.33	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	189	161	217	14.00	28.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	29	23	35	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Glucose dehydrogenase
	mg/dl	272	231	313	20.50	41.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.95	2.51	3.39	0.22	0.44	Direct HDL Immunoseparation
	mg/dl	114	96.9	131	8.55	17.10	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.92	2.48	3.36	0.22	0.44	Direct Clearance Method
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	2.76	2.34	3.18	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	107	90.3	124	8.35	16.70	
Iron	µmol/l	39.2	32.2	46.2	3.50	7.00	Colorimetric with ppt.
	µg/dl	219	180	258	19.50	39.00	
	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.50	39.00	
Lactate	mmol/l	5.55	4.55	6.55	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.0	41.0	59.0	4.50	9.00	
LD (LDH)	U/l	368	313	423	27.50	55.00	L->P 37°C
	U/l	831	706	956	62.50	125.00	P->L Scandinavian & Dutch 37°C
	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	93	75	111	9.00	18.00	Other Colorimetric 37°C
	U/l	77	62	92	7.50	15.00	Roche Colorimetric 37°C
	U/l	84	67	101	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.20	1.54	0.09	0.17	
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Xylidyl Blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
Osmolality	mOsm/kg	342	274	410	34.00	68.00	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	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.05	5.56	6.54	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	54.6	43.2	66.0	5.70	11.40	FE+UIBC(saturation with iron)
	µg/dl	305	241	369	32.00	64.00	
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	263	220	306	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.57	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	0.55	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	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease end point
	mg/dl	114	96.8	131	8.60	17.20	
	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	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.9	24.5	33.3	2.20	4.40	Bromocresol Purple
	g/dl	2.89	2.45	3.33	0.22	0.44	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
	U/l	175	149	201	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	135	108	162	13.50	27.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	208	177	239	15.50	31.00	Immunoinhibition EPS substrate 37°C
	U/l	209	177	241	16.00	32.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	290	247	333	21.50	43.00	Beckman maltotetraose 37°C
	U/l	288	245	331	21.50	43.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Differential rate pH change
	mmol/l	19.0	15.0	23.0	2.00	4.00	Ion selective electrode
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	86.5	68.4	105	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.06	4.00	6.12	0.53	1.06	
	µmol/l	85.5	67.6	103	8.95	17.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Ion selective electrode
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.05	2.74	3.36	0.16	0.31	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Cholesterol	mmol/l	7.58	6.60	8.56	0.49	0.98	Cholesterol Oxidase
	mg/dl	293	255	331	19.00	38.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	585	479	691	53.00	106.00	CK-NAC (IFCC) 37°C
	U/l	567	465	669	51.00	102.00	Monothioglycerol 37°C
Creatinine	µmol/l	390	312	468	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	383	307	459	38.00	76.00	Randox Enzymatic UV method
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	394	316	472	39.00	78.00	Jaffe rate blanked
	mg/dl	4.45	3.57	5.33	0.44	0.88	
	µmol/l	389	311	467	39.00	78.00	IDMS traceable
	mg/dl	4.40	3.51	5.29	0.45	0.89	
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	152	129	175	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	168	143	193	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.5	13.1	17.9	1.20	2.40	Oxygen electrode
	mg/dl	279	236	322	21.50	43.00	
	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	3.66	3.11	4.21	0.28	0.55	Direct HDL PPD
	mg/dl	141	120	162	10.50	21.00	
	mmol/l	3.44	2.93	3.95	0.26	0.51	Direct HDL PEGME
	mg/dl	133	113	153	10.00	20.00	
Iron	µmol/l	39.1	32.1	46.1	3.50	7.00	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
Lactate	mmol/l	5.30	4.34	6.26	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.8	39.1	56.5	4.35	8.70	
LD (LDH)	U/l	304	258	350	23.00	46.00	L->P 37°C
	U/l	983	835	1131	74.00	148.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	340	289	391	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Calmagite
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Osmolality	mOsm/kg	335	268	402	33.50	67.00	Calculated
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.07	5.59	6.55	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction CX4/5/7
	g/dl	4.48	3.58	5.38	0.45	0.90	
	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	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	63.2	49.9	76.5	6.65	13.30	Removal of excess free iron
	µg/dl	353	279	427	37.00	74.00	
	µmol/l	57.4	45.3	69.5	6.05	12.10	FE+UIBC(saturation with iron)
	µg/dl	321	253	389	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	
	mmol/l	2.98	2.50	3.46	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	264	221	307	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.82	7.68	9.96	0.57	1.14	
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	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	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
ALT (GPT)	U/l	158	127	189	15.50	31.00	Tris buffer without P5P 37°C
	U/l	117	94	140	11.50	23.00	Tris buffer without P5P 30°C
	U/l	89	72	106	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	169	135	203	17.00	34.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	86.4	68.3	105	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.05	4.00	6.10	0.53	1.05	
Cholesterol	mmol/l	7.73	6.72	8.74	0.51	1.01	Cholesterol Oxidase
	mg/dl	298	259	337	19.50	39.00	
Creatinine	µmol/l	346	277	415	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.91	3.13	4.69	0.39	0.78	
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.92	2.48	3.36	0.22	0.44	Direct Clearance Method
	mg/dl	113	95.7	130	8.65	17.30	
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	
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.50	39.00	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Green
	g/dl	2.91	2.47	3.35	0.22	0.44	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	121	103	139	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	99	84	114	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	87	69	105	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	162	129	195	16.50	33.00	Tris buffer without P5P 37°C
	U/l	110	87	133	11.50	23.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
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	3.13	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	7.47	6.50	8.44	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	251	325	18.50	37.00	
CK Total	U/l	600	492	708	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	376	308	444	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	255	209	301	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	340	272	408	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.84	3.07	4.61	0.39	0.77	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
Protein Total	g/l	46.3	37.1	55.5	4.60	9.20	Biuret reaction end point
	g/dl	4.63	3.71	5.55	0.46	0.92	
Triglycerides	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	251	212	290	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	8.03	10.5	0.61	1.21	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.21	0.41	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	110	93	127	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 25°C
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
Amylase Pancreatic	U/l	250	212	288	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	265	225	305	20.00	40.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	267	227	307	20.00	40.00	Saccharogenic 37°C
	U/l	271	230	312	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	271	230	312	20.50	41.00	Roche liquid stable pNPG7 37°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
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Enzymatic

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	28.6	22.6	34.6	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	81.1	64.0	98.2	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	80.2	63.3	97.1	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	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	
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	3.11	2.80	3.42	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.68	6.68	8.68	0.50	1.00	Cholesterol Oxidase
	mg/dl	296	258	334	19.00	38.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	567	465	669	51.00	102.00	CK-NAC substrate start (DGKC) 37°C
	U/l	355	291	419	32.00	64.00	CK-NAC substrate start (DGKC) 30°C
	U/l	241	198	284	21.50	43.00	CK-NAC substrate start (DGKC) 25°C
	U/l	601	493	709	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	376	309	443	33.50	67.00	CK-NAC (IFCC) 30°C
	U/l	255	210	300	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate with deproteinization
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	358	287	429	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.05	3.24	4.86	0.41	0.81	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	372	298	446	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	360	288	432	36.00	72.00	Jaffe rate blanked
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	371	296	446	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.19	3.34	5.04	0.43	0.85	
	µmol/l	360	288	432	36.00	72.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.07	3.25	4.89	0.41	0.82	
gamma-GT	U/l	165	140	190	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	110	150	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	86	118	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	190	161	219	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	127	173	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose dehydrogenase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.22	2.73	3.71	0.25	0.49	Direct HDL PEGME
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	3.14	2.66	3.62	0.24	0.48	Direct HDL Roche 3rd generation
	mg/dl	121	103	139	9.00	18.00	
Iron	µmol/l	39.0	32.0	46.0	3.50	7.00	Colorimetric with ppt.
	µg/dl	218	179	257	19.50	39.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	39.3	32.3	46.3	3.50	7.00	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.87	4.81	6.93	0.53	1.06	Colorimetric Lactate Oxidase
	mg/dl	52.9	43.3	62.5	4.80	9.60	
LD (LDH)	U/l	718	610	826	54.00	108.00	P->L German methods 37°C
	U/l	518	440	596	39.00	78.00	P->L German methods 30°C
	U/l	364	309	419	27.50	55.00	P->L German methods 25°C
	U/l	386	328	444	29.00	58.00	L->P IFCC 37°C
	U/l	279	237	321	21.00	42.00	L->P IFCC 30°C
	U/l	196	166	226	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	82	66	98	8.00	16.00	Roche Colorimetric 37°C
Lithium	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	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.04	5.98	8.10	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	6.10	5.61	6.59	0.25	0.49	ISE method - indirect
Protein Total	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	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.1	45.9	70.3	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	325	257	393	34.00	68.00	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	252	212	292	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	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	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	8.16	10.6	0.61	1.21	
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease end point
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease kinetic
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	BUN
	mg/dl	50.8	43.2	58.4	3.80	7.60	

