RANDOX 0086 CE

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

CAT. NO. HE1532 / HS2611 **LOT NO.** 809UE
SIZE: 20 x 5ml / 5 x 5ml **EXPIRY:** 2019-07

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 –18°C to –24°C. (See Limitations)

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

LIMITATIONS
For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25 - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C and 28 days when frozen once at –18°C to –24°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –18°C to –24°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.

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

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.

2. Refer to the Control section of the individual analyser application.

3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

® All trademarks recognised.

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

22 Apr '16 ne

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RANDOX

ABBOTT AEROSET®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
ALT (GPT)	U/l	122	98	146	12.00	24.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	29.9	23.6	36.2	3.15	6.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Bilirubin Total	µmol/l	88.6	70.0	107	9.30	18.60	Diazo with Dichloroaniline (DCA)
	mg/dl	5.18	4.10	6.26	0.54	1.08	
Calcium	mmol/l	2.99	2.69	3.29	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	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	6.93	6.03	7.83	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	233	301	17.00	34.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct
CK Total	U/l	549	450	648	49.50	99.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	354	283	425	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.00	3.20	4.80	0.40	0.80	
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	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.54	2.16	2.92	0.19	0.38	HDL - Ultra
	mg/dl	98.0	83.4	113	7.30	14.60	
Iron	µmol/l	35.8	29.3	42.3	3.25	6.50	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	5.89	5.42	6.36	0.24	0.47	ISE method - direct
Protein Total	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction end point
	g/dl	4.41	3.53	5.29	0.44	0.88	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.57	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	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.39	8.18	10.6	0.61	1.21	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.1	23.9	32.3	2.10	4.20	Bromocresol Green
	g/dl	2.81	2.39	3.23	0.21	0.42	
	g/l	26.5	22.5	30.5	2.00	4.00	Bromocresol Purple
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	309	263	355	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	303	257	349	23.00	46.00	AMP non-optimised 37°C
ALT (GPT)	U/l	118	94	142	12.00	24.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	259	220	298	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	297	253	341	22.00	44.00	Randox liquid stable pNPG7 37°C
	U/l	310	264	356	23.00	46.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	350	298	402	26.00	52.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	45.7	36.5	54.9	4.60	9.20	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.21	1.83	0.16	0.31	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin Total	µmol/l	86.9	68.6	105	9.15	18.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.08	4.01	6.15	0.54	1.07	
	µmol/l	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	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	88.4	69.8	107	9.30	18.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.17	4.08	6.26	0.55	1.09	
	µmol/l	86.3	68.2	104	9.05	18.10	Nitrobenzenediazonium salt
	mg/dl	5.05	3.99	6.11	0.53	1.06	
	µmol/l	88.3	69.8	107	9.25	18.50	Diazonium ion
	mg/dl	5.17	4.08	6.26	0.55	1.09	
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	6.77	5.89	7.65	0.44	0.88	Cholesterol Oxidase
	mg/dl	261	227	295	17.00	34.00	
Chloride	mmol/l	116	106	126	5.00	10.00	ISE indirect
Cholinesterase	U/l	5882	4706	7058	588.00	1176.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5660	4528	6792	566.00	1132.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	559	458	660	50.50	101.00	CK-NAC serum start (DGKC) 37°C
	U/l	554	454	654	50.00	100.00	CK-NAC substrate start (DGKC) 37°C
	U/l	541	444	638	48.50	97.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	20.5	16.4	24.6	2.05	4.10	Colorimetric
	µg/dl	130	104	156	13.00	26.00	
Creatinine	µmol/l	378	302	454	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	367	294	440	36.50	73.00	Randox Enzymatic UV method
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	µmol/l	372	297	447	37.50	75.00	Creatinine PAP method
	mg/dl	4.20	3.36	5.04	0.42	0.84	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	373	298	448	37.50	75.00	Jaffe rate blanked
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	µmol/l	379	304	454	37.50	75.00	IDMS traceable
	mg/dl	4.28	3.44	5.12	0.42	0.84	
Free T4	pmol/l	40.0	30.0	50.0	5.00	10.00	Abbott Architect
	ng/dl	3.12	2.34	3.90	0.39	0.78	
	pg/ml	31.2	23.4	39.0	3.90	7.80	Abbott Architect
gamma-GT	U/l	144	122	166	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	143	122	164	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	121	163	10.50	21.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose dehydrogenase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.62	2.22	3.02	0.20	0.40	Direct HDL PPD
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.49	2.12	2.86	0.19	0.37	Direct Clearance Method
	mg/dl	96.1	81.8	110	7.15	14.30	
	mmol/l	2.51	2.13	2.89	0.19	0.38	HDL - Ultra
	mg/dl	96.9	82.2	112	7.35	14.70	
Iron	µmol/l	34.3	28.2	40.4	3.05	6.10	Colorimetric with ppt.
	µg/dl	192	158	226	17.00	34.00	
	µmol/l	34.1	27.9	40.3	3.10	6.20	Colorimetric without ppt.
	µg/dl	191	156	226	17.50	35.00	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.20	4.26	6.14	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	46.9	38.4	55.4	4.25	8.50	
LD (LDH)	U/l	339	288	390	25.50	51.00	L->P 37°C
	U/l	671	570	772	50.50	101.00	P->L German methods 37°C
	U/l	339	288	390	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.89	1.67	2.11	0.11	0.22	Spectrophotometric
	mg/dl	1.31	1.16	1.46	0.08	0.15	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Arsenazo III
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Enzymatic
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Osmolality	mOsm/kg	354	283	425	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.07	6.01	8.13	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	6.03	5.55	6.51	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction kinetic
	g/dl	4.53	3.62	5.44	0.46	0.91	
PSA Total	ng/ml =	27.8	20.9	34.7	3.45	6.90	Abbott Architect
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	0.93	0.74	1.11	0.09	0.19	Abbott Architect
TIBC	µmol/l	60.3	47.7	72.9	6.30	12.60	FE+UIBC(saturation with iron)
	µg/dl	337	267	407	35.00	70.00	
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	211	291	20.00	40.00	
	mmol/l	2.79	2.35	3.23	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	247	208	286	19.50	39.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.83	2.38	3.28	0.23	0.45	Agappe - GPO - TOPS
	mg/dl	250	211	289	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.28	10.7	0.62	1.23	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.28	10.7	0.62	1.23	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.44	8.22	10.7	0.61	1.22	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	

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			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	
Alkaline Phosphatase	U/l	337	287	387	25.00	50.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	25.6	20.3	30.9	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Bilirubin Total	µmol/l	90.2	71.2	109	9.50	19.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.28	4.17	6.39	0.56	1.11	
Calcium	mmol/l	3.27	2.94	3.60	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.25	2.92	3.58	0.17	0.33	Arsenazo III
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Cholesterol	mmol/l	6.97	6.06	7.88	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
CK Total	U/l	535	439	631	48.00	96.00	CK-NAC (IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.78	2.36	3.20	0.21	0.42	Direct HDL PPD
	mg/dl	107	91.1	123	7.95	15.90	
Iron	µmol/l	33.6	27.5	39.7	3.05	6.10	Colorimetric without ppt.
	µg/dl	188	154	222	17.00	34.00	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Xylidyl Blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.44	2.07	2.81	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.56	6.42	8.70	0.57	1.14	
Protein Total	g/l	48.2	38.6	57.8	4.80	9.60	Biuret reaction end point
	g/dl	4.82	3.86	5.78	0.48	0.96	
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	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	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	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.51	8.27	10.8	0.62	1.24	
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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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.4	23.3	31.5	2.05	4.10	Bromocresol Green
	g/dl	2.74	2.33	3.15	0.21	0.41	
Alkaline Phosphatase	U/l	397	337	457	30.00	60.00	p-Nitrophenylphosphate AMP 37°C
	U/l	526	447	605	39.50	79.00	Diethanolamine buffer DEA 37°C
	U/l	390	331	449	29.50	59.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	pNP Maltotrioside substrates 37°C
	U/l	272	231	313	20.50	41.00	Biotrol - blocked pNPG7 37°C
	U/l	286	243	329	21.50	43.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	276	234	318	21.00	42.00	Beckman Olympus - blocked pNPG7 37°C
AST (GOT)	U/l	165	132	198	16.50	33.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	22.8	18.0	27.6	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.33	1.05	1.61	0.14	0.28	
	µmol/l	23.6	18.7	28.5	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.38	1.09	1.67	0.15	0.29	
	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Bilirubin Total	µmol/l	88.5	69.9	107	9.30	18.60	Diazo with Dichloroaniline (DCA)
	mg/dl	5.18	4.09	6.27	0.55	1.09	
	µmol/l	88.1	69.6	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.15	4.07	6.23	0.54	1.08	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	87.2	68.9	106	9.15	18.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.10	4.03	6.17	0.54	1.07	
	µmol/l	85.6	67.6	104	9.00	18.00	Oxidation to Biliverdin
	mg/dl	5.01	3.95	6.07	0.53	1.06	
Calcium	mmol/l	3.13	2.81	3.45	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	
Cholesterol	mmol/l	6.87	5.98	7.76	0.45	0.89	Cholesterol Oxidase
	mg/dl	265	231	299	17.00	34.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholinesterase	U/l	4569	3655	5483	457.00	914.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	537	440	634	48.50	97.00	CK-NAC serum start (DGKC) 37°C
	U/l	558	457	659	50.50	101.00	CK-NAC substrate start (DGKC) 37°C
	U/l	551	452	650	49.50	99.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	25.8	20.6	31.0	2.60	5.20	Colorimetric
	µg/dl	164	131	197	16.50	33.00	
Creatinine	µmol/l	351	281	421	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.97	3.18	4.76	0.40	0.79	
	µmol/l	366	293	439	36.50	73.00	Randox Enzymatic UV method
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	361	289	433	36.00	72.00	Creatinine PAP method
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	356	285	427	35.50	71.00	Jaffe rate blanked
	mg/dl	4.02	3.22	4.82	0.40	0.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	358	287	429	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.05	3.24	4.86	0.41	0.81	
	µmol/l	362	290	434	36.00	72.00	IDMS traceable
	mg/dl	4.09	3.28	4.90	0.41	0.81	
D-3-Hydroxybutyrate	mmol/l	1.12	0.95	1.29	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	150	128	172	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	31	25	37	3.00	6.00	Triethanolamine buffer 50 mmol 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	2.67	2.27	3.07	0.20	0.40	Direct HDL Immunoseparation
	mg/dl	103	87.6	118	7.70	15.40	
	mmol/l	2.62	2.23	3.01	0.20	0.39	Direct Clearance Method
	mg/dl	101	86.1	116	7.45	14.90	
Iron	µmol/l	34.9	28.6	41.2	3.15	6.30	Colorimetric with ppt.
	µg/dl	195	160	230	17.50	35.00	
	µmol/l	34.6	28.4	40.8	3.10	6.20	Colorimetric without ppt.
	µg/dl	193	159	227	17.00	34.00	
Lactate	mmol/l	5.24	4.29	6.19	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.2	38.7	55.7	4.25	8.50	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	335	285	385	25.00	50.00	L->P 37°C
	U/l	762	648	876	57.00	114.00	P->L Scandinavian & Dutch 37°C
	U/l	654	556	752	49.00	98.00	P->L German methods 37°C
	U/l	337	286	388	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	62	50	74	6.00	12.00	Other Colorimetric 37°C
	U/l	66	53	79	6.50	13.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.88	1.66	2.10	0.11	0.22	Spectrophotometric
	mg/dl	1.31	1.15	1.47	0.08	0.16	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.16	6.08	8.24	0.54	1.08	
	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction kinetic
	g/dl	4.43	3.54	5.32	0.45	0.89	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.6	46.3	70.9	6.15	12.30	FE+UIBC(saturation with iron)
	µg/dl	328	259	397	34.50	69.00	
Total T4	nmol/l	176	132	220	22.00	44.00	Microgenics DRI assay
	µg/dl	13.7	10.3	17.1	1.70	3.40	
	ng/ml	137	103	171	17.00	34.00	Microgenics DRI assay