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ELITech / Vitalab Selectra Pro/E/XL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
Alkaline Phosphatase	U/l	252	214	290	19.00	38.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	92.4	73.0	112	9.70	19.40	Diazo with Sulphanilic Acid
	mg/dl	5.41	4.27	6.55	0.57	1.14	
	µmol/l	85.4	67.4	103	9.00	18.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.00	3.94	6.06	0.53	1.06	
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	
Cholesterol	mmol/l	7.68	6.68	8.68	0.50	1.00	Cholesterol Oxidase
	mg/dl	296	258	334	19.00	38.00	
CK Total	U/l	596	488	704	54.00	108.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	361	289	433	36.00	72.00	Jaffe rate blanked
	mg/dl	4.08	3.27	4.89	0.41	0.81	
gamma-GT	U/l	177	150	204	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.79	7.64	9.94	0.58	1.15	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
	g/l	27.2	23.1	31.3	2.05	4.10	Bromocresol Purple
	g/dl	2.72	2.31	3.13	0.21	0.41	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	177	150	204	13.50	27.00	Randox AMP 37°C
	U/l	138	117	159	10.50	21.00	Randox AMP 30°C
	U/l	113	96	130	8.50	17.00	Randox AMP 25°C
ALT (GPT)	U/l	138	111	165	13.50	27.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	270	230	310	20.00	40.00	Randox liquid stable pNPG7 37°C
	U/l	244	207	281	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	263	223	303	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	298	253	343	22.50	45.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	10.6	7.10	14.1	1.75	3.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (non-prostatic)	U/l	15.1	10.1	20.1	2.50	5.00	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	35.1	23.5	46.7	5.80	11.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	20.8	13.9	27.7	3.45	6.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	45.7	30.6	60.8	7.55	15.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	35.9	24.1	47.7	5.90	11.80	1-Naphthyl Phosphate substrate Kinetic 37°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
Bile Acids	µmol/l	49.3	39.4	59.2	4.95	9.90	5th Generation Colorimetric
Bicarbonate	mmol/l	19.0	15.0	23.0	2.00	4.00	Colorimetric
	mmol/l	19.0	15.1	22.9	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Oxidation to Biliverdin
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	86.1	68.0	104	9.05	18.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.04	3.98	6.10	0.53	1.06	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazo with Sulphanilic Acid
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	80.8	63.8	97.8	8.50	17.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.73	3.73	5.73	0.50	1.00	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazonium ion
	mg/dl	4.74	3.74	5.74	0.50	1.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	89.4	70.6	108	9.40	18.80	Oxidation to Biliverdin
	mg/dl	5.23	4.13	6.33	0.55	1.10	
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	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.15	2.83	3.47	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.53	6.55	8.51	0.49	0.98	Cholesterol Oxidase
	mg/dl	291	253	329	19.00	38.00	
Chloride	mmol/l	110	102	118	4.00	8.00	ISE indirect
Cholinesterase	U/l	5073	4059	6087	507.00	1014.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	562	461	663	50.50	101.00	CK-NAC substrate start (DGKC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC substrate start (DGKC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC substrate start (DGKC) 25°C
	U/l	563	461	665	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC (IFCC) 25°C
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	394	315	473	39.50	79.00	Randox Enzymatic UV method
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	403	323	483	40.00	80.00	Creatinine PAP method
	mg/dl	4.55	3.65	5.45	0.45	0.90	
	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/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. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	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	387	310	464	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	3.50	5.24	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.18	1.00	1.36	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	182	155	209	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	122	164	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	96	128	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	194	165	223	14.50	29.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	153	130	176	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	120	102	138	9.00	18.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
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	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
alpha-HBDH	U/l	466	368	564	49.00	98.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	352	278	426	37.00	74.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	264	208	320	28.00	56.00	Oxobutyrate < 10 mmol/l 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.89	2.45	3.33	0.22	0.44	Direct HDL Immunoseparation
	mg/dl	112	94.6	129	8.70	17.40	
	mmol/l	3.13	2.66	3.60	0.24	0.47	Direct HDL PEGME
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	2.95	2.51	3.39	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	114	96.9	131	8.55	17.10	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
Lactate	mmol/l	5.53	4.53	6.53	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.8	40.8	58.8	4.50	9.00	
LD (LDH)	U/l	714	607	821	53.50	107.00	P->L German methods 37°C
	U/l	516	438	594	39.00	78.00	P->L German methods 30°C
	U/l	362	308	416	27.00	54.00	P->L German methods 25°C
	U/l	364	309	419	27.50	55.00	L->P IFCC 37°C
	U/l	263	223	303	20.00	40.00	L->P IFCC 30°C
	U/l	185	157	213	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	77	62	92	7.50	15.00	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	1.80	1.59	2.01	0.11	0.21	Xylidyl Blue
	mg/dl	4.37	3.86	4.88	0.26	0.51	
	mmol/l	1.80	1.58	2.02	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.37	3.84	4.90	0.27	0.53	
	mmol/l	1.79	1.58	2.00	0.11	0.21	Enzymatic
	mg/dl	4.35	3.84	4.86	0.26	0.51	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	352	281	423	35.50	71.00	Calculated
Phosphate Inorganic	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	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.0	41.1	62.9	5.45	10.90	FE+UIBC(saturation with iron)
	µg/dl	291	230	352	30.50	61.00	
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
	mmol/l	2.81	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	2.79	2.34	3.24	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	247	207	287	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.01	10.4	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.14	7.95	10.3	0.60	1.19	
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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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Green
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	124	168	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	102	136	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	133	107	159	13.00	26.00	Tris buffer without P5P 37°C
	U/l	98	79	117	9.50	19.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	54	80	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	50.3	40.2	60.4	5.05	10.10	Enzymatic Colorimetric
Bilirubin Total	µmol/l	87.9	69.4	106	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.14	4.06	6.22	0.54	1.08	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	7.50	6.52	8.48	0.49	0.98	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
CK Total	U/l	520	426	614	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	326	267	385	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 25°C

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ILab 600® / 650® / Aries®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	348	278	418	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.93	3.14	4.72	0.40	0.79	
D-3-Hydroxybutyrate	mmol/l	1.19	1.01	1.37	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	169	144	194	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	133	113	153	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	104	89	119	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase
	mg/dl	285	243	327	21.00	42.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
Iron	µmol/l	37.1	30.4	43.8	3.35	6.70	Colorimetric without ppt.
	µg/dl	207	170	244	18.50	37.00	
LD (LDH)	U/l	709	602	816	53.50	107.00	P->L German methods 37°C
	U/l	512	435	589	38.50	77.00	P->L German methods 30°C
	U/l	359	305	413	27.00	54.00	P->L German methods 25°C
Lipase	U/l	85	68	102	8.50	17.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.83	1.61	2.05	0.11	0.22	Xylidyl Blue
	mg/dl	4.45	3.91	4.99	0.27	0.54	
	mmol/l	1.87	1.65	2.09	0.11	0.22	Enzymatic
	mg/dl	4.54	4.01	5.07	0.27	0.53	
Phosphate Inorganic	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	6.12	5.63	6.61	0.25	0.49	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	

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ILab 600® / 650® / Aries®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.56	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	
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	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.6	23.4	31.8	2.10	4.20	Ortho Vitros Microslide Systems
	g/dl	2.76	2.34	3.18	0.21	0.42	
Alkaline Phosphatase	U/l	123	105	141	9.00	18.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Ortho Vitros Microslide Systems 37°C
	U/l	148	118	178	15.00	30.00	Vitros DT60/DT60 II/DTSC II 37°C
Amylase Total	U/l	162	138	186	12.00	24.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	193	154	232	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
	U/l	202	161	243	20.50	41.00	Vitros DT60/DT60 II/DTSC II 37°C
Bicarbonate	mmol/l	20.7	16.4	25.0	2.15	4.30	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	74.5	58.8	90.2	7.85	15.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.36	3.44	5.28	0.46	0.92	
	µmol/l	75.8	59.9	91.7	7.95	15.90	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.43	3.50	5.36	0.47	0.93	
Calcium	mmol/l	3.07	2.76	3.38	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	
Cholesterol	mmol/l	6.91	6.01	7.81	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	267	232	302	17.50	35.00	
	mmol/l	7.49	6.51	8.47	0.49	0.98	Vitros DT60/DT60 II
	mg/dl	289	251	327	19.00	38.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	113	104	122	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	118	109	127	4.50	9.00	Vitros DT60/DT60 II/DTE II
Cholinesterase	U/l	4969	3975	5963	497.00	994.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	432	354	510	39.00	78.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	401	321	481	40.00	80.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.53	3.63	5.43	0.45	0.90	
	µmol/l	386	309	463	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.36	3.49	5.23	0.44	0.87	
gamma-GT	U/l	221	187	255	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.4	12.3	16.5	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	259	222	296	18.50	37.00	
	mmol/l	14.6	12.4	16.8	1.10	2.20	Vitros DT60/DT60 II
	mg/dl	263	223	303	20.00	40.00	
HDL - Cholesterol	mmol/l	2.31	1.96	2.66	0.18	0.35	Vitros Magnetic HDL
	mg/dl	89.2	75.7	103	6.75	13.50	
	mmol/l	2.39	2.03	2.75	0.18	0.36	Vitros 5.1 FS microtip assay
	mg/dl	92.3	78.4	106	6.95	13.90	
	mmol/l	2.37	2.01	2.73	0.18	0.36	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	91.5	77.6	105	6.95	13.90	
Iron	µmol/l	40.7	33.4	48.0	3.65	7.30	Ortho Vitros Microslide Systems
	µg/dl	228	187	269	20.50	41.00	
Lactate	mmol/l	5.13	4.21	6.05	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	46.2	37.9	54.5	4.15	8.30	
LD (LDH)	U/l	1056	897	1215	79.50	159.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	864	693	1035	85.50	171.00	Ortho Vitros Microslide Systems 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	2.37	2.09	2.65	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.65	1.45	1.85	0.10	0.20	
Magnesium	mmol/l	1.82	1.60	2.04	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.42	3.89	4.95	0.27	0.53	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Vitros DT60/DT60 II
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.23	1.90	2.56	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.91	5.89	7.93	0.51	1.02	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	5.87	5.40	6.34	0.24	0.47	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	46.5	37.2	55.8	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.65	3.72	5.58	0.47	0.93	
PSA Total	ng/ml =	34.2	25.6	42.8	4.30	8.60	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	155	147	163	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	156	148	164	4.00	8.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
TIBC	µmol/l	70.3	55.5	85.1	7.40	14.80	Ortho Vitros Microslide Systems
	µg/dl	393	310	476	41.50	83.00	
Total T3	nmol/l	7.87	5.90	9.84	0.99	1.97	Vitros ECi
	ng/ml	5.12	3.84	6.40	0.64	1.28	
	ng/dl	512	384	640	64.00	128.00	Vitros ECi
Triglycerides	mmol/l	3.56	2.99	4.13	0.29	0.57	Ortho Vitros Microslide Systems
	mg/dl	315	265	365	25.00	50.00	
	mmol/l	3.69	3.10	4.28	0.30	0.59	Vitros DT60/DT60 II
	mg/dl	327	274	380	26.50	53.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.52	0.45	0.58	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.67	7.54	9.80	0.57	1.13	
	mmol/l	0.52	0.45	0.59	0.03	0.07	Vitros DT60/DT60 II
	mg/dl	8.77	7.63	9.91	0.57	1.14	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	18.2	15.5	20.9	1.35	2.70	Vitros DT60/DT60 II
	mg/dl	109	93.2	125	7.90	15.80	
	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	

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
Alkaline Phosphatase	U/l	272	231	313	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	212	180	244	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	174	148	200	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	133	114	152	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	174	148	200	13.00	26.00	AMP optimised to NVKC/SFBC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
	U/l	111	95	127	8.00	16.00	AMP optimised to NVKC/SFBC 25°C
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 25°C
Amylase Total	U/l	256	217	295	19.50	39.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	162	129	195	16.50	33.00	Tris buffer without P5P 37°C
	U/l	110	87	133	11.50	23.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	49.7	39.7	59.7	5.00	10.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	19.0	15.1	22.9	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	33.6	26.6	40.6	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.97	1.56	2.38	0.21	0.41	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	83.3	65.8	101	8.75	17.50	Diazo with Sulphanilic Acid
	mg/dl	4.87	3.85	5.89	0.51	1.02	
	µmol/l	83.7	66.1	101	8.80	17.60	Nitrobenzenediazonium salt
	mg/dl	4.90	3.87	5.93	0.52	1.03	
Calcium	mmol/l	3.24	2.91	3.57	0.17	0.33	Arsenazo III
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Cholesterol	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE direct
CK Total	U/l	555	455	655	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	347	285	409	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	236	193	279	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	387	310	464	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	383	306	460	38.50	77.00	Randox Enzymatic UV method
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	391	313	469	39.00	78.00	Creatinine PAP method
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked
	mg/dl	4.25	3.40	5.10	0.43	0.85	
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	178	151	205	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	140	119	161	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	93	127	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.79	2.37	3.21	0.21	0.42	Direct HDL PEGME
	mg/dl	108	91.5	125	8.25	16.50	
Iron	µmol/l	39.2	32.1	46.3	3.55	7.10	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
LD (LDH)	U/l	782	665	899	58.50	117.00	P->L Scandinavian & Dutch 37°C
	U/l	565	480	650	42.50	85.00	P->L Scandinavian & Dutch 30°C
	U/l	396	337	455	29.50	59.00	P->L Scandinavian & Dutch 25°C
	U/l	769	653	885	58.00	116.00	P->L German methods 37°C
	U/l	555	471	639	42.00	84.00	P->L German methods 30°C
	U/l	390	331	449	29.50	59.00	P->L German methods 25°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Calmagite
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.65	1.45	1.85	0.10	0.20	Xylidyl Blue
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Phosphate Inorganic	mmol/l	2.29	1.94	2.64	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.10	6.01	8.19	0.55	1.09	
Potassium	mmol/l	5.91	5.44	6.38	0.24	0.47	ISE method - direct
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	154	146	162	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	262	220	304	21.00	42.00	

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.76	8.48	11.0	0.64	1.28	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	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	
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease kinetic
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.7	25.2	34.2	2.25	4.50	Bromocresol Green
	g/dl	2.97	2.52	3.42	0.23	0.45	
	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Purple
	g/dl	2.78	2.36	3.20	0.21	0.42	
	g/l	27.6	23.4	31.8	2.10	4.20	Ortho Vitros Microslide Systems
	g/dl	2.76	2.34	3.18	0.21	0.42	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	p-Nitrophenylphosphate AMP 37°C
	U/l	137	117	157	10.00	20.00	p-Nitrophenylphosphate AMP 30°C
	U/l	112	96	128	8.00	16.00	p-Nitrophenylphosphate AMP 25°C
	U/l	123	105	141	9.00	18.00	Ortho Vitros Microslide Systems 37°C
	U/l	275	234	316	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	214	182	246	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	176	150	202	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	179	153	205	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	139	119	159	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	114	98	130	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	170	145	195	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	132	113	151	9.50	19.00	AMP optimised to NVKC/SFBC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to NVKC/SFBC 25°C

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Lot. No. 723UE Cat. No. HE1532 / HS2611