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.80	2.36	3.24	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	248	209	287	19.50	39.00	
	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	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.74	8.47	11.0	0.64	1.27	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.83	8.55	11.1	0.64	1.28	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.83	8.55	11.1	0.64	1.28	
Urea	mmol/l	18.5	15.8	21.2	1.35	2.70	Urease end point
	mg/dl	111	95.0	127	8.00	16.00	
	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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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.2	23.9	32.5	2.15	4.30	Bromocresol Purple
	g/dl	2.82	2.39	3.25	0.22	0.43	
Alkaline Phosphatase	U/l	355	302	408	26.50	53.00	p-Nitrophenylphosphate AMP 37°C
	U/l	356	302	410	27.00	54.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer SCE 37°C
Amylase Total	U/l	280	238	322	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	290	247	333	21.50	43.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	148	118	178	15.00	30.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Differential rate pH change
	mmol/l	17.7	14.1	21.3	1.80	3.60	Ion selective electrode
Bilirubin Direct	µmol/l	16.2	12.8	19.6	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.948	0.749	1.15	0.10	0.20	
Bilirubin Total	µmol/l	86.0	68.0	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.03	3.98	6.08	0.53	1.05	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Ion selective electrode
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	6.91	6.01	7.81	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	232	302	17.50	35.00	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
CK Total	U/l	565	463	667	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	555	455	655	50.00	100.00	Monothioglycerol 37°C
Creatinine	µmol/l	362	290	434	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.28	4.90	0.41	0.81	
	µmol/l	364	292	436	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.11	3.30	4.92	0.41	0.81	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	365	292	438	36.50	73.00	IDMS traceable
	mg/dl	4.12	3.30	4.94	0.41	0.82	
Free T4	pmol/l	56.9	42.6	71.2	7.15	14.30	Beckman DxI800
	ng/dl	4.44	3.32	5.56	0.56	1.12	
	pg/ml	44.4	33.2	55.6	5.60	11.20	Beckman DxI800
gamma-GT	U/l	121	103	139	9.00	18.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.0	12.7	17.3	1.15	2.30	Hexokinase
	mg/dl	270	229	311	20.50	41.00	
	mmol/l	15.0	12.7	17.3	1.15	2.30	Oxygen electrode
	mg/dl	270	229	311	20.50	41.00	
	mmol/l	14.9	12.7	17.1	1.10	2.20	Glucose oxidase
	mg/dl	268	229	307	19.50	39.00	
HDL - Cholesterol	mmol/l	3.53	3.00	4.06	0.27	0.53	Direct HDL PPD
	mg/dl	136	116	156	10.00	20.00	
	mmol/l	2.65	2.26	3.04	0.20	0.39	HDL - Ultra
	mg/dl	102	87.2	117	7.40	14.80	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	34.7	28.5	40.9	3.10	6.20	Colorimetric without ppt.
	µg/dl	194	159	229	17.50	35.00	
Lactate	mmol/l	5.00	4.10	5.90	0.45	0.90	Colorimetric Lactate Oxidase
	mg/dl	45.1	36.9	53.3	4.10	8.20	
LD (LDH)	U/l	281	239	323	21.00	42.00	L->P 37°C
	U/l	881	749	1013	66.00	132.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	281	239	323	21.00	42.00	L->P IFCC 37°C
Lipase	U/l	59	48	70	5.50	11.00	Other Colorimetric 37°C
Lithium	mmol/l	1.90	1.67	2.13	0.12	0.23	Spectrophotometric
	mg/dl	1.32	1.16	1.48	0.08	0.16	
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Calmagite
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	6.03	5.54	6.52	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.8	35.0	52.6	4.40	8.80	Biuret reaction CX4/5/7
	g/dl	4.38	3.50	5.26	0.44	0.88	
	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	42.9	34.3	51.5	4.30	8.60	Biuret reaction kinetic
	g/dl	4.29	3.43	5.15	0.43	0.86	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
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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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.15	10.6	0.61	1.22	
	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	
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease end point
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
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	175	140	210	17.50	35.00	Tris buffer without P5P 37°C
	U/l	118	95	141	11.50	23.00	Tris buffer without P5P 30°C
	U/l	83	67	99	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	90.6	71.6	110	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.30	4.19	6.41	0.56	1.11	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	6.79	5.90	7.68	0.45	0.89	Cholesterol Oxidase
	mg/dl	262	228	296	17.00	34.00	
Creatinine	µmol/l	335	268	402	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.79	3.03	4.55	0.38	0.76	
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Triglycerides	mmol/l	2.65	2.22	3.08	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	235	196	274	19.50	39.00	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.2	8.85	11.6	0.68	1.35	
Urea	mmol/l	17.7	15.0	20.4	1.35	2.70	Urease kinetic
	mg/dl	106	90.2	122	7.90	15.80	
	mmol/l	17.7	15.0	20.4	1.35	2.70	BUN
	mg/dl	49.7	42.2	57.2	3.75	7.50	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
Alkaline Phosphatase	U/l	327	278	376	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	255	217	293	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	209	178	240	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	132	106	158	13.00	26.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	74	60	88	7.00	14.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	168	135	201	16.50	33.00	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 Direct	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Bilirubin Total	µmol/l	90.2	71.3	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.28	4.17	6.39	0.56	1.11	
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Cholesterol	mmol/l	6.93	6.02	7.84	0.46	0.91	Cholesterol Oxidase
	mg/dl	267	232	302	17.50	35.00	
CK Total	U/l	574	470	678	52.00	104.00	CK-NAC (IFCC) 37°C
	U/l	359	294	424	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	244	200	288	22.00	44.00	CK-NAC (IFCC) 25°C

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	323	258	388	32.50	65.00	Alkaline picrate no deproteinization
	mg/dl	3.65	2.92	4.38	0.37	0.73	
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	119	101	137	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	93	79	107	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
LD (LDH)	U/l	721	613	829	54.00	108.00	P->L Scandinavian & Dutch 37°C
	U/l	521	443	599	39.00	78.00	P->L Scandinavian & Dutch 30°C
	U/l	366	311	421	27.50	55.00	P->L Scandinavian & Dutch 25°C
	U/l	660	561	759	49.50	99.00	P->L German methods 37°C
	U/l	477	405	549	36.00	72.00	P->L German methods 30°C
	U/l	335	284	386	25.50	51.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.13	6.05	8.21	0.54	1.08	
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
Triglycerides	mmol/l	2.60	2.19	3.01	0.21	0.41	Lipase/GPO-PAP no correction
	mg/dl	230	194	266	18.00	36.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
Urea	mmol/l	17.3	14.7	19.9	1.30	2.60	Urease kinetic
	mg/dl	104	88.3	120	7.85	15.70	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	17.3	14.7	19.9	1.30	2.60	BUN
	mg/dl	48.6	41.3	55.9	3.65	7.30	

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Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
Alkaline Phosphatase	U/l	480	408	552	36.00	72.00	Diethanolamine buffer DEA 37°C
	U/l	374	318	430	28.00	56.00	Diethanolamine buffer DEA 30°C
	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	95	75	115	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	152	121	183	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	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.9	67.1	103	8.90	17.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.97	3.93	6.01	0.52	1.04	
Calcium	mmol/l	3.02	2.72	3.32	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	6.83	5.94	7.72	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	229	299	17.50	35.00	
Creatinine	µmol/l	342	273	411	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.86	3.08	4.64	0.39	0.78	
	µmol/l	365	292	438	36.50	73.00	Creatinine PAP method
	mg/dl	4.12	3.30	4.94	0.41	0.82	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Glucose oxidase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.45	2.09	2.81	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	94.6	80.7	109	6.95	13.90	
	mmol/l	2.79	2.37	3.21	0.21	0.42	Direct Clearance Method
	mg/dl	108	91.5	125	8.25	16.50	
Phosphate Inorganic	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Triglycerides	mmol/l	2.59	2.17	3.01	0.21	0.42	Lipase/GPO-PAP no correction
	mg/dl	229	192	266	18.50	37.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
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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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	27.0	22.9	31.1	2.05	4.10	Bromocresol Purple
	g/dl	2.70	2.29	3.11	0.21	0.41	
	g/l	25.6	21.7	29.5	1.95	3.90	Turbidimetric Assays
	g/dl	2.56	2.17	2.95	0.20	0.39	
Alkaline Phosphatase	U/l	237	202	272	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	185	157	213	14.00	28.00	Roche Integra AMP buffer 30°C
	U/l	151	129	173	11.00	22.00	Roche Integra AMP buffer 25°C
	U/l	242	206	278	18.00	36.00	AMP optimised to IFCC 37°C
	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 30°C
	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	113	91	135	11.00	22.00	Tris buffer without P5P 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	250	212	288	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	276	235	317	20.50	41.00	Saccharogenic 37°C
	U/l	273	232	314	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	270	229	311	20.50	41.00	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