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	172	146	198	13.00	26.00	AMP reduced interference 37°C
	U/l	134	114	154	10.00	20.00	AMP reduced interference 30°C
	U/l	110	93	127	8.50	17.00	AMP reduced interference 25°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Ortho Vitros Microslide Systems 37°C
	U/l	178	142	214	18.00	36.00	Tris buffer with P5P 37°C
	U/l	132	105	159	13.50	27.00	Tris buffer with P5P 30°C
	U/l	100	80	120	10.00	20.00	Tris buffer with P5P 25°C
	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
	U/l	136	109	163	13.50	27.00	Tris buffer SCE 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer SCE 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer SCE 25°C
	U/l	147	118	176	14.50	29.00	Agappe - IFCC 37°C
	U/l	109	87	131	11.00	22.00	Agappe - IFCC 30°C
	U/l	83	66	100	8.50	17.00	Agappe - IFCC 25°C
Amylase Pancreatic	U/l	238	202	274	18.00	36.00	Immunoinhibition EPS substrate 37°C
	U/l	270	230	310	20.00	40.00	Randox liquid stable pNPG7 37°C
	U/l	244	207	281	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	278	236	320	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	276	235	317	20.50	41.00	Siemens - blocked pNPG7 37°C
	U/l	277	235	319	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	289	245	333	22.00	44.00	I.L. - blocked pNPG7 37°C
	U/l	229	195	263	17.00	34.00	Randox - Ethylidene pNPG7 37°C
	U/l	298	253	343	22.50	45.00	Randox liquid stable pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	264	225	303	19.50	39.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	284	241	327	21.50	43.00	Beckman maltotetraose 37°C
	U/l	324	275	373	24.50	49.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	269	229	309	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	162	138	186	12.00	24.00	Ortho Vitros Microslide Systems 37°C
	U/l	266	226	306	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	328	279	377	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
	U/l	259	220	298	19.50	39.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	275	234	316	20.50	41.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	288	245	331	21.50	43.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	0.95	0.78	1.12	0.09	0.17	Immunoturbidimetric
	mg/dl	94.6	77.6	112	8.50	17.00	
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	
Acid Phosphatase (non-prostatic)	U/l	15.1	10.1	20.1	2.50	5.00	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.6	7.10	14.1	1.75	3.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	20.8	13.9	27.7	3.45	6.90	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	35.1	23.5	46.7	5.80	11.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	35.9	24.1	47.7	5.90	11.80	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	45.7	30.6	60.8	7.55	15.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	193	154	232	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
	U/l	213	170	256	21.50	43.00	Tris buffer with P5P 37°C
	U/l	144	115	173	14.50	29.00	Tris buffer with P5P 30°C
	U/l	101	81	121	10.00	20.00	Tris buffer with P5P 25°C
	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer without P5P 30°C
	U/l	71	57	85	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. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer SCE 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer SCE 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer SCE 25°C
	U/l	159	127	191	16.00	32.00	Agappe - IFCC 37°C
	U/l	107	86	128	10.50	21.00	Agappe - IFCC 30°C
	U/l	76	60	92	8.00	16.00	Agappe - IFCC 25°C
Bile Acids	µmol/l	50.9	40.7	61.1	5.10	10.20	4th Generation Colorimetric
	µmol/l	49.3	39.4	59.2	4.95	9.90	5th Generation Colorimetric
Bicarbonate	mmol/l	18.2	14.5	21.9	1.85	3.70	Colorimetric
	mmol/l	20.7	16.4	25.0	2.15	4.30	Ortho Vitros Microslide Systems
	mmol/l	18.9	15.0	22.8	1.95	3.90	Differential rate pH change
	mmol/l	19.1	15.1	23.1	2.00	4.00	Enzymatic
	mmol/l	18.2	14.4	22.0	1.90	3.80	Ion selective electrode
Bilirubin Direct	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	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	
	µmol/l	31.6	24.9	38.3	3.35	6.70	Roche JG factored
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.70	1.34	2.06	0.18	0.36	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	30.7	24.3	37.1	3.20	6.40	Modified Jendrassik
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	74.5	58.8	90.2	7.85	15.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.36	3.44	5.28	0.46	0.92	
	µmol/l	75.8	59.9	91.7	7.95	15.90	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.43	3.50	5.36	0.47	0.93	
	µmol/l	95.9	75.8	116	10.05	20.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.61	4.43	6.79	0.59	1.18	
	µmol/l	84.7	66.9	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.95	3.91	5.99	0.52	1.04	
	µmol/l	93.5	73.9	113	9.80	19.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.47	4.32	6.62	0.58	1.15	
	µmol/l	84.4	66.7	102	8.85	17.70	Nitrobenzenediazonium salt
	mg/dl	4.94	3.90	5.98	0.52	1.04	
	µmol/l	80.8	63.8	97.8	8.50	17.00	Diazonium ion
	mg/dl	4.73	3.73	5.73	0.50	1.00	
	µmol/l	91.2	72.1	110	9.55	19.10	Oxidation to Biliverdin
	mg/dl	5.34	4.22	6.46	0.56	1.12	
	µmol/l	94.6	74.7	115	9.95	19.90	Modified Jendrassik
	mg/dl	5.53	4.37	6.69	0.58	1.16	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.05	2.75	3.35	0.15	0.30	Ion selective electrode
	mg/dl	12.2	11.0	13.4	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.82	2.53	3.11	0.15	0.29	Methylthymol blue
	mg/dl	11.3	10.1	12.5	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	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	
Cholesterol	mmol/l	6.91	6.01	7.81	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	267	232	302	17.50	35.00	
	mmol/l	7.53	6.55	8.51	0.49	0.98	Cholesterol Oxidase
	mg/dl	291	253	329	19.00	38.00	
	mmol/l	7.63	6.64	8.62	0.50	0.99	Agappe - CHOD-PAP
	mg/dl	295	256	334	19.50	39.00	
Chloride	mmol/l	113	104	122	4.50	9.00	Colorimetric
	mmol/l	113	104	122	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	111	102	120	4.50	9.00	ISE indirect
	mmol/l	113	104	122	4.50	9.00	ISE direct
Cholinesterase	U/l	5123	4098	6148	512.50	1025.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	432	354	510	39.00	78.00	Ortho Vitros Microslide Systems 37°C
	U/l	569	467	671	51.00	102.00	CK-NAC serum start (DGKC) 37°C
	U/l	356	292	420	32.00	64.00	CK-NAC serum start (DGKC) 30°C
	U/l	242	198	286	22.00	44.00	CK-NAC serum start (DGKC) 25°C
	U/l	575	471	679	52.00	104.00	CK-NAC substrate start (DGKC) 37°C
	U/l	360	295	425	32.50	65.00	CK-NAC substrate start (DGKC) 30°C
	U/l	244	200	288	22.00	44.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	583	478	688	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	365	299	431	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	248	203	293	22.50	45.00	CK-NAC (IFCC) 25°C
	U/l	567	465	669	51.00	102.00	Monothioglycerol 37°C
	U/l	355	291	419	32.00	64.00	Monothioglycerol 30°C
	U/l	241	198	284	21.50	43.00	Monothioglycerol 25°C
	U/l	535	439	631	48.00	96.00	Dithioerythritol 37°C
	U/l	335	275	395	30.00	60.00	Dithioerythritol 30°C
	U/l	227	187	267	20.00	40.00	Dithioerythritol 25°C
	U/l	534	438	630	48.00	96.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	334	274	394	30.00	60.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	227	186	268	20.50	41.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	28.7	23.0	34.4	2.85	5.70	Atomic absorption
	µg/dl	183	146	220	18.50	37.00	
	µmol/l	28.0	22.4	33.6	2.80	5.60	Colorimetric
	µg/dl	178	142	214	18.00	36.00	
Cortisol	nmol/l	1002	752	1252	125.00	250.00	Roche Cobas E411
	µg/dl	36.1	27.1	45.1	4.50	9.00	
Creatinine	µmol/l	341	273	409	34.00	68.00	Alkaline picrate with deproteinization
	mg/dl	3.85	3.08	4.62	0.39	0.77	
	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	389	312	466	38.50	77.00	Randox Enzymatic UV method
	mg/dl	4.40	3.53	5.27	0.44	0.87	
	µmol/l	391	313	469	39.00	78.00	Creatinine PAP method
	mg/dl	4.42	3.54	5.30	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	389	311	467	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	384	308	460	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.48	5.20	0.43	0.86	
	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	386	309	463	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	388	310	466	39.00	78.00	IDMS traceable
	mg/dl	4.38	3.50	5.26	0.44	0.88	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.32	0.09	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.53	2.82	4.24	0.36	0.71	Immunoturbidimetric
	ng/ml	2.76	2.20	3.32	0.28	0.56	
Folate	nmol/l	24.9	18.9	30.9	3.00	6.00	Roche Cobas E411
	ng/ml	11.0	8.33	13.7	1.34	2.67	
Free T4	pmol/l	52.4	39.3	65.5	6.55	13.10	Abbott Architect
	ng/dl	4.09	3.07	5.11	0.51	1.02	
	pg/ml	40.9	30.7	51.1	5.10	10.20	Abbott Architect
	pmol/l	66.1	49.6	82.6	8.25	16.50	Siemens Centaur XP/Classic
	ng/dl	5.16	3.87	6.45	0.65	1.29	
	pg/ml	51.6	38.7	64.5	6.45	12.90	Siemens Centaur XP/Classic
	pmol/l	63.5	47.6	79.4	7.95	15.90	Beckman Access
	ng/dl	4.95	3.71	6.19	0.62	1.24	
	pg/ml	49.5	37.1	61.9	6.20	12.40	Beckman Access