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	29.4	23.2	35.6	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.72	1.36	2.08	0.18	0.36	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Roche JG factored
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Bilirubin Total	µmol/l	80.7	63.7	97.7	8.50	17.00	Diazo with Sulphanilic Acid
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	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	81.2	64.2	98.2	8.50	17.00	Diazonium ion
	mg/dl	4.75	3.76	5.74	0.50	0.99	
Calcium	mmol/l	3.16	2.85	3.47	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	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	6.93	6.03	7.83	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	233	301	17.00	34.00	
Chloride	mmol/l	116	106	126	5.00	10.00	ISE indirect
CK Total	U/l	548	449	647	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	343	281	405	31.00	62.00	CK-NAC substrate start (DGKC) 30°C
	U/l	233	191	275	21.00	42.00	CK-NAC substrate start (DGKC) 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	574	471	677	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	359	295	423	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	244	200	288	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	327	262	392	32.50	65.00	Alkaline picrate with deproteinization
	mg/dl	3.70	2.96	4.44	0.37	0.74	
	µmol/l	339	271	407	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.83	3.06	4.60	0.39	0.77	
	µmol/l	354	283	425	35.50	71.00	Randox Enzymatic UV method
	mg/dl	4.00	3.20	4.80	0.40	0.80	
	µmol/l	357	286	428	35.50	71.00	Roche Creatinine Plus
	mg/dl	4.03	3.23	4.83	0.40	0.80	
	µmol/l	344	275	413	34.50	69.00	Jaffe rate blanked
	mg/dl	3.89	3.11	4.67	0.39	0.78	
	µmol/l	343	275	411	34.00	68.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	3.88	3.11	4.65	0.39	0.77	
	µmol/l	341	273	409	34.00	68.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.85	3.08	4.62	0.39	0.77	
gamma-GT	U/l	133	113	153	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	105	89	121	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	82	70	94	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	152	129	175	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	120	102	138	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	94	80	108	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose dehydrogenase
	mg/dl	272	232	312	20.00	40.00	

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	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	3.30	2.81	3.79	0.25	0.49	Direct HDL PEGME
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	3.45	2.93	3.97	0.26	0.52	Direct HDL Roche 3rd generation
	mg/dl	133	113	153	10.00	20.00	
Iron	µmol/l	34.6	28.4	40.8	3.10	6.20	Colorimetric with ppt.
	µg/dl	193	159	227	17.00	34.00	
	µmol/l	34.8	28.5	41.1	3.15	6.30	Colorimetric without ppt.
	µg/dl	195	159	231	18.00	36.00	
Lactate	mmol/l	5.46	4.48	6.44	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.2	40.4	58.0	4.40	8.80	
LD (LDH)	U/l	645	548	742	48.50	97.00	P->L German methods 37°C
	U/l	466	396	536	35.00	70.00	P->L German methods 30°C
	U/l	327	278	376	24.50	49.00	P->L German methods 25°C
	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
	U/l	255	217	293	19.00	38.00	L->P IFCC 30°C
	U/l	179	152	206	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	55	44	66	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.92	1.69	2.15	0.12	0.23	Ion selective electrode
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Methylthymol blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.16	6.11	8.21	0.53	1.05	
	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.16	6.08	8.24	0.54	1.08	
Potassium	mmol/l	6.09	5.60	6.58	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.3	34.6	52.0	4.35	8.70	Biuret reaction end point
	g/dl	4.33	3.46	5.20	0.44	0.87	
	g/l	43.3	34.6	52.0	4.35	8.70	Biuret reaction kinetic
	g/dl	4.33	3.46	5.20	0.44	0.87	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	60.5	47.8	73.2	6.35	12.70	FE+UIBC(saturation with iron)
	µg/dl	338	267	409	35.50	71.00	
Triglycerides	mmol/l	2.69	2.26	3.12	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	238	200	276	19.00	38.00	
	mmol/l	2.71	2.28	3.14	0.22	0.43	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	240	202	278	19.00	38.00	
	mmol/l	2.68	2.25	3.11	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	237	199	275	19.00	38.00	
	mmol/l	2.60	2.18	3.02	0.21	0.42	Lipase/Glycerol Dehydrogenase
	mg/dl	230	193	267	18.50	37.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	8.30	10.8	0.61	1.23	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.59	8.35	10.8	0.62	1.24	
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	17.7	15.1	20.3	1.30	2.60	Urease hypochlorite
	mg/dl	106	90.8	121	7.60	15.20	
	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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ELITech/Vitalab Selectra Pro/E/XL/Jnr

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	26.0	35.0	2.25	4.50	Bromocresol Green
	g/dl	3.05	2.60	3.50	0.23	0.45	
Alkaline Phosphatase	U/l	520	442	598	39.00	78.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	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	94.1	74.3	114	9.90	19.80	Diazo with Sulphanilic Acid
	mg/dl	5.50	4.35	6.65	0.58	1.15	
	µmol/l	82.8	65.4	100	8.70	17.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.84	3.83	5.85	0.51	1.01	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	6.93	6.03	7.83	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	233	301	17.00	34.00	
CK Total	U/l	543	445	641	49.00	98.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	343	274	412	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.88	3.10	4.66	0.39	0.78	
	µmol/l	353	283	423	35.00	70.00	Jaffe rate blanked
	mg/dl	3.99	3.20	4.78	0.40	0.79	
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	14.6	12.4	16.8	1.10	2.20	Agappe - GOD-PAP
	mg/dl	263	223	303	20.00	40.00	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
Protein Total	g/l	48.1	38.5	57.7	4.80	9.60	Biuret reaction end point
	g/dl	4.81	3.85	5.77	0.48	0.96	
Triglycerides	mmol/l	2.70	2.27	3.13	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	239	201	277	19.00	38.00	
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	
Urea	mmol/l	18.3	15.6	21.0	1.35	2.70	Urease kinetic
	mg/dl	110	93.8	126	8.10	16.20	
	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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			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	27.4	23.3	31.5	2.05	4.10	Bromocresol Purple
	g/dl	2.74	2.33	3.15	0.21	0.41	
Alkaline Phosphatase	U/l	207	176	238	15.50	31.00	Roche Integra AMP buffer 37°C
	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 30°C
	U/l	132	112	152	10.00	20.00	Roche Integra AMP buffer 25°C
	U/l	350	298	402	26.00	52.00	Randox AMP 37°C
	U/l	273	232	314	20.50	41.00	Randox AMP 30°C
	U/l	224	190	258	17.00	34.00	Randox AMP 25°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	237	201	273	18.00	36.00	Roche liquid stable pNPG7 37°C
	U/l	276	235	317	20.50	41.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	263	223	303	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	302	257	347	22.50	45.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	7.20	4.82	9.58	1.19	2.38	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	10.8	7.24	14.4	1.78	3.56	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	26.3	17.6	35.0	4.35	8.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	19.5	13.1	25.9	3.20	6.40	1-Naphthyl Phosphate substrate Kinetic 37°C

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	33.5	22.4	44.6	5.55	11.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	30.3	20.3	40.3	5.00	10.00	1-Naphthyl Phosphate substrate Kinetic 37°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
Bile Acids	µmol/l	47.2	37.8	56.6	4.70	9.40	5th Generation Colorimetric
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Colorimetric
	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin Total	µmol/l	81.2	64.1	98.3	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.75	3.75	5.75	0.50	1.00	
	µmol/l	80.1	63.3	96.9	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	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	94.9	74.9	115	10.00	20.00	Oxidation to Biliverdin
	mg/dl	5.55	4.38	6.72	0.59	1.17	
Calcium	mmol/l	3.17	2.86	3.48	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.19	2.87	3.51	0.16	0.32	NM-BAPTA
	mg/dl	12.8	11.5	14.1	0.65	1.30	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.87	5.98	7.76	0.45	0.89	Cholesterol Oxidase
	mg/dl	265	231	299	17.00	34.00	
Chloride	mmol/l	111	103	119	4.00	8.00	ISE indirect
Cholinesterase	U/l	5029	4023	6035	503.00	1006.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	528	433	623	47.50	95.00	CK-NAC substrate start (DGKC) 37°C
	U/l	331	271	391	30.00	60.00	CK-NAC substrate start (DGKC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC substrate start (DGKC) 25°C
	U/l	517	424	610	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	324	265	383	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	220	180	260	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	361	289	433	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	366	293	439	36.50	73.00	Creatinine PAP method
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	368	295	441	36.50	73.00	Roche Creatinine Plus
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.14	3.31	4.97	0.42	0.83	
D-3-Hydroxybutyrate	mmol/l	1.08	0.92	1.24	0.08	0.16	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	125	107	143	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	99	84	114	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	77	66	88	5.50	11.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	143	121	165	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	113	95	131	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	88	75	101	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	153	130	176	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	36	28	44	4.00	8.00	Triethanolamine buffer 50 mmol 37°C
	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
alpha-HBDH	U/l	403	318	488	42.50	85.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	304	240	368	32.00	64.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	228	180	276	24.00	48.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.63	2.24	3.02	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	102	86.5	118	7.75	15.50	
	mmol/l	3.06	2.60	3.52	0.23	0.46	Direct HDL PEGME
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	3.17	2.70	3.64	0.24	0.47	Direct HDL Roche 3rd generation
	mg/dl	122	104	140	9.00	18.00	
Iron	µmol/l	33.8	27.8	39.8	3.00	6.00	Colorimetric without ppt.
	µg/dl	189	155	223	17.00	34.00	
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	659	560	758	49.50	99.00	P->L German methods 37°C
	U/l	476	404	548	36.00	72.00	P->L German methods 30°C
	U/l	334	284	384	25.00	50.00	P->L German methods 25°C

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	329	280	378	24.50	49.00	L->P IFCC 37°C
	U/l	238	202	274	18.00	36.00	L->P IFCC 30°C
	U/l	167	142	192	12.50	25.00	L->P IFCC 25°C
Lipase	U/l	50	40	60	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.88	1.66	2.10	0.11	0.22	Spectrophotometric
	mg/dl	1.31	1.15	1.47	0.08	0.16	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Xylidyl Blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.6	35.6	53.6	4.50	9.00	Biuret reaction end point
	g/dl	4.46	3.56	5.36	0.45	0.90	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	56.4	44.5	68.3	5.95	11.90	FE+UIBC(saturation with iron)
	µg/dl	315	249	381	33.00	66.00	
Triglycerides	mmol/l	2.66	2.23	3.09	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	235	197	273	19.00	38.00	
	mmol/l	2.78	2.34	3.22	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	246	207	285	19.50	39.00	
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	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.39	8.16	10.6	0.62	1.23	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
ALT (GPT)	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Amylase Total	U/l	284	241	327	21.50	43.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.9	35.1	52.7	4.40	8.80	Enzymatic Colorimetric
Bilirubin Total	µmol/l	91.7	72.5	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.36	4.24	6.48	0.56	1.12	
Calcium	mmol/l	3.27	2.94	3.60	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Cholesterol	mmol/l	6.74	5.86	7.62	0.44	0.88	Cholesterol Oxidase
	mg/dl	260	226	294	17.00	34.00	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
CK Total	U/l	488	400	576	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	305	250	360	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	334	267	401	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.77	3.02	4.52	0.38	0.75	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
D-3-Hydroxybutyrate	mmol/l	1.13	0.96	1.30	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	137	117	157	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	108	92	124	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	85	72	98	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	138	118	158	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	85	73	97	6.00	12.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	14.8	12.6	17.0	1.10	2.20	Glucose oxidase
	mg/dl	267	227	307	20.00	40.00	
HDL - Cholesterol	mmol/l	2.30	1.95	2.65	0.18	0.35	Direct HDL Immunoseparation
	mg/dl	88.8	75.3	102	6.75	13.50	
Iron	µmol/l	34.0	27.8	40.2	3.10	6.20	Colorimetric without ppt.
	µg/dl	190	155	225	17.50	35.00	
LD (LDH)	U/l	683	581	785	51.00	102.00	P->L German methods 37°C
	U/l	493	419	567	37.00	74.00	P->L German methods 30°C
	U/l	346	295	397	25.50	51.00	P->L German methods 25°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Enzymatic
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.07	5.59	6.55	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.6	35.7	53.5	4.45	8.90	Biuret reaction end point
	g/dl	4.46	3.57	5.35	0.45	0.89	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.75	2.31	3.19	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	243	204	282	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.79	8.52	11.1	0.64	1.27	
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	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	26.3	22.4	30.2	1.95	3.90	Ortho Vitros Microslide Systems
	g/dl	2.63	2.24	3.02	0.20	0.39	
Alkaline Phosphatase	U/l	201	171	231	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	200	170	230	15.00	30.00	Vitros DT60/DT60 II/DTSC II 37°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Ortho Vitros Microslide Systems 37°C
	U/l	122	98	146	12.00	24.00	Vitros DT60/DT60 II/DTSC II 37°C
Amylase Total	U/l	167	142	192	12.50	25.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	178	143	213	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
	U/l	179	144	214	17.50	35.00	Vitros DT60/DT60 II/DTSC II 37°C
Bicarbonate	mmol/l	18.0	14.3	21.7	1.85	3.70	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	77.3	61.0	93.6	8.15	16.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.52	3.57	5.47	0.48	0.95	
	µmol/l	78.0	61.6	94.4	8.20	16.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	80.7	63.7	97.7	8.50	17.00	Vitros DT60/DT60 II Total Bil
	mg/dl	4.72	3.73	5.71	0.50	0.99	
Calcium	mmol/l	3.14	2.82	3.46	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.15	2.84	3.46	0.16	0.31	Vitros DT60/DT60 II/DTSC II
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	6.25	5.44	7.06	0.41	0.81	Ortho Vitros Microslide Systems
	mg/dl	241	210	272	15.50	31.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.56	5.71	7.41	0.43	0.85	Vitros DT60/DT60 II
	mg/dl	253	220	286	16.50	33.00	
Chloride	mmol/l	114	105	123	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	114	105	123	4.50	9.00	Vitros DT60/DT60 II/DTE II
Cholinesterase	U/l	4699	3759	5639	470.00	940.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	456	374	538	41.00	82.00	Ortho Vitros Microslide Systems 37°C
	U/l	413	339	487	37.00	74.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	358	286	430	36.00	72.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.05	3.23	4.87	0.41	0.82	
	µmol/l	372	298	446	37.00	74.00	Vitros IDMS Traceable
	mg/dl	4.20	3.37	5.03	0.42	0.83	
Free T4	pmol/l	86.3	64.8	108	10.75	21.50	Vitros ECi
	ng/dl	6.73	5.05	8.41	0.84	1.68	
	pg/ml	67.3	50.5	84.1	8.40	16.80	Vitros ECi
gamma-GT	U/l	177	150	204	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	173	147	199	13.00	26.00	Vitros DT60/DT60 II/DTSC II 37°C
Glucose	mmol/l	14.1	12.0	16.2	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	254	216	292	19.00	38.00	
	mmol/l	14.0	11.9	16.1	1.05	2.10	Vitros DT60/DT60 II
	mg/dl	252	214	290	19.00	38.00	
HDL - Cholesterol	mmol/l	2.48	2.10	2.86	0.19	0.38	Vitros Magnetic HDL
	mg/dl	95.7	81.1	110	7.30	14.60	
	mmol/l	2.48	2.11	2.85	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	95.7	81.4	110	7.15	14.30	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	36.4	29.9	42.9	3.25	6.50	Ortho Vitros Microslide Systems
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	4.82	3.95	5.69	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	43.4	35.6	51.2	3.90	7.80	
LD (LDH)	U/l	1012	860	1164	76.00	152.00	Ortho Vitros Microslide Systems 37°C
	U/l	992	843	1141	74.50	149.00	Vitros DT60/DT60 II/DTSC II 37°C
Lipase	U/l	582	467	697	57.50	115.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.33	2.05	2.61	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.62	1.42	1.82	0.10	0.20	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.82	1.60	2.04	0.11	0.22	Vitros DT60/DT60 II
	mg/dl	4.42	3.89	4.95	0.27	0.53	
Phosphate Inorganic	mmol/l	2.26	1.93	2.59	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	7.01	5.98	8.04	0.52	1.03	
	mmol/l	2.31	1.97	2.65	0.17	0.34	Vitros DT60/DT60 II
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	5.98	5.50	6.46	0.24	0.48	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Ortho Vitros Microslide Systems
	g/dl	4.51	3.61	5.41	0.45	0.90	
PSA Total	ng/ml =	34.7	26.0	43.4	4.35	8.70	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	154	147	161	3.50	7.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.07	0.86	1.28	0.11	0.21	Vitros ECi

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	6.62	4.96	8.28	0.83	1.66	Vitros ECi
	ng/ml	4.31	3.23	5.39	0.54	1.08	
	ng/dl	431	323	539	54.00	108.00	Vitros ECi
Triglycerides	mmol/l	3.09	2.60	3.58	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	273	230	316	21.50	43.00	
	mmol/l	3.24	2.72	3.76	0.26	0.52	Vitros DT60/DT60 II
	mg/dl	287	241	333	23.00	46.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.99	7.81	10.2	0.59	1.18	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Vitros DT60/DT60 II
	mg/dl	9.29	8.08	10.5	0.61	1.21	
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	18.1	15.4	20.8	1.35	2.70	Vitros DT60/DT60 II
	mg/dl	109	92.6	125	8.20	16.40	
	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®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	172	138	206	17.00	34.00	Tris buffer without P5P 37°C
	U/l	116	93	139	11.50	23.00	Tris buffer without P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	49.2	39.4	59.0	4.90	9.80	Enzymatic Colorimetric
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	
Bilirubin Total	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	82.5	65.1	99.9	8.70	17.40	Nitrobenzenediazonium salt
	mg/dl	4.83	3.81	5.85	0.51	1.02	
Calcium	mmol/l	3.27	2.94	3.60	0.17	0.33	Arsenazo III
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Cholesterol	mmol/l	6.63	5.77	7.49	0.43	0.86	Cholesterol Oxidase
	mg/dl	256	223	289	16.50	33.00	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE direct
CK Total	U/l	540	443	637	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	338	277	399	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	230	188	272	21.00	42.00	CK-NAC (IFCC) 25°C

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RANDOX

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

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	360	288	432	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	360	288	432	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	363	290	436	36.50	73.00	Creatinine PAP method
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	330	264	396	33.00	66.00	Jaffe rate blanked
	mg/dl	3.73	2.98	4.48	0.38	0.75	
D-3-Hydroxybutyrate	mmol/l	1.15	0.97	1.33	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	145	123	167	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	114	97	131	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	89	76	102	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	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	3.10	2.63	3.57	0.24	0.47	Direct HDL PEGME
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	2.91	2.47	3.35	0.22	0.44	Direct Clearance Method
	mg/dl	112	95.3	129	8.35	16.70	
Iron	µmol/l	35.5	29.1	41.9	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	163	233	17.50	35.00	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Calmagite
	mg/dl	4.06	3.57	4.55	0.25	0.49	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.50	1.32	1.68	0.09	0.18	Xylidyl Blue
	mg/dl	3.65	3.21	4.09	0.22	0.44	
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.35	6.23	8.47	0.56	1.12	
Potassium	mmol/l	5.93	5.45	6.41	0.24	0.48	ISE method - direct
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	154	146	162	4.00	8.00	ISE method - direct
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	
Uric Acid (Urate)	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.98	8.69	11.3	0.65	1.29	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.81	8.53	11.1	0.64	1.28	
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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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.1	24.8	33.4	2.15	4.30	Bromocresol Green
	g/dl	2.91	2.48	3.34	0.22	0.43	
	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	
	g/l	26.3	22.4	30.2	1.95	3.90	Ortho Vitros Microslide Systems
	g/dl	2.63	2.24	3.02	0.20	0.39	
	g/l	25.7	21.8	29.6	1.95	3.90	Turbidimetric Assays
	g/dl	2.57	2.18	2.96	0.20	0.39	
Alkaline Phosphatase	U/l	355	301	409	27.00	54.00	p-Nitrophenylphosphate AMP 37°C
	U/l	277	234	320	21.50	43.00	p-Nitrophenylphosphate AMP 30°C
	U/l	227	192	262	17.50	35.00	p-Nitrophenylphosphate AMP 25°C
	U/l	201	171	231	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	524	445	603	39.50	79.00	Diethanolamine buffer DEA 37°C
	U/l	408	347	469	30.50	61.00	Diethanolamine buffer DEA 30°C
	U/l	335	284	386	25.50	51.00	Diethanolamine buffer DEA 25°C
	U/l	347	295	399	26.00	52.00	AMP optimised to IFCC 37°C
	U/l	270	230	310	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	222	189	255	16.50	33.00	AMP optimised to IFCC 25°C
	U/l	314	266	362	24.00	48.00	AMP optimised to NVKC/SFBC 37°C
	U/l	245	207	283	19.00	38.00	AMP optimised to NVKC/SFBC 30°C
	U/l	201	170	232	15.50	31.00	AMP optimised to NVKC/SFBC 25°C