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	67.3	50.5	84.1	8.40	16.80	BioMerieux Vidas
	ng/dl	5.25	3.94	6.56	0.66	1.31	
	pg/ml	52.5	39.4	65.6	6.55	13.10	BioMerieux Vidas
	pmol/l	74.6	55.9	93.3	9.35	18.70	Roche Elecsys
	ng/dl	5.82	4.36	7.28	0.73	1.46	
	pg/ml	58.2	43.6	72.8	7.30	14.60	Roche Elecsys
	pmol/l	78.9	59.2	98.6	9.85	19.70	Roche Modular E170
	ng/dl	6.15	4.62	7.68	0.77	1.53	
	pg/ml	61.5	46.2	76.8	7.65	15.30	Roche Modular E170
	pmol/l	75.9	57.0	94.8	9.45	18.90	Roche Cobas E411
	ng/dl	5.92	4.45	7.39	0.74	1.47	
	pg/ml	59.2	44.5	73.9	7.35	14.70	Roche Cobas E411
	pmol/l	74.0	55.5	92.5	9.25	18.50	Roche Cobas 6000/8000
	ng/dl	5.77	4.33	7.21	0.72	1.44	
	pg/ml	57.7	43.3	72.1	7.20	14.40	Roche Cobas 6000/8000
Gentamicin	µmol/l	17.8	14.2	21.4	1.80	3.60	Immunoturbidimetric
	µg/ml	8.51	6.79	10.2	0.86	1.72	
gamma-GT	U/l	171	146	196	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	115	155	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	221	187	255	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	152	129	175	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	120	102	138	9.00	18.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl-4-nitroanilide 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	167	142	192	12.50	25.00	Agappe - Szasz Kinetic 37°C
	U/l	132	112	152	10.00	20.00	Agappe - Szasz Kinetic 30°C
	U/l	103	88	118	7.50	15.00	Agappe - Szasz Kinetic 25°C
	U/l	194	165	223	14.50	29.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	153	130	176	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	120	102	138	9.00	18.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	27	21	33	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	21	16	26	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.4	12.3	16.5	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	259	222	296	18.50	37.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose dehydrogenase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Oxygen electrode
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	
alpha-HBDH	U/l	466	368	564	49.00	98.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	352	278	426	37.00	74.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	264	208	320	28.00	56.00	Oxobutyrate < 10 mmol/l 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	3.31	2.81	3.81	0.25	0.50	Direct HDL PPD
	mg/dl	128	108	148	10.00	20.00	
	mmol/l	2.86	2.43	3.29	0.22	0.43	Direct HDL Immunoseparation
	mg/dl	110	93.8	126	8.10	16.20	
	mmol/l	2.31	1.96	2.66	0.18	0.35	Vitros Magnetic HDL
	mg/dl	89.2	75.7	103	6.75	13.50	
	mmol/l	2.96	2.52	3.40	0.22	0.44	Direct HDL PEGME
	mg/dl	114	97.3	131	8.35	16.70	
	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct Clearance Method
	mg/dl	113	96.5	130	8.25	16.50	
	mmol/l	2.37	2.01	2.73	0.18	0.36	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	91.5	77.6	105	6.95	13.90	
	mmol/l	2.98	2.53	3.43	0.23	0.45	Direct HDL Roche 3rd generation
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	2.82	2.40	3.24	0.21	0.42	HDL - Ultra
	mg/dl	109	92.6	125	8.20	16.40	
Immunoglobulin A	g/l	1.57	1.18	1.96	0.20	0.39	Immunoturbidimetric
	mg/dl	157	118	196	19.50	39.00	
Immunoglobulin G	g/l	6.10	5.00	7.20	0.55	1.10	Immunoturbidimetric
	mg/dl	610	500	720	55.00	110.00	
Immunoglobulin M	g/l	0.62	0.49	0.74	0.06	0.12	Immunoturbidimetric
	mg/dl	61.8	49.4	74.2	6.20	12.40	
Iron	µmol/l	38.5	31.6	45.4	3.45	6.90	Colorimetric with ppt.
	µg/dl	215	177	253	19.00	38.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	38.7	31.7	45.7	3.50	7.00	Colorimetric without ppt.
	µg/dl	216	177	255	19.50	39.00	
	µmol/l	40.7	33.4	48.0	3.65	7.30	Ortho Vitros Microslide Systems
	µg/dl	228	187	269	20.50	41.00	
Lactate	mmol/l	5.56	4.56	6.56	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.1	41.1	59.1	4.50	9.00	
	mmol/l	5.13	4.21	6.05	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	46.2	37.9	54.5	4.15	8.30	
	mmol/l	5.22	4.28	6.16	0.47	0.94	UV LDH
	mg/dl	47.0	38.6	55.4	4.20	8.40	
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1056	897	1215	79.50	159.00	Ortho Vitros Microslide Systems 37°C
	U/l	328	279	377	24.50	49.00	L->P 37°C
	U/l	237	201	273	18.00	36.00	L->P 30°C
	U/l	166	141	191	12.50	25.00	L->P 25°C
	U/l	795	675	915	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	574	487	661	43.50	87.00	P->L Scandinavian & Dutch 30°C
	U/l	403	342	464	30.50	61.00	P->L Scandinavian & Dutch 25°C
	U/l	722	613	831	54.50	109.00	P->L German methods 37°C
	U/l	521	443	599	39.00	78.00	P->L German methods 30°C
	U/l	366	311	421	27.50	55.00	P->L German methods 25°C
	U/l	736	625	847	55.50	111.00	P->L SFBC 37°C
	U/l	531	451	611	40.00	80.00	P->L SFBC 30°C
	U/l	373	317	429	28.00	56.00	P->L SFBC 25°C
	U/l	369	314	424	27.50	55.00	L->P IFCC 37°C
	U/l	266	227	305	19.50	39.00	L->P IFCC 30°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	864	693	1035	85.50	171.00	Ortho Vitros Microslide Systems 37°C
	U/l	76	61	91	7.50	15.00	Roche Colorimetric 37°C
	U/l	438	351	525	43.50	87.00	Randox Turbidimetric with colipase 37°C
	U/l	84	67	101	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.37	2.09	2.65	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.65	1.45	1.85	0.10	0.20	
	mmol/l	2.12	1.87	2.37	0.13	0.25	Flame photometry
	mg/dl	1.47	1.30	1.64	0.09	0.17	
	mmol/l	2.11	1.85	2.37	0.13	0.26	Ion selective electrode
	mg/dl	1.47	1.28	1.66	0.10	0.19	
	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
	mmol/l	2.02	1.78	2.26	0.12	0.24	Randox Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Arsenazo III
	mg/dl	4.40	3.86	4.94	0.27	0.54	
	mmol/l	1.82	1.60	2.04	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.42	3.89	4.95	0.27	0.53	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Calmagite
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.81	1.59	2.03	0.11	0.22	Xylidyl Blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
	mmol/l	1.81	1.59	2.03	0.11	0.22	Methylthymol blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.81	1.59	2.03	0.11	0.22	Enzymatic
	mg/dl	4.40	3.86	4.94	0.27	0.54	
NEFA	mmol/l	0.69	0.59	0.79	0.05	0.10	Colorimetric
Osmolality	mOsm/kg	338	270	406	34.00	68.00	Calculated
	mOsm/kg	377	301	453	38.00	76.00	Freezing point depression
Paracetamol	mmol/l	0.60	0.48	0.72	0.06	0.12	Colorimetric
	mg/l	90.8	72.6	109	9.10	18.20	
Phosphate Inorganic	mmol/l	2.23	1.90	2.56	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.91	5.89	7.93	0.51	1.02	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	6.09	5.60	6.58	0.25	0.49	Enzymatic
	mmol/l	5.87	5.40	6.34	0.24	0.47	Flame photometry
	mmol/l	6.02	5.54	6.50	0.24	0.48	ISE method - direct
	mmol/l	6.09	5.61	6.57	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.5	37.2	55.8	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.65	3.72	5.58	0.47	0.93	
	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction kinetic
	g/dl	4.49	3.59	5.39	0.45	0.90	
	g/l	46.7	37.3	56.1	4.70	9.40	Agappe - Biuret
	g/dl	4.67	3.73	5.61	0.47	0.94	
PSA Total	ng/ml =	35.0	26.2	43.8	4.40	8.80	Roche Elecsys Modular E170
	ng/ml =	34.0	25.5	42.5	4.25	8.50	Beckman Access standardised to Hybritech
	ng/ml =	32.4	24.3	40.5	4.05	8.10	bioMerieux VIDAS TPSA
	ng/ml =	29.4	22.1	36.7	3.65	7.30	Siemens Centaur XP/Classic
	ng/ml =	29.5	22.1	36.9	3.70	7.40	Abbott Architect
	ng/ml =	35.7	26.8	44.6	4.45	8.90	Cobas E411
	ng/ml =	36.5	27.4	45.6	4.55	9.10	Roche Cobas 6000/8000
	ng/ml =	34.2	25.6	42.8	4.30	8.60	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.83	0.66	0.99	0.08	0.17	Enzymatic
	mg/dl	11.4	9.11	13.7	1.15	2.29	
Sodium	mmol/l	155	147	163	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	156	148	164	4.00	8.00	ISE method - direct
	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	124	99.2	149	12.40	24.80	Immunoturbidimetric
	µg/ml	22.3	17.9	26.7	2.20	4.40	
Thyroid Stimulating Hormone	µU/ml =	0.99	0.79	1.19	0.10	0.20	Abbott Architect
	µU/ml =	1.24	1.00	1.49	0.12	0.25	Siemens Centaur XP/Classic
	µU/ml =	1.30	1.04	1.56	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.22	0.98	1.47	0.12	0.25	Siemens Immulite 1000

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Elecsys
	µU/ml =	1.37	1.09	1.65	0.14	0.28	Roche Modular E170
	µU/ml =	1.41	1.13	1.69	0.14	0.28	Roche Cobas E411
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.11	0.89	1.33	0.11	0.22	Siemens Centaur XP/Classic TSH3-Ultra
TIBC	µmol/l	70.3	55.5	85.1	7.40	14.80	Ortho Vitros Microslide Systems
	µg/dl	393	310	476	41.50	83.00	
	µmol/l	51.3	40.6	62.0	5.35	10.70	Removal of excess free iron
	µg/dl	287	227	347	30.00	60.00	
	µmol/l	55.5	43.8	67.2	5.85	11.70	FE+UIBC(saturation with iron)
	µg/dl	310	245	375	32.50	65.00	
	µmol/l	49.9	39.4	60.4	5.25	10.50	Direct Colorimetric
	µg/dl	279	220	338	29.50	59.00	
	µmol/l	53.6	42.3	64.9	5.65	11.30	Randox Direct
	µg/dl	300	236	364	32.00	64.00	
Tobramycin	µmol/l	15.0	12.0	18.0	1.50	3.00	Immunoturbidimetric
	µg/ml	7.02	5.62	8.42	0.70	1.40	
Total T3	nmol/l	3.70	2.77	4.63	0.47	0.93	Abbott Architect
	ng/ml	2.41	1.80	3.02	0.31	0.61	
	ng/dl	241	180	302	30.50	61.00	Abbott Architect
	nmol/l	5.68	4.26	7.10	0.71	1.42	Siemens Centaur XP/Classic
	ng/ml	3.70	2.77	4.63	0.47	0.93	
	ng/dl	370	277	463	46.50	93.00	Siemens Centaur XP/Classic
	nmol/l	4.19	3.14	5.24	0.53	1.05	BioMerieux Vidas
	ng/ml	2.73	2.04	3.42	0.35	0.69	
	ng/dl	273	204	342	34.50	69.00	BioMerieux Vidas

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	7.87	5.90	9.84	0.99	1.97	Vitros ECi
	ng/ml	5.12	3.84	6.40	0.64	1.28	
	ng/dl	512	384	640	64.00	128.00	Vitros ECi
Total T4	nmol/l	241	181	301	30.00	60.00	Abbott Architect
	µg/dl	18.8	14.1	23.5	2.35	4.70	
	ng/ml	188	141	235	23.50	47.00	Abbott Architect
	nmol/l	227	170	284	28.50	57.00	Siemens Centaur XP/Classic
	µg/dl	17.7	13.3	22.1	2.20	4.40	
	ng/ml	177	133	221	22.00	44.00	Siemens Centaur XP/Classic
	nmol/l	212	159	265	26.50	53.00	BioMerieux Vidas
	µg/dl	16.5	12.4	20.6	2.05	4.10	
	ng/ml	165	124	206	20.50	41.00	BioMerieux Vidas
	nmol/l	206	155	257	25.50	51.00	Siemens Immulite 2000/2500
	µg/dl	16.1	12.1	20.1	2.00	4.00	
	ng/ml	161	121	201	20.00	40.00	Siemens Immulite 2000/2500
	nmol/l	235	176	294	29.50	59.00	Roche Modular E170
	µg/dl	18.3	13.7	22.9	2.30	4.60	
	ng/ml	183	137	229	23.00	46.00	Roche Modular E170
	nmol/l	189	142	236	23.50	47.00	Roche Cobas E411
	µg/dl	14.7	11.1	18.3	1.80	3.60	
	ng/ml	147	111	183	18.00	36.00	Roche Cobas E411
	nmol/l	180	135	225	22.50	45.00	Roche Cobas 6000/8000
	µg/dl	14.0	10.5	17.5	1.75	3.50	
	ng/ml	140	105	175	17.50	35.00	Roche Cobas 6000/8000

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Transferrin	g/l	1.71	1.37	2.05	0.17	0.34	Immunoturbidimetric
	mg/dl	171	137	205	17.00	34.00	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	3.56	2.99	4.13	0.29	0.57	Ortho Vitros Microslide Systems
	mg/dl	315	265	365	25.00	50.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.58	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.67	7.54	9.80	0.57	1.13	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.11	7.93	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.06	7.88	10.2	0.59	1.18	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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 with ascorbate oxidase @ 546nm
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.58	0.50	0.66	0.04	0.08	Agappe - Uricase - PAP
	mg/dl	9.74	8.47	11.0	0.64	1.27	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	17.7	15.1	20.3	1.30	2.60	Urease end point
	mg/dl	106	90.8	121	7.60	15.20	
	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	17.5	14.9	20.1	1.30	2.60	Urease hypochlorite
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	18.6	15.8	21.4	1.40	2.80	Agappe - Urease GLDH
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease Berthelot
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	
Vitamin B12	pmol/l	258	206	310	26.00	52.00	Roche Cobas E411
	pg/ml	350	279	421	35.50	71.00	
Zinc	µmol/l	33.6	26.9	40.3	3.35	6.70	Colorimetric with deproteinisation
	µg/dl	219	176	262	21.50	43.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		7.8	5.9	9.7	0.94	1.87	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.5	5.7	9.3	0.90	1.80	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		59.1	53.2	65.0	2.95	5.90	% of total Protein (Beckman Capillary)
beta-globulin		13.5	10.3	16.7	1.60	3.20	% of total Protein (Beckman Capillary)
gamma-globulin		12.1	9.2	15.0	1.45	2.90	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.2	26.5	35.9	2.35	4.70	Bromocresol Green
	g/dl	3.12	2.65	3.59	0.24	0.47	
Alkaline Phosphatase	U/l	279	237	321	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	217	185	249	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	178	151	205	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	177	150	204	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	138	117	159	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	113	96	130	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	108	87	129	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	157	126	188	15.50	31.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.6	22.6	34.6	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.54	6.56	8.52	0.49	0.98	Cholesterol Oxidase
	mg/dl	291	253	329	19.00	38.00	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	332	266	398	33.00	66.00	Alkaline picrate with deproteinization
	mg/dl	3.75	3.01	4.49	0.37	0.74	
	µmol/l	354	284	424	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	4.00	3.21	4.79	0.40	0.79	
	µmol/l	404	323	485	40.50	81.00	Randox Enzymatic UV method
	mg/dl	4.57	3.65	5.49	0.46	0.92	
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	121	165	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	95	129	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	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	3.04	2.59	3.49	0.23	0.45	Direct HDL PPD
	mg/dl	117	100	134	8.50	17.00	
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	
LD (LDH)	U/l	720	612	828	54.00	108.00	P->L SFBC 37°C
	U/l	520	442	598	39.00	78.00	P->L SFBC 30°C
	U/l	365	310	420	27.50	55.00	P->L SFBC 25°C
Lipase	U/l	86	69	103	8.50	17.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Xylidyl Blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	5.83	5.36	6.30	0.24	0.47	ISE method - direct
Protein Total	g/l	48.5	38.8	58.2	4.85	9.70	Biuret reaction end point
	g/dl	4.85	3.88	5.82	0.49	0.97	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.76	8.50	11.0	0.63	1.26	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.86	8.58	11.1	0.64	1.28	
	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	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease end point
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease hypochlorite
	mg/dl	109	93.2	125	7.90	15.80	
	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	

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RANDOX

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
Alkaline Phosphatase	U/l	249	211	287	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	194	164	224	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	159	135	183	12.00	24.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	87	133	11.50	23.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	58	88	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	90.7	71.6	110	9.55	19.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.31	4.19	6.43	0.56	1.12	
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	7.77	6.76	8.78	0.51	1.01	Cholesterol Oxidase
	mg/dl	300	261	339	19.50	39.00	
CK Total	U/l	566	464	668	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	354	290	418	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	241	197	285	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	351	280	422	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	3.97	3.16	4.78	0.41	0.81	

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RANDOX

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	402	321	483	40.50	81.00	Creatinine PAP method
	mg/dl	4.54	3.63	5.45	0.46	0.91	
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.10	1.79	2.41	0.16	0.31	Direct HDL Immunoseparation
	mg/dl	81.1	69.1	93.1	6.00	12.00	
Protein Total	g/l	49.7	39.7	59.7	5.00	10.00	Biuret reaction end point
	g/dl	4.97	3.97	5.97	0.50	1.00	
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.77	7.63	9.91	0.57	1.14	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

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RANDOX

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.21	0.41	
	g/l	26.6	22.6	30.6	2.00	4.00	Turbidimetric Assays
	g/dl	2.66	2.26	3.06	0.20	0.40	
Alkaline Phosphatase	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	75	103	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	134	108	160	13.00	26.00	Tris buffer without P5P 37°C
	U/l	99	80	118	9.50	19.00	Tris buffer without P5P 30°C
	U/l	75	61	89	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	241	204	278	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	264	224	304	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	267	227	307	20.00	40.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	264	225	303	19.50	39.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	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
Bile Acids	µmol/l	50.5	40.4	60.6	5.05	10.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Colorimetric

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bicarbonate	mmol/l	19.0	15.1	22.9	1.95	3.90	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	
	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	29.3	23.2	35.4	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Bilirubin Total	µmol/l	79.3	62.7	95.9	8.30	16.60	Diazo with Sulphanilic Acid
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	79.4	62.7	96.1	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	80.1	63.3	96.9	8.40	16.80	Diazonium ion
	mg/dl	4.69	3.70	5.68	0.50	0.99	
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	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.51	6.54	8.48	0.49	0.97	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
Chloride	mmol/l	108	99.3	117	4.35	8.70	ISE indirect
Cholinesterase	U/l	5131	4105	6157	513.00	1026.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	605	496	714	54.50	109.00	CK-NAC substrate start (DGKC) 37°C
	U/l	379	310	448	34.50	69.00	CK-NAC substrate start (DGKC) 30°C
	U/l	257	211	303	23.00	46.00	CK-NAC substrate start (DGKC) 25°C
	U/l	606	497	715	54.50	109.00	CK-NAC (IFCC) 37°C
	U/l	379	311	447	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	258	211	305	23.50	47.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Creatinine	µmol/l	381	304	458	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.31	3.44	5.18	0.44	0.87	
	µmol/l	397	318	476	39.50	79.00	Randox Enzymatic UV method
	mg/dl	4.49	3.59	5.39	0.45	0.90	
	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.33	3.46	5.20	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.32	0.09	0.17	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	74.0	55.5	92.5	9.25	18.50	Roche Cobas 6000/8000
	ng/dl	5.77	4.33	7.21	0.72	1.44	
	pg/ml	57.7	43.3	72.1	7.20	14.40	Roche Cobas 6000/8000
gamma-GT	U/l	164	140	188	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	110	148	9.50	19.00	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	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	166	141	191	12.50	25.00	Agappe - Szasz Kinetic 37°C
	U/l	131	111	151	10.00	20.00	Agappe - Szasz Kinetic 30°C
	U/l	102	87	117	7.50	15.00	Agappe - Szasz Kinetic 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.93	2.49	3.37	0.22	0.44	Direct HDL PEGME
	mg/dl	113	96.1	130	8.45	16.90	
	mmol/l	2.93	2.49	3.37	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	113	96.1	130	8.45	16.90	
Iron	µmol/l	38.0	31.1	44.9	3.45	6.90	Colorimetric with ppt.
	µg/dl	212	174	250	19.00	38.00	
	µmol/l	38.7	31.8	45.6	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	178	254	19.00	38.00	
Lactate	mmol/l	5.58	4.58	6.58	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.3	41.3	59.3	4.50	9.00	
LD (LDH)	U/l	706	600	812	53.00	106.00	P->L German methods 37°C
	U/l	510	433	587	38.50	77.00	P->L German methods 30°C
	U/l	358	304	412	27.00	54.00	P->L German methods 25°C
	U/l	708	602	814	53.00	106.00	P->L SFBC 37°C
	U/l	511	435	587	38.00	76.00	P->L SFBC 30°C
	U/l	359	305	413	27.00	54.00	P->L SFBC 25°C
	U/l	363	309	417	27.00	54.00	L->P IFCC 37°C
	U/l	262	223	301	19.50	39.00	L->P IFCC 30°C
	U/l	184	157	211	13.50	27.00	L->P IFCC 25°C

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	73	59	87	7.00	14.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Xylidyl Blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
	mmol/l	1.80	1.58	2.02	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.37	3.84	4.90	0.27	0.53	
Osmolality	mOsm/kg	341	272	410	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	mmol/l	2.18	1.86	2.50	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.76	5.77	7.75	0.50	0.99	
Potassium	mmol/l	6.12	5.63	6.61	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction kinetic
	g/dl	4.50	3.60	5.40	0.45	0.90	
PSA Total	ng/ml =	36.5	27.4	45.6	4.55	9.10	Roche Cobas 6000/8000
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Cobas 6000/8000
TIBC	µmol/l	55.0	43.5	66.5	5.75	11.50	FE+UIBC(saturation with iron)
	µg/dl	307	243	371	32.00	64.00	
Total T4	nmol/l	180	135	225	22.50	45.00	Roche Cobas 6000/8000
	µg/dl	14.0	10.5	17.5	1.75	3.50	
	ng/ml	140	105	175	17.50	35.00	Roche Cobas 6000/8000