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	126	101	151	12.50	25.00	Ortho Vitros Microslide Systems 37°C
	U/l	147	118	176	14.50	29.00	Tris buffer with P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer with P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer with P5P 25°C
	U/l	118	94	142	12.00	24.00	Tris buffer without P5P 37°C
	U/l	87	70	104	8.50	17.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
	U/l	124	99	149	12.50	25.00	Phosphate buffer DGKC 37°C
	U/l	92	73	111	9.50	19.00	Phosphate buffer DGKC 30°C
	U/l	70	56	84	7.00	14.00	Phosphate buffer DGKC 25°C
	U/l	114	91	137	11.50	23.00	Tris buffer SCE 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer SCE 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	244	207	281	18.50	37.00	Roche liquid stable pNPG7 37°C
	U/l	276	235	317	20.50	41.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	276	234	318	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	275	234	316	20.50	41.00	Siemens - blocked pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Biotrol - blocked pNPG7 37°C
	U/l	231	196	266	17.50	35.00	Randox - Ethylidene pNPG7 37°C
	U/l	300	255	345	22.50	45.00	Randox liquid stable pNPG7 37°C
	U/l	269	228	310	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	280	238	322	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	320	272	368	24.00	48.00	Siemens - maltopenta/hexaoside 37°C
	U/l	268	228	308	20.00	40.00	Saccharogenic 37°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	270	230	310	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	167	142	192	12.50	25.00	Ortho Vitros Microslide Systems 37°C
	U/l	261	222	300	19.50	39.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	266	226	306	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	329	279	379	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
	U/l	255	216	294	19.50	39.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	276	234	318	21.00	42.00	Beckman Olympus - blocked pNPG7 37°C
	U/l	290	247	333	21.50	43.00	Beckman Synchron AMY7 37°C
	U/l	291	248	334	21.50	43.00	I.L. 2-chloro-pNPG3 37°C
	U/l	310	264	356	23.00	46.00	Abbott Architect Non-IFCC Cal. 37°C
Apolipoprotein A-1	g/l	0.97	0.80	1.15	0.09	0.18	Immunoturbidimetric
	mg/dl	97.1	79.6	115	8.75	17.50	
Apolipoprotein B	g/l	0.55	0.45	0.65	0.05	0.10	Immunoturbidimetric
	mg/dl	54.7	44.9	64.5	4.90	9.80	
Acid Phosphatase (non-prostatic)	U/l	10.8	7.24	14.4	1.78	3.56	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	7.20	4.82	9.58	1.19	2.38	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	19.5	13.1	25.9	3.20	6.40	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	26.3	17.6	35.0	4.35	8.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	30.3	20.3	40.3	5.00	10.00	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	33.5	22.4	44.6	5.55	11.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	178	143	213	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
	U/l	210	168	252	21.00	42.00	Tris buffer with P5P 37°C
	U/l	142	114	170	14.00	28.00	Tris buffer with P5P 30°C
	U/l	100	80	120	10.00	20.00	Tris buffer with P5P 25°C
	U/l	152	121	183	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	72	58	86	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. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	169	135	203	17.00	34.00	Phosphate buffer DGKC 37°C
	U/l	114	91	137	11.50	23.00	Phosphate buffer DGKC 30°C
	U/l	80	64	96	8.00	16.00	Phosphate buffer DGKC 25°C
	U/l	148	118	178	15.00	30.00	Tris buffer SCE 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer SCE 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	44.9	35.9	53.9	4.50	9.00	4th Generation Colorimetric
	µmol/l	47.2	37.8	56.6	4.70	9.40	5th Generation Colorimetric
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Colorimetric
	mmol/l	18.0	14.3	21.7	1.85	3.70	Ortho Vitros Microslide Systems
	mmol/l	16.1	12.8	19.4	1.65	3.30	Differential rate pH change
	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
	mmol/l	17.4	13.8	21.0	1.80	3.60	Ion selective electrode
Bilirubin Direct	µmol/l	27.4	21.6	33.2	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Roche JG factored
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	31.7	25.0	38.4	3.35	6.70	Oxidation to Biliverdin
	mg/dl	1.85	1.46	2.24	0.20	0.39	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	30.8	24.3	37.3	3.25	6.50	Modified Jendrassik
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	77.3	61.0	93.6	8.15	16.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.52	3.57	5.47	0.48	0.95	
	µmol/l	78.0	61.6	94.4	8.20	16.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	99.1	78.3	120	10.40	20.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.80	4.58	7.02	0.61	1.22	
	µmol/l	85.4	67.4	103	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.00	3.94	6.06	0.53	1.06	
	µmol/l	97.7	77.2	118	10.25	20.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.72	4.52	6.92	0.60	1.20	
	µmol/l	83.1	65.6	101	8.75	17.50	Nitrobenzenediazonium salt
	mg/dl	4.86	3.84	5.88	0.51	1.02	
	µmol/l	81.1	64.1	98.1	8.50	17.00	Diazonium ion
	mg/dl	4.74	3.75	5.73	0.50	0.99	
	µmol/l	95.3	75.3	115	10.00	20.00	Oxidation to Biliverdin
	mg/dl	5.58	4.41	6.75	0.59	1.17	
	µmol/l	101	79.8	122	10.60	21.20	Modified Jendrassik
	mg/dl	5.91	4.67	7.15	0.62	1.24	
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	3.14	2.82	3.46	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.08	2.77	3.39	0.16	0.31	Ion selective electrode
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Methylthymol blue
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.17	2.85	3.49	0.16	0.32	NM-BAPTA
	mg/dl	12.7	11.4	14.0	0.65	1.30	
Cholesterol	mmol/l	6.25	5.44	7.06	0.41	0.81	Ortho Vitros Microslide Systems
	mg/dl	241	210	272	15.50	31.00	
	mmol/l	6.87	5.97	7.77	0.45	0.90	Cholesterol Oxidase
	mg/dl	265	230	300	17.50	35.00	
Chloride	mmol/l	115	106	124	4.50	9.00	Colorimetric
	mmol/l	114	105	123	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	113	104	122	4.50	9.00	ISE indirect
	mmol/l	115	105	125	5.00	10.00	ISE direct
Cholinesterase	U/l	4699	3759	5639	470.00	940.00	Ortho Vitros Microslide Systems 37°C
	U/l	5058	4046	6070	506.00	1012.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	456	374	538	41.00	82.00	Ortho Vitros Microslide Systems 37°C
	U/l	550	451	649	49.50	99.00	CK-NAC serum start (DGKC) 37°C
	U/l	344	282	406	31.00	62.00	CK-NAC serum start (DGKC) 30°C
	U/l	234	192	276	21.00	42.00	CK-NAC serum start (DGKC) 25°C
	U/l	551	452	650	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	345	283	407	31.00	62.00	CK-NAC substrate start (DGKC) 30°C
	U/l	234	192	276	21.00	42.00	CK-NAC substrate start (DGKC) 25°C
	U/l	557	457	657	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	349	286	412	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	237	194	280	21.50	43.00	CK-NAC (IFCC) 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	555	455	655	50.00	100.00	Monothioglycerol 37°C
	U/l	347	285	409	31.00	62.00	Monothioglycerol 30°C
	U/l	236	193	279	21.50	43.00	Monothioglycerol 25°C
	U/l	504	414	594	45.00	90.00	Dithioerythritol 37°C
	U/l	316	259	373	28.50	57.00	Dithioerythritol 30°C
	U/l	214	176	252	19.00	38.00	Dithioerythritol 25°C
	U/l	504	413	595	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	316	259	373	28.50	57.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	214	176	252	19.00	38.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	27.6	22.0	33.2	2.80	5.60	Atomic absorption
	µg/dl	176	140	212	18.00	36.00	
	µmol/l	26.7	21.4	32.0	2.65	5.30	Colorimetric
	µg/dl	170	136	204	17.00	34.00	
Cortisol	nmol/l	1037	778	1296	129.50	259.00	Roche Cobas E411
	µg/dl	37.3	28.0	46.6	4.65	9.30	
Creatinine	µmol/l	332	265	399	33.50	67.00	Alkaline picrate with deproteinization
	mg/dl	3.75	2.99	4.51	0.38	0.76	
	µmol/l	347	277	417	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.92	3.13	4.71	0.40	0.79	
	µmol/l	364	291	437	36.50	73.00	Randox Enzymatic UV method
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	365	292	438	36.50	73.00	Creatinine PAP method
	mg/dl	4.12	3.30	4.94	0.41	0.82	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	370	296	444	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	359	288	430	35.50	71.00	Jaffe rate blanked
	mg/dl	4.06	3.25	4.87	0.41	0.81	
	µmol/l	360	288	432	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	347	278	416	34.50	69.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.92	3.14	4.70	0.39	0.78	
	µmol/l	372	298	446	37.00	74.00	Vitros IDMS Traceable
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	365	292	438	36.50	73.00	IDMS traceable
	mg/dl	4.12	3.30	4.94	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.13	0.96	1.30	0.08	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.33	2.66	4.00	0.34	0.67	Immunoturbidimetric
	ng/ml	2.60	2.08	3.12	0.26	0.52	
Folate	nmol/l	23.1	17.6	28.6	2.75	5.50	Roche Cobas E411
	ng/ml	10.2	7.76	12.6	1.22	2.44	
Free T4	pmol/l	40.6	30.4	50.8	5.10	10.20	Abbott Architect
	ng/dl	3.17	2.37	3.97	0.40	0.80	
	pg/ml	31.7	23.7	39.7	4.00	8.00	Abbott Architect
	pmol/l	53.9	40.4	67.4	6.75	13.50	Siemens Centaur XP/XPT/Classic
	ng/dl	4.20	3.15	5.25	0.53	1.05	
	pg/ml	42.0	31.5	52.5	5.25	10.50	Siemens Centaur XP/XPT/Classic
	pmol/l	54.0	40.5	67.5	6.75	13.50	Beckman Access
	ng/dl	4.21	3.16	5.26	0.53	1.05	
	pg/ml	42.1	31.6	52.6	5.25	10.50	Beckman Access

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	56.9	42.6	71.2	7.15	14.30	Beckman DxI800
	ng/dl	4.44	3.32	5.56	0.56	1.12	
	pg/ml	44.4	33.2	55.6	5.60	11.20	Beckman DxI800
	pmol/l	60.6	45.5	75.7	7.55	15.10	Siemens Immulite 1000
	ng/dl	4.73	3.55	5.91	0.59	1.18	
	pg/ml	47.3	35.5	59.1	5.90	11.80	Siemens Immulite 1000
	pmol/l	57.0	42.8	71.2	7.10	14.20	Siemens Immulite 2000/2500
	ng/dl	4.45	3.34	5.56	0.56	1.11	
	pg/ml	44.5	33.4	55.6	5.55	11.10	Siemens Immulite 2000/2500
	pmol/l	86.3	64.8	108	10.75	21.50	Vitros ECi
	ng/dl	6.73	5.05	8.41	0.84	1.68	
	pg/ml	67.3	50.5	84.1	8.40	16.80	Vitros ECi
	pmol/l	58.9	44.2	73.6	7.35	14.70	Roche Modular E170
	ng/dl	4.59	3.45	5.73	0.57	1.14	
	pg/ml	45.9	34.5	57.3	5.70	11.40	Roche Modular E170
	pmol/l	59.9	44.9	74.9	7.50	15.00	Roche Cobas E411
	ng/dl	4.67	3.50	5.84	0.59	1.17	
	pg/ml	46.7	35.0	58.4	5.85	11.70	Roche Cobas E411
	pmol/l	58.9	44.2	73.6	7.35	14.70	Roche Cobas 6000/8000
	ng/dl	4.59	3.45	5.73	0.57	1.14	
	pg/ml	45.9	34.5	57.3	5.70	11.40	Roche Cobas 6000/8000
	pmol/l	58.7	44.0	73.4	7.35	14.70	BioMerieux Vidas
	ng/dl	4.58	3.43	5.73	0.58	1.15	BioMerieux Vidas
	pg/ml	45.8	34.3	57.3	5.75	11.50	BioMerieux Vidas