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	249	209	289	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.02	7.85	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.11	7.91	10.3	0.60	1.20	
Urea	mmol/l	17.3	14.7	19.9	1.30	2.60	Urease end point
	mg/dl	104	88.3	120	7.85	15.70	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	140	119	161	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	109	93	125	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	76	102	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	272	231	313	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	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
Bicarbonate	mmol/l	18.5	14.7	22.3	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	31.4	24.8	38.0	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	30.7	24.2	37.2	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	80.2	63.4	97.0	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.69	3.71	5.67	0.49	0.98	
	µmol/l	80.2	63.4	97.0	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.71	5.67	0.49	0.98	

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	81.9	64.7	99.1	8.60	17.20	Diazonium ion
	mg/dl	4.79	3.78	5.80	0.51	1.01	
Calcium	mmol/l	3.12	2.80	3.44	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	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	
	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	
Cholesterol	mmol/l	7.68	6.68	8.68	0.50	1.00	Cholesterol Oxidase
	mg/dl	296	258	334	19.00	38.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	602	494	710	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	377	309	445	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	256	210	302	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	366	293	439	36.50	73.00	Roche Creatinine Plus
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.12	3.30	4.94	0.41	0.82	
gamma-GT	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
HDL - Cholesterol	mmol/l	3.02	2.57	3.47	0.23	0.45	Direct HDL Roche 3rd generation
	mg/dl	117	99.2	135	8.90	17.80	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
Lactate	mmol/l	5.81	4.77	6.85	0.52	1.04	Colorimetric Lactate Oxidase
	mg/dl	52.3	43.0	61.6	4.65	9.30	
LD (LDH)	U/l	378	321	435	28.50	57.00	L->P IFCC 37°C
	U/l	273	232	314	20.50	41.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.28	1.93	2.63	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.07	5.98	8.16	0.55	1.09	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
Sodium	mmol/l	153	145	161	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.86	2.41	3.31	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	253	213	293	20.00	40.00	

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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 with ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	17.8	15.2	20.4	1.30	2.60	Urease hypochlorite
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	17.9	15.2	20.6	1.35	2.70	Agappe - Urease GLDH
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	18.3	15.6	21.0	1.35	2.70	BUN
	mg/dl	51.4	43.7	59.1	3.85	7.70	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
	g/l	27.3	23.2	31.4	2.05	4.10	Bromocresol Purple
	g/dl	2.73	2.32	3.14	0.21	0.41	
Alkaline Phosphatase	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	75	103	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	245	208	282	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	266	226	306	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	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
Bicarbonate	mmol/l	19.3	15.3	23.3	2.00	4.00	Enzymatic
Bilirubin Direct	µmol/l	28.8	22.7	34.9	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.7	22.6	34.8	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.32	2.04	0.18	0.36	
Bilirubin Total	µmol/l	80.3	63.4	97.2	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.70	3.71	5.69	0.50	0.99	

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.8	63.1	96.5	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.67	3.69	5.65	0.49	0.98	
	µmol/l	81.8	64.6	99.0	8.60	17.20	Diazonium ion
	mg/dl	4.79	3.78	5.80	0.51	1.01	
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	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.55	6.57	8.53	0.49	0.98	Cholesterol Oxidase
	mg/dl	291	254	328	18.50	37.00	
Chloride	mmol/l	109	99.9	118	4.55	9.10	ISE indirect
CK Total	U/l	598	490	706	54.00	108.00	CK-NAC substrate start (DGKC) 37°C
	U/l	374	307	441	33.50	67.00	CK-NAC substrate start (DGKC) 30°C
	U/l	254	208	300	23.00	46.00	CK-NAC substrate start (DGKC) 25°C
	U/l	604	496	712	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	378	310	446	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	257	211	303	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	369	295	443	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	399	319	479	40.00	80.00	Randox Enzymatic UV method
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	397	318	476	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.49	3.59	5.39	0.45	0.90	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	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	
gamma-GT	U/l	169	144	194	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	133	113	153	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	89	119	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	188	160	216	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	148	126	170	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	116	99	133	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	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	2.89	2.46	3.32	0.22	0.43	Direct HDL Roche 3rd generation
	mg/dl	112	95.0	129	8.50	17.00	
Iron	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	71	57	85	7.00	14.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Xylidyl Blue
	mg/dl	4.37	3.86	4.88	0.26	0.51	
	mmol/l	1.79	1.58	2.00	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.35	3.84	4.86	0.26	0.51	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.16	6.08	8.24	0.54	1.08	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - indirect
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	
	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction kinetic
	g/dl	4.50	3.60	5.40	0.45	0.90	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	55.4	43.7	67.1	5.85	11.70	FE+UIBC(saturation with iron)
	µg/dl	310	244	376	33.00	66.00	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.83	2.38	3.28	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	250	211	289	19.50	39.00	
	mmol/l	2.89	2.42	3.36	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	256	214	298	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease end point
	mg/dl	111	93.8	128	8.60	17.20	
	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	137	110	164	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	62	92	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	245	208	282	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	264	224	304	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	148	119	177	14.50	29.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	57	83	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.0	15.1	22.9	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	30.2	23.9	36.5	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Bilirubin Total	µmol/l	75.7	59.8	91.6	7.95	15.90	Diazo with Sulphanilic Acid
	mg/dl	4.43	3.50	5.36	0.47	0.93	
	µmol/l	78.5	62.0	95.0	8.25	16.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.59	3.63	5.55	0.48	0.96	
	µmol/l	78.9	62.3	95.5	8.30	16.60	Diazonium ion
	mg/dl	4.62	3.64	5.60	0.49	0.98	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	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	
Cholesterol	mmol/l	7.45	6.48	8.42	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	250	326	19.00	38.00	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
CK Total	U/l	530	435	625	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	332	272	392	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	225	185	265	20.00	40.00	CK-NAC (IFCC) 25°C
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	310	464	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	3.50	5.24	0.44	0.87	
gamma-GT	U/l	162	138	186	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	109	147	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	100	85	115	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	183	156	210	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	144	123	165	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	113	96	130	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.95	2.51	3.39	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	114	96.9	131	8.55	17.10	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	37.6	30.8	44.4	3.40	6.80	Colorimetric without ppt.
	µg/dl	210	172	248	19.00	38.00	
Lactate	mmol/l	5.55	4.55	6.55	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.0	41.0	59.0	4.50	9.00	
LD (LDH)	U/l	362	307	417	27.50	55.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	184	156	212	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	75	60	90	7.50	15.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.05	1.80	2.30	0.13	0.25	Spectrophotometric
	mg/dl	1.42	1.25	1.59	0.09	0.17	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Potassium	mmol/l	6.18	5.69	6.67	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	55.4	43.7	67.1	5.85	11.70	FE+UIBC(saturation with iron)
	µg/dl	310	244	376	33.00	66.00	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.76	2.32	3.20	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	244	205	283	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.95	10.3	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.99	7.81	10.2	0.59	1.18	
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease kinetic
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	BUN
	mg/dl	50.8	43.2	58.4	3.80	7.60	

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RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			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	
Alkaline Phosphatase	U/l	323	275	371	24.00	48.00	Diethanolamine buffer DEA 37°C
	U/l	177	150	204	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	270	230	310	20.00	40.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	298	253	343	22.50	45.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	168	134	202	17.00	34.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	49.3	39.4	59.2	4.95	9.90	5th Generation Colorimetric
Bicarbonate	mmol/l	20.5	16.3	24.7	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Vanadate Oxidation
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.02	6.18	0.54	1.08	
	µmol/l	92.2	72.8	112	9.70	19.40	Vanadate Oxidation
	mg/dl	5.39	4.26	6.52	0.57	1.13	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.69	6.69	8.69	0.50	1.00	Cholesterol Oxidase
	mg/dl	297	258	336	19.50	39.00	

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RANDOX

RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	109	100	118	4.50	9.00	ISE direct
CK Total	U/l	551	452	650	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	596	489	703	53.50	107.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	333	266	400	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.76	3.01	4.51	0.38	0.75	
	µmol/l	382	306	458	38.00	76.00	Randox Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
gamma-GT	U/l	194	165	223	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.54	4.54	6.54	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.9	40.9	58.9	4.50	9.00	
LD (LDH)	U/l	747	635	859	56.00	112.00	P->L German methods 37°C
	U/l	369	314	424	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	84	67	101	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.02	1.78	2.26	0.12	0.24	Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.82	1.60	2.04	0.11	0.22	Xylidyl Blue
	mg/dl	4.42	3.89	4.95	0.27	0.53	
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	

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RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	5.85	5.38	6.32	0.24	0.47	ISE method - direct
	mmol/l	5.89	5.42	6.36	0.24	0.47	Enzymatic
Protein Total	g/l	47.2	37.8	56.6	4.70	9.40	Biuret reaction end point
	g/dl	4.72	3.78	5.66	0.47	0.94	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - direct
	mmol/l	155	147	163	4.00	8.00	Enzymatic
TIBC	µmol/l	53.6	42.3	64.9	5.65	11.30	Direct Colorimetric
	µg/dl	300	236	364	32.00	64.00	
Triglycerides	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
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	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.39	8.16	10.6	0.62	1.23	
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	

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SIEMENS ADVIA 1200 / 1650 / 2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Green
	g/dl	2.90	2.47	3.33	0.22	0.43	
	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Purple
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	177	150	204	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	254	215	293	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	50.6	40.5	60.7	5.05	10.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	20.8	16.5	25.1	2.15	4.30	Enzymatic
Bilirubin Direct	µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Bilirubin Total	µmol/l	91.8	72.5	111	9.65	19.30	Oxidation to Biliverdin
	mg/dl	5.37	4.24	6.50	0.57	1.13	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.06	2.75	3.37	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	7.45	6.48	8.42	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	250	326	19.00	38.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	547	449	645	49.00	98.00	CK-NAC substrate start (DGKC) 37°C
	U/l	557	457	657	50.00	100.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	377	302	452	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.26	3.41	5.11	0.43	0.85	
	µmol/l	385	308	462	38.50	77.00	Randox Enzymatic UV method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	386	309	463	38.50	77.00	Jaffe rate blanked
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.24	3.39	5.09	0.43	0.85	
gamma-GT	U/l	184	157	211	13.50	27.00	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	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.58	2.19	2.97	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.6	84.5	115	7.55	15.10	
	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	
Iron	µmol/l	39.2	32.2	46.2	3.50	7.00	Colorimetric without ppt.
	µg/dl	219	180	258	19.50	39.00	
Lactate	mmol/l	5.67	4.65	6.69	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	51.1	41.9	60.3	4.60	9.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P 37°C
	U/l	750	638	862	56.00	112.00	P->L German methods 37°C
	U/l	369	313	425	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	80	64	96	8.00	16.00	Other Colorimetric 37°C
Lithium	mmol/l	2.10	1.84	2.36	0.13	0.26	Spectrophotometric
	mg/dl	1.46	1.28	1.64	0.09	0.18	
Magnesium	mmol/l	1.85	1.63	2.07	0.11	0.22	Xylidyl Blue
	mg/dl	4.50	3.96	5.04	0.27	0.54	
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	6.10	5.61	6.59	0.25	0.49	ISE method - indirect
Protein Total	g/l	46.8	37.4	56.2	4.70	9.40	Biuret reaction end point
	g/dl	4.68	3.74	5.62	0.47	0.94	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.2	41.3	63.1	5.45	10.90	FE+UIBC(saturation with iron)
	µg/dl	292	231	353	30.50	61.00	
	µmol/l	52.2	41.2	63.2	5.50	11.00	Direct Colorimetric
	µg/dl	292	230	354	31.00	62.00	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.97	2.50	3.44	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	263	221	305	21.00	42.00	
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	0.54	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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SIEMENS ADVIA 1200 / 1650 / 2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.9	23.8	32.0	2.05	4.10	Bromocresol Purple
	g/dl	2.79	2.38	3.20	0.21	0.41	
Alkaline Phosphatase	U/l	162	138	186	12.00	24.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer with P5P 37°C
	U/l	149	119	179	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	324	275	373	24.50	49.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	332	282	382	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	183	146	220	18.50	37.00	Tris buffer with P5P 37°C
	U/l	181	145	217	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	17.9	14.1	21.7	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.825	1.28	0.11	0.23	
Bilirubin Total	µmol/l	85.7	67.7	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.01	3.96	6.06	0.53	1.05	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Dimension-Siemens reagents
	mg/dl	274	239	309	17.50	35.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	537	441	633	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	392	314	470	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.43	3.55	5.31	0.44	0.88	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	194	165	223	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	226	192	260	17.00	34.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
LD (LDH)	U/l	372	316	428	28.00	56.00	L->P IFCC 37°C
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Methylthymol blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.7	38.2	57.2	4.75	9.50	Biuret reaction end point
	g/dl	4.77	3.82	5.72	0.48	0.95	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	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	
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.07	7.90	10.2	0.59	1.17	
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	

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SIEMENS DIMENSION RxL / Max / Xpand® ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Green
	g/dl	2.78	2.36	3.20	0.21	0.42	
	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Purple
	g/dl	2.78	2.36	3.20	0.21	0.42	
Alkaline Phosphatase	U/l	155	131	179	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	155	132	178	11.50	23.00	Randox AMP 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer with P5P 37°C
	U/l	149	119	179	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	328	279	377	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	184	147	221	18.50	37.00	Tris buffer with P5P 37°C
	U/l	185	148	222	18.50	37.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	19.4	15.4	23.4	2.00	4.00	Enzymatic
Bilirubin Direct	µmol/l	17.4	13.8	21.0	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	85.1	67.2	103	8.95	17.90	Diazo with Sulphanilic Acid
	mg/dl	4.98	3.93	6.03	0.53	1.05	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Dimension-Siemens reagents
	mg/dl	273	237	309	18.00	36.00	

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RANDOX

SIEMENS DIMENSION RxL / Max / Xpand® ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	542	444	640	49.00	98.00	Dithioerythritol 37°C
	U/l	540	442	638	49.00	98.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	398	318	478	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	378	302	454	38.00	76.00	Randox Enzymatic UV method
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	387	310	464	38.50	77.00	Creatinine PAP method
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	392	314	470	39.00	78.00	Jaffe rate blanked
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	400	320	480	40.00	80.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	383	306	460	38.50	77.00	IDMS traceable
	mg/dl	4.33	3.46	5.20	0.44	0.87	
gamma-GT	U/l	192	163	221	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	218	185	251	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.09	2.62	3.56	0.24	0.47	Direct HDL PPD
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	3.03	2.57	3.49	0.23	0.46	Direct HDL PEGME
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	2.95	2.50	3.40	0.23	0.45	Direct Clearance Method
	mg/dl	114	96.5	132	8.75	17.50	

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SIEMENS DIMENSION RxL / Max / Xpand® ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07 **Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric with ppt.
	µg/dl	208	170	246	19.00	38.00	
	µmol/l	36.7	30.1	43.3	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.32	4.36	6.28	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.9	39.3	56.5	4.30	8.60	
LD (LDH)	U/l	374	318	430	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	367	312	422	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	342	275	409	33.50	67.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.82	1.60	2.04	0.11	0.22	Methylthymol blue
	mg/dl	4.42	3.89	4.95	0.27	0.53	
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.07	5.58	6.56	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	50.0	39.5	60.5	5.25	10.50	Removal of excess free iron
	µg/dl	280	221	339	29.50	59.00	
	µmol/l	50.2	39.7	60.7	5.25	10.50	Direct Colorimetric
	µg/dl	281	222	340	29.50	59.00	
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	

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SIEMENS DIMENSION RxL/Max/Xpand® ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07 **Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	264	221	307	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.14	7.96	10.3	0.59	1.18	
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	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	

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Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.7	23.6	31.8	2.05	4.10	Bromocresol Purple
	g/dl	2.77	2.36	3.18	0.21	0.41	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer with P5P 37°C
	U/l	141	113	169	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	326	277	375	24.50	49.00	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	184	147	221	18.50	37.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	20.2	16.0	24.4	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.7	22.7	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	83.1	65.7	101	8.70	17.40	Diazo with Sulphanilic Acid
	mg/dl	4.86	3.84	5.88	0.51	1.02	
Calcium	mmol/l	3.08	2.78	3.38	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.01	6.09	7.93	0.46	0.92	Dimension-Siemens reagents
	mg/dl	271	235	307	18.00	36.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
CK Total	U/l	541	444	638	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	529	434	624	47.50	95.00	Dithioerythritol 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	529	434	624	47.50	95.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	395	316	474	39.50	79.00	Alkaline picrate no deproteinization
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	400	320	480	40.00	80.00	Randox Enzymatic UV method
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	395	316	474	39.50	79.00	IDMS traceable
	mg/dl	4.46	3.57	5.35	0.45	0.89	
gamma-GT	U/l	209	178	240	15.50	31.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	217	184	250	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.93	2.49	3.37	0.22	0.44	Direct HDL PEGME
	mg/dl	113	96.1	130	8.45	16.90	
Iron	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	5.23	4.29	6.17	0.47	0.94	UV LDH
	mg/dl	47.1	38.7	55.5	4.20	8.40	
LD (LDH)	U/l	374	318	430	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	378	303	453	37.50	75.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.79	1.58	2.00	0.11	0.21	Methylthymol blue
	mg/dl	4.35	3.84	4.86	0.26	0.51	
Phosphate Inorganic	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.76	5.74	7.78	0.51	1.02	

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Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	5.98	5.50	6.46	0.24	0.48	ISE method - indirect
Protein Total	g/l	47.7	38.2	57.2	4.75	9.50	Biuret reaction end point
	g/dl	4.77	3.82	5.72	0.48	0.95	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.10	2.60	3.60	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	274	230	318	22.00	44.00	
Uric Acid (Urate)	mmol/l	0.51	0.44	0.58	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.55	7.44	9.66	0.56	1.11	
	mmol/l	0.51	0.44	0.58	0.03	0.07	Spectrophotometric at 280-290
	mg/dl	8.58	7.46	9.70	0.56	1.12	
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	

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VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	93.0	73.5	113	9.75	19.50	Diazo with Sulphanilic Acid
	mg/dl	5.44	4.30	6.58	0.57	1.14	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.77	6.76	8.78	0.51	1.01	Cholesterol Oxidase
	mg/dl	300	261	339	19.50	39.00	
CK Total	U/l	583	478	688	52.50	105.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	176	149	203	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
LD (LDH)	U/l	363	308	418	27.50	55.00	L->P IFCC 37°C
Protein Total	g/l	53.0	42.4	63.6	5.30	10.60	Biuret reaction end point
	g/dl	5.30	4.24	6.36	0.53	1.06	
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.51	8.28	10.7	0.62	1.23	
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	

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Lot. No. 723UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	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	

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