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Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Gentamicin	µmol/l	18.2	14.6	21.8	1.80	3.60	Immunoturbidimetric
	µg/ml	8.70	6.98	10.4	0.86	1.72	
gamma-GT	U/l	139	118	160	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	86	73	99	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	150	204	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	121	103	139	9.00	18.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	95	81	109	7.00	14.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	75	64	86	5.50	11.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	117	100	134	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	92	78	106	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	153	130	176	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	30	24	36	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	23	18	28	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.1	12.0	16.2	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	254	216	292	19.00	38.00	
	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose dehydrogenase
	mg/dl	272	232	312	20.00	40.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	14.9	12.7	17.1	1.10	2.20	Oxygen electrode
	mg/dl	268	229	307	19.50	39.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose oxidase
	mg/dl	272	232	312	20.00	40.00	
alpha-HBDH	U/l	409	323	495	43.00	86.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	309	244	374	32.50	65.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	231	183	279	24.00	48.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.61	2.22	3.00	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.48	2.10	2.86	0.19	0.38	Vitros Magnetic HDL
	mg/dl	95.7	81.1	110	7.30	14.60	
	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	2.58	2.19	2.97	0.20	0.39	Direct Clearance Method
	mg/dl	99.6	84.5	115	7.55	15.10	
	mmol/l	2.48	2.11	2.85	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	95.7	81.4	110	7.15	14.30	
	mmol/l	3.26	2.77	3.75	0.25	0.49	Direct HDL Roche 3rd generation
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	2.53	2.15	2.91	0.19	0.38	HDL - Ultra
	mg/dl	97.7	83.0	112	7.35	14.70	
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	5.69	4.67	6.71	0.51	1.02	Immunoturbidimetric
	mg/dl	569	467	671	51.00	102.00	
Immunoglobulin M	g/l	0.72	0.57	0.86	0.07	0.14	Immunoturbidimetric
	mg/dl	71.7	57.4	86.0	7.15	14.30	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	34.2	28.0	40.4	3.10	6.20	Colorimetric with ppt.
	µg/dl	191	157	225	17.00	34.00	
	µmol/l	34.2	28.1	40.3	3.05	6.10	Colorimetric without ppt.
	µg/dl	191	157	225	17.00	34.00	
	µmol/l	36.4	29.9	42.9	3.25	6.50	Ortho Vitros Microslide Systems
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.34	4.38	6.30	0.48	0.96	Ion selective electrode
	mg/dl	48.1	39.5	56.7	4.30	8.60	
	mmol/l	5.23	4.29	6.17	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	47.1	38.7	55.5	4.20	8.40	
	mmol/l	4.82	3.95	5.69	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	43.4	35.6	51.2	3.90	7.80	
	mmol/l	5.32	4.36	6.28	0.48	0.96	Enzymatic Electrode
	mg/dl	47.9	39.3	56.5	4.30	8.60	
	mmol/l	5.04	4.14	5.94	0.45	0.90	UV LDH
	mg/dl	45.4	37.3	53.5	4.05	8.10	
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1012	860	1164	76.00	152.00	Ortho Vitros Microslide Systems 37°C
	U/l	305	260	350	22.50	45.00	L->P 37°C
	U/l	220	188	252	16.00	32.00	L->P 30°C
	U/l	155	132	178	11.50	23.00	L->P 25°C
	U/l	747	635	859	56.00	112.00	P->L Scandinavian & Dutch 37°C
	U/l	539	458	620	40.50	81.00	P->L Scandinavian & Dutch 30°C
	U/l	379	322	436	28.50	57.00	P->L Scandinavian & Dutch 25°C

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LD (LDH)	U/l	663	564	762	49.50	99.00	P->L German methods 37°C
	U/l	479	407	551	36.00	72.00	P->L German methods 30°C
	U/l	336	286	386	25.00	50.00	P->L German methods 25°C
	U/l	669	569	769	50.00	100.00	P->L SFBC 37°C
	U/l	483	411	555	36.00	72.00	P->L SFBC 30°C
	U/l	339	288	390	25.50	51.00	P->L SFBC 25°C
	U/l	338	287	389	25.50	51.00	L->P IFCC 37°C
	U/l	244	207	281	18.50	37.00	L->P IFCC 30°C
	U/l	171	146	196	12.50	25.00	L->P IFCC 25°C
Lipase	U/l	61	49	73	6.00	12.00	Other Colorimetric 37°C
	U/l	582	467	697	57.50	115.00	Ortho Vitros Microslide Systems 37°C
	U/l	50	40	60	5.00	10.00	Roche Colorimetric 37°C
	U/l	338	271	405	33.50	67.00	Randox Turbidimetric with colipase 37°C
	U/l	68	55	81	6.50	13.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.33	2.05	2.61	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.62	1.42	1.82	0.10	0.20	
	mmol/l	1.96	1.72	2.20	0.12	0.24	Ion selective electrode
	mg/dl	1.36	1.19	1.53	0.09	0.17	
	mmol/l	1.91	1.68	2.14	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	
	mmol/l	1.87	1.65	2.09	0.11	0.22	Randox Colorimetric
	mg/dl	1.30	1.15	1.45	0.08	0.15	
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Arsenazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.23	3.72	4.74	0.26	0.51	

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Magnesium	mmol/l	1.69	1.48	1.90	0.11	0.21	Calmagite
	mg/dl	4.11	3.60	4.62	0.26	0.51	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
	mmol/l	1.70	1.50	1.90	0.10	0.20	Methylthymol blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
	mmol/l	1.69	1.49	1.89	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Enzymatic
	mg/dl	4.18	3.67	4.69	0.26	0.51	
NEFA	mmol/l	0.55	0.47	0.64	0.04	0.08	Colorimetric
Osmolality	mOsm/kg	338	271	405	33.50	67.00	Calculated
	mOsm/kg	371	296	446	37.50	75.00	Freezing point depression
Paracetamol	mmol/l	0.57	0.46	0.69	0.06	0.11	Colorimetric
	mg/l	86.5	69.3	104	8.60	17.20	
Phosphate Inorganic	mmol/l	2.26	1.93	2.59	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	7.01	5.98	8.04	0.52	1.03	
	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	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	6.12	5.63	6.61	0.25	0.49	Enzymatic
	mmol/l	5.87	5.40	6.34	0.24	0.47	Flame photometry

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	ISE method - direct
	mmol/l	6.06	5.58	6.54	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Ortho Vitros Microslide Systems
	g/dl	4.51	3.61	5.41	0.45	0.90	
	g/l	44.7	35.7	53.7	4.50	9.00	Biuret reaction end point
	g/dl	4.47	3.57	5.37	0.45	0.90	
	g/l	43.7	35.0	52.4	4.35	8.70	Biuret reaction kinetic
	g/dl	4.37	3.50	5.24	0.44	0.87	
PSA Total	ng/ml =	22.7	17.1	28.3	2.80	5.60	Tosoh AIA360
	ng/ml =	34.3	25.7	42.9	4.30	8.60	Roche Elecsys Modular E170
	ng/ml =	32.4	24.3	40.5	4.05	8.10	Beckman Access standardised to Hybritech
	ng/ml =	28.9	21.7	36.1	3.60	7.20	bioMerieux VIDAS TPSA
	ng/ml =	28.9	21.7	36.1	3.60	7.20	Siemens Centaur XP/XPT/Classic
	ng/ml =	28.4	21.3	35.5	3.55	7.10	Abbott Architect
	ng/ml =	36.3	27.2	45.4	4.55	9.10	Cobas E411
	ng/ml =	35.2	26.4	44.0	4.40	8.80	Roche Cobas 6000/8000
Salicylate	mmol/l	0.89	0.71	1.07	0.09	0.18	Enzymatic
	mg/dl	12.3	9.84	14.8	1.23	2.46	
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	155	147	163	4.00	8.00	Enzymatic
	mmol/l	155	147	163	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	111	88.8	133	11.10	22.20	Immunoturbidimetric
	µg/ml	20.0	16.0	24.0	2.00	4.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	0.93	0.74	1.11	0.09	0.19	Abbott Architect
	µU/ml =	1.20	0.96	1.44	0.12	0.24	bioMerieux VIDAS TSH
	µU/ml =	1.11	0.88	1.34	0.11	0.23	Siemens Immulite 1000
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Vitros ECi
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Roche Elecsys
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Roche Modular E170
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Tosoh AIA360
	µU/ml =	1.23	0.98	1.48	0.12	0.25	Roche Cobas E411
	µU/ml =	1.24	1.00	1.48	0.12	0.24	Roche Cobas 6000/8000
	µU/ml =	1.05	0.84	1.26	0.11	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	58.6	46.3	70.9	6.15	12.30	FE+UIBC(saturation with iron)
	µg/dl	328	259	397	34.50	69.00	
	µmol/l	54.5	43.0	66.0	5.75	11.50	Direct Colorimetric
	µg/dl	305	240	370	32.50	65.00	
	µmol/l	59.1	46.7	71.5	6.20	12.40	Randox Direct
	µg/dl	330	261	399	34.50	69.00	
Tobramycin	µmol/l	14.5	11.6	17.4	1.45	2.90	Immunoturbidimetric
	µg/ml	6.79	5.43	8.15	0.68	1.36	
Total T3	nmol/l	3.57	2.68	4.46	0.45	0.89	Abbott Architect
	ng/ml	2.32	1.74	2.90	0.29	0.58	
	ng/dl	232	174	290	29.00	58.00	Abbott Architect
	nmol/l	5.44	4.08	6.80	0.68	1.36	Siemens Centaur XP/XPT/Classic
	ng/ml	3.54	2.66	4.42	0.44	0.88	
	ng/dl	354	266	442	44.00	88.00	Siemens Centaur XP/XPT/Classic
	nmol/l	4.24	3.18	5.30	0.53	1.06	BioMerieux Vidas
	ng/ml	2.76	2.07	3.45	0.35	0.69	
	ng/dl	276	207	345	34.50	69.00	BioMerieux Vidas

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	4.76	3.57	5.95	0.60	1.19	Siemens Immulite 2000/2500
	ng/ml	3.10	2.32	3.88	0.39	0.78	
	ng/dl	310	232	388	39.00	78.00	Siemens Immulite 2000/2500
	nmol/l	3.64	2.73	4.55	0.46	0.91	Tosoh AIA360
	ng/ml	2.37	1.78	2.96	0.30	0.59	
	ng/dl	237	178	296	29.50	59.00	Tosoh AIA360
	nmol/l	6.62	4.96	8.28	0.83	1.66	Vitros ECi
	ng/ml	4.31	3.23	5.39	0.54	1.08	
	ng/dl	431	323	539	54.00	108.00	Vitros ECi
	nmol/l	4.60	3.45	5.75	0.58	1.15	Roche Cobas E411
	ng/ml	2.99	2.25	3.73	0.37	0.74	
	ng/dl	299	225	373	37.00	74.00	Roche Cobas E411
	nmol/l	4.52	3.39	5.65	0.57	1.13	Roche Cobas 6000/8000
	ng/ml	2.94	2.21	3.67	0.37	0.73	
	ng/dl	294	221	367	36.50	73.00	Roche Cobas 6000/8000
Total T4	nmol/l	195	147	243	24.00	48.00	Abbott Architect
	µg/dl	15.2	11.5	18.9	1.85	3.70	
	ng/ml	152	115	189	18.50	37.00	Abbott Architect
	nmol/l	185	139	231	23.00	46.00	Siemens Centaur XP/XPT/Classic
	µg/dl	14.4	10.8	18.0	1.80	3.60	
	ng/ml	144	108	180	18.00	36.00	Siemens Centaur XP/XPT/Classic
	nmol/l	186	139	233	23.50	47.00	BioMerieux Vidas
	µg/dl	14.5	10.8	18.2	1.85	3.70	
	ng/ml	145	108	182	18.50	37.00	BioMerieux Vidas

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	183	137	229	23.00	46.00	Siemens Immulite 1000
	µg/dl	14.3	10.7	17.9	1.80	3.60	
	ng/ml	143	107	179	18.00	36.00	Siemens Immulite 1000
	nmol/l	164	123	205	20.50	41.00	Roche Modular E170
	µg/dl	12.8	9.59	16.0	1.61	3.21	
	ng/ml	128	95.9	160	16.05	32.10	Roche Modular E170
	nmol/l	177	133	221	22.00	44.00	Roche Cobas E411
	µg/dl	13.8	10.4	17.2	1.70	3.40	
	ng/ml	138	104	172	17.00	34.00	Roche Cobas E411
	nmol/l	173	130	216	21.50	43.00	Roche Cobas 6000/8000
	µg/dl	13.5	10.1	16.9	1.70	3.40	
	ng/ml	135	101	169	17.00	34.00	Roche Cobas 6000/8000
Transferrin	g/l	1.80	1.44	2.16	0.18	0.36	Immunoturbidimetric
	mg/dl	180	144	216	18.00	36.00	
Triglycerides	mmol/l	2.71	2.27	3.15	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	240	201	279	19.50	39.00	
	mmol/l	2.70	2.27	3.13	0.22	0.43	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	239	201	277	19.00	38.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.70	2.27	3.13	0.22	0.43	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	239	201	277	19.00	38.00	
	mmol/l	2.71	2.27	3.15	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	240	201	279	19.50	39.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	3.09	2.60	3.58	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	273	230	316	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.99	7.81	10.2	0.59	1.18	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.37	8.15	10.6	0.61	1.22	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	8.15	10.6	0.61	1.22	
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	18.0	15.3	20.7	1.35	2.70	Urease end point
	mg/dl	108	92.0	124	8.00	16.00	
	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	21.7	18.4	25.0	1.65	3.30	Urease Berthelot
	mg/dl	130	111	149	9.50	19.00	
	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

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Vitamin B12	pmol/l	181	145	217	18.00	36.00	Roche Cobas E411
	pg/ml	245	196	294	24.50	49.00	
Zinc	µmol/l	36.4	29.1	43.7	3.65	7.30	Atomic absorption
	µg/dl	238	190	286	24.00	48.00	
	µmol/l	36.9	29.5	44.3	3.70	7.40	Colorimetric with deproteinisation
	µg/dl	241	193	289	24.00	48.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		6.7	5.1	8.3	0.81	1.61	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.7	5.9	9.6	0.93	1.85	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		60.4	54.4	66.4	3.00	6.00	% of total Protein (Beckman Capillary)
beta-globulin		13.9	10.6	17.2	1.65	3.30	% of total Protein (Beckman Capillary)
gamma-globulin		11.3	8.6	14.0	1.36	2.71	% of total Protein (Beckman Capillary)

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Bromocresol Green
	g/dl	2.98	2.54	3.42	0.22	0.44	
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	157	125	189	16.00	32.00	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	31.4	24.8	38.0	3.30	6.60	Oxidation to Biliverdin
	mg/dl	1.84	1.45	2.23	0.20	0.39	
Bilirubin Total	µmol/l	94.8	74.9	115	9.95	19.90	Diazo with Sulphanilic Acid
	mg/dl	5.55	4.38	6.72	0.59	1.17	
	µmol/l	93.0	73.4	113	9.80	19.60	Oxidation to Biliverdin
	mg/dl	5.44	4.29	6.59	0.58	1.15	
Calcium	mmol/l	2.94	2.64	3.24	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.8	10.6	13.0	0.60	1.20	
	mmol/l	3.14	2.82	3.46	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	6.80	5.92	7.68	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	229	295	16.50	33.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE direct

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	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	325	260	390	32.50	65.00	Alkaline picrate no deproteinization
	mg/dl	3.67	2.94	4.40	0.37	0.73	
	µmol/l	358	286	430	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.05	3.23	4.87	0.41	0.82	
gamma-GT	U/l	140	119	161	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	110	94	126	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	86	73	99	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct Clearance Method
	mg/dl	105	89.6	120	7.70	15.40	
Iron	µmol/l	33.5	27.4	39.6	3.05	6.10	Colorimetric without ppt.
	µg/dl	187	153	221	17.00	34.00	
LD (LDH)	U/l	721	613	829	54.00	108.00	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	687	584	790	51.50	103.00	P->L SFBC 37°C
	U/l	496	422	570	37.00	74.00	P->L SFBC 30°C
	U/l	348	296	400	26.00	52.00	P->L SFBC 25°C
	U/l	350	298	402	26.00	52.00	L->P IFCC 37°C
	U/l	253	215	291	19.00	38.00	L->P IFCC 30°C
	U/l	177	151	203	13.00	26.00	L->P IFCC 25°C

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	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	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	5.65	5.20	6.10	0.23	0.45	ISE method - direct
Protein Total	g/l	47.8	38.3	57.3	4.75	9.50	Biuret reaction end point
	g/dl	4.78	3.83	5.73	0.48	0.95	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
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	
	mmol/l	2.68	2.25	3.11	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	237	199	275	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	
	mmol/l	0.54	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	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.42	8.20	10.6	0.61	1.22	
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	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease hypochlorite
	mg/dl	108	91.4	125	8.30	16.60	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

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

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
AST (GOT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	76	60	92	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	23.7	18.7	28.7	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.39	1.09	1.69	0.15	0.30	
Bilirubin Total	µmol/l	83.3	65.8	101	8.75	17.50	Diazo with Dichloroaniline (DCA)
	mg/dl	4.87	3.85	5.89	0.51	1.02	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Cholesterol	mmol/l	6.85	5.96	7.74	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	230	298	17.00	34.00	
CK Total	U/l	572	469	675	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	358	294	422	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	243	199	287	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	330	264	396	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.73	2.98	4.48	0.38	0.75	
	µmol/l	367	293	441	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.15	3.31	4.99	0.42	0.84	
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	
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	
Triglycerides	mmol/l	2.71	2.28	3.14	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	240	202	278	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.71	8.45	11.0	0.63	1.26	
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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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
	g/l	26.7	22.7	30.7	2.00	4.00	Bromocresol Purple
	g/dl	2.67	2.27	3.07	0.20	0.40	
	g/l	25.9	22.0	29.8	1.95	3.90	Turbidimetric Assays
	g/dl	2.59	2.20	2.98	0.20	0.39	
Alkaline Phosphatase	U/l	242	205	279	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	189	160	218	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	155	131	179	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	113	91	135	11.00	22.00	Tris buffer without P5P 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	243	206	280	18.50	37.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	264	225	303	19.50	39.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	264	224	304	20.00	40.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	263	224	302	19.50	39.00	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
Bile Acids	µmol/l	46.7	37.4	56.0	4.65	9.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Colorimetric

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	28.7	22.7	34.7	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Bilirubin Total	µmol/l	80.6	63.7	97.5	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	80.6	63.7	97.5	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	80.7	63.7	97.7	8.50	17.00	Diazonium ion
	mg/dl	4.72	3.73	5.71	0.50	0.99	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.17	2.86	3.48	0.16	0.31	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.17	2.86	3.48	0.16	0.31	NM-BAPTA
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	6.80	5.92	7.68	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	229	295	16.50	33.00	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
Cholinesterase	U/l	4901	3921	5881	490.00	980.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	580	476	684	52.00	104.00	CK-NAC substrate start (DGKC) 37°C
	U/l	363	298	428	32.50	65.00	CK-NAC substrate start (DGKC) 30°C
	U/l	247	202	292	22.50	45.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	578	474	682	52.00	104.00	CK-NAC (IFCC) 37°C
	U/l	362	297	427	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	246	201	291	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	354	283	425	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.00	3.20	4.80	0.40	0.80	
	µmol/l	370	296	444	37.00	74.00	Randox Enzymatic UV method
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	371	297	445	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.19	3.36	5.02	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	356	285	427	35.50	71.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.02	3.22	4.82	0.40	0.80	
	µmol/l	351	281	421	35.00	70.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.97	3.18	4.76	0.40	0.79	
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	58.9	44.2	73.6	7.35	14.70	Roche Cobas 6000/8000
	ng/dl	4.59	3.45	5.73	0.57	1.14	
	pg/ml	45.9	34.5	57.3	5.70	11.40	Roche Cobas 6000/8000
gamma-GT	U/l	132	113	151	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	104	89	119	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	81	70	92	5.50	11.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	150	127	173	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	118	100	136	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	93	78	108	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	3.33	2.83	3.83	0.25	0.50	Direct HDL PEGME
	mg/dl	129	109	149	10.00	20.00	
	mmol/l	3.26	2.77	3.75	0.25	0.49	Direct HDL Roche 3rd generation
	mg/dl	126	107	145	9.50	19.00	
Iron	µmol/l	33.9	27.8	40.0	3.05	6.10	Colorimetric with ppt.
	µg/dl	190	155	225	17.50	35.00	
	µmol/l	34.0	27.9	40.1	3.05	6.10	Colorimetric without ppt.
	µg/dl	190	156	224	17.00	34.00	
Lactate	mmol/l	5.24	4.30	6.18	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	47.2	38.7	55.7	4.25	8.50	
LD (LDH)	U/l	647	550	744	48.50	97.00	P->L German methods 37°C
	U/l	467	397	537	35.00	70.00	P->L German methods 30°C
	U/l	328	279	377	24.50	49.00	P->L German methods 25°C
	U/l	335	284	386	25.50	51.00	L->P IFCC 37°C
	U/l	242	205	279	18.50	37.00	L->P IFCC 30°C
	U/l	170	144	196	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	49	39	59	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.92	1.69	2.15	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
Osmolality	mOsm/kg	332	266	398	33.00	66.00	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	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.12	5.63	6.61	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction CX4/5/7
	g/dl	4.39	3.51	5.27	0.44	0.88	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
	g/l	43.4	34.7	52.1	4.35	8.70	Biuret reaction kinetic
	g/dl	4.34	3.47	5.21	0.44	0.87	
PSA Total	ng/ml =	35.3	26.5	44.1	4.40	8.80	Roche Cobas 6000/8000
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.24	1.00	1.48	0.12	0.24	Roche Cobas 6000/8000
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	
Total T3	nmol/l	4.52	3.39	5.65	0.57	1.13	Roche Cobas 6000/8000
	ng/ml	2.94	2.21	3.67	0.37	0.73	
	ng/dl	294	221	367	36.50	73.00	Roche Cobas 6000/8000
Total T4	nmol/l	173	130	216	21.50	43.00	Roche Cobas 6000/8000
	µg/dl	13.5	10.1	16.9	1.70	3.40	
	ng/ml	135	101	169	17.00	34.00	Roche Cobas 6000/8000

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.64	2.21	3.07	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	234	196	272	19.00	38.00	
	mmol/l	2.58	2.17	2.99	0.21	0.41	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	228	192	264	18.00	36.00	
	mmol/l	2.62	2.20	3.04	0.21	0.42	L/G Kinase EP. no correction
	mg/dl	232	195	269	18.50	37.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.55	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	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	
Urea	mmol/l	18.9	16.0	21.8	1.45	2.90	Urease kinetic
	mg/dl	114	96.2	132	8.90	17.80	
	mmol/l	18.9	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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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.1	34.1	2.25	4.50	Bromocresol Green
	g/dl	2.96	2.51	3.41	0.23	0.45	
Alkaline Phosphatase	U/l	234	199	269	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	182	155	209	13.50	27.00	Roche Integra AMP buffer 30°C
	U/l	150	127	173	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Amylase Total	U/l	270	230	310	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	30.1	23.8	36.4	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	29.3	23.2	35.4	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Bilirubin Total	µmol/l	80.5	63.6	97.4	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.71	3.72	5.70	0.50	0.99	
	µmol/l	79.7	63.0	96.4	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.66	3.69	5.63	0.49	0.97	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	80.5	63.6	97.4	8.45	16.90	Diazonium ion
	mg/dl	4.71	3.72	5.70	0.50	0.99	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	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	6.98	6.07	7.89	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
CK Total	U/l	570	467	673	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	357	292	422	32.50	65.00	CK-NAC (IFCC) 30°C
	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	339	272	406	33.50	67.00	Alkaline picrate with deproteinization
	mg/dl	3.83	3.07	4.59	0.38	0.76	
	µmol/l	338	271	405	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.82	3.06	4.58	0.38	0.76	
	µmol/l	360	288	432	36.00	72.00	Roche Creatinine Plus
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	338	270	406	34.00	68.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.82	3.05	4.59	0.39	0.77	
gamma-GT	U/l	144	122	166	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	113	96	130	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	89	75	103	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	146	124	168	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	90	77	103	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	
HDL - Cholesterol	mmol/l	3.15	2.67	3.63	0.24	0.48	Direct HDL Roche 3rd generation
	mg/dl	122	103	141	9.50	19.00	
Iron	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric without ppt.
	µg/dl	199	163	235	18.00	36.00	
LD (LDH)	U/l	348	295	401	26.50	53.00	L->P IFCC 37°C
	U/l	251	213	289	19.00	38.00	L->P IFCC 30°C
	U/l	176	150	202	13.00	26.00	L->P IFCC 25°C
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.25	6.17	8.33	0.54	1.08	
Potassium	mmol/l	6.02	5.54	6.50	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.68	2.25	3.11	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	237	199	275	19.00	38.00	
	mmol/l	2.63	2.21	3.05	0.21	0.42	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	233	196	270	18.50	37.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.05	10.5	0.61	1.21	
Urea	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease kinetic
	mg/dl	109	93.2	125	7.90	15.80	
	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	18.2	15.5	20.9	1.35	2.70	BUN
	mg/dl	51.1	43.4	58.8	3.85	7.70	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	26.9	22.8	31.0	2.05	4.10	Bromocresol Purple
	g/dl	2.69	2.28	3.10	0.21	0.41	
Alkaline Phosphatase	U/l	238	202	274	18.00	36.00	Roche Integra AMP buffer 37°C
	U/l	185	157	213	14.00	28.00	Roche Integra AMP buffer 30°C
	U/l	152	129	175	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 37°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Amylase Total	U/l	267	227	307	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	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
Bicarbonate	mmol/l	15.7	12.4	19.0	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	27.8	21.9	33.7	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.28	1.98	0.18	0.35	
	µmol/l	28.2	22.2	34.2	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	
Bilirubin Total	µmol/l	80.1	63.3	96.9	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	80.9	63.9	97.9	8.50	17.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.73	3.74	5.72	0.50	0.99	
	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	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.19	2.87	3.51	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.20	2.88	3.52	0.16	0.32	NM-BAPTA
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	6.84	5.95	7.73	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	230	298	17.00	34.00	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
Cholinesterase	U/l	4851	3881	5821	485.00	970.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	581	476	686	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	364	298	430	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	247	202	292	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	352	282	422	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.98	3.19	4.77	0.40	0.79	
	µmol/l	376	301	451	37.50	75.00	Randox Enzymatic UV method
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	376	301	451	37.50	75.00	Roche Creatinine Plus
	mg/dl	4.25	3.40	5.10	0.43	0.85	

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Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	347	278	416	34.50	69.00	Jaffe rate blanked
	mg/dl	3.92	3.14	4.70	0.39	0.78	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.12	3.30	4.94	0.41	0.82	
gamma-GT	U/l	135	115	155	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	106	91	121	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	83	71	95	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	117	100	134	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	92	78	106	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose oxidase
	mg/dl	272	232	312	20.00	40.00	
HDL - Cholesterol	mmol/l	3.11	2.65	3.57	0.23	0.46	Direct HDL Roche 3rd generation
	mg/dl	120	102	138	9.00	18.00	
Iron	µmol/l	34.0	27.9	40.1	3.05	6.10	Colorimetric without ppt.
	µg/dl	190	156	224	17.00	34.00	
Lactate	mmol/l	5.29	4.34	6.24	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.7	39.1	56.3	4.30	8.60	
LD (LDH)	U/l	647	550	744	48.50	97.00	P->L German methods 37°C
	U/l	467	397	537	35.00	70.00	P->L German methods 30°C
	U/l	328	279	377	24.50	49.00	P->L German methods 25°C
	U/l	333	283	383	25.00	50.00	L->P IFCC 37°C
	U/l	240	204	276	18.00	36.00	L->P IFCC 30°C
	U/l	169	143	195	13.00	26.00	L->P IFCC 25°C

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	49	40	58	4.50	9.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.72	1.52	1.92	0.10	0.20	Xylidyl Blue
	mg/dl	4.18	3.69	4.67	0.25	0.49	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.10	5.62	6.58	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction kinetic
	g/dl	4.43	3.54	5.32	0.45	0.89	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.65	2.22	3.08	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	235	196	274	19.50	39.00	
	mmol/l	2.64	2.22	3.06	0.21	0.42	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	234	196	272	19.00	38.00	
	mmol/l	2.68	2.25	3.11	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	237	199	275	19.00	38.00	
	mmol/l	2.71	2.28	3.14	0.22	0.43	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	240	202	278	19.00	38.00	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.42	8.20	10.6	0.61	1.22	
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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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	204	174	234	15.00	30.00	Roche Integra AMP buffer 37°C
	U/l	159	136	182	11.50	23.00	Roche Integra AMP buffer 30°C
	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	115	92	138	11.50	23.00	Tris buffer without P5P 37°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	243	207	279	18.00	36.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	266	226	306	20.00	40.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	265	225	305	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	29.6	23.4	35.8	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Bilirubin Total	µmol/l	79.2	62.5	95.9	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.63	3.66	5.60	0.49	0.97	
	µmol/l	78.6	62.1	95.1	8.25	16.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.60	3.63	5.57	0.49	0.97	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	78.6	62.1	95.1	8.25	16.50	Diazonium ion
	mg/dl	4.60	3.63	5.57	0.49	0.97	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.14	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	6.76	5.88	7.64	0.44	0.88	Cholesterol Oxidase
	mg/dl	261	227	295	17.00	34.00	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
CK Total	U/l	505	414	596	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	316	259	373	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	373	299	447	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	355	284	426	35.50	71.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.01	3.21	4.81	0.40	0.80	
gamma-GT	U/l	131	112	150	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	81	69	93	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	116	99	133	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	91	77	105	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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	3.16	2.69	3.63	0.24	0.47	Direct HDL Roche 3rd generation
	mg/dl	122	104	140	9.00	18.00	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	33.1	27.2	39.0	2.95	5.90	Colorimetric without ppt.
	µg/dl	185	152	218	16.50	33.00	
Lactate	mmol/l	5.21	4.27	6.15	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	46.9	38.5	55.3	4.20	8.40	
LD (LDH)	U/l	330	280	380	25.00	50.00	L->P IFCC 37°C
	U/l	238	202	274	18.00	36.00	L->P IFCC 30°C
	U/l	167	142	192	12.50	25.00	L->P IFCC 25°C
Lipase	U/l	50	40	60	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.88	1.65	2.11	0.12	0.23	Spectrophotometric
	mg/dl	1.31	1.15	1.47	0.08	0.16	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	mmol/l	2.21	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	6.14	5.65	6.63	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	59.1	46.7	71.5	6.20	12.40	FE+UIBC(saturation with iron)
	µg/dl	330	261	399	34.50	69.00	
Triglycerides	mmol/l	2.62	2.20	3.04	0.21	0.42	Lipase/GPO-PAP no correction
	mg/dl	232	195	269	18.50	37.00	
	mmol/l	2.61	2.19	3.03	0.21	0.42	L/G Kinase EP. no correction
	mg/dl	231	194	268	18.50	37.00	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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 with ascorbate oxidase
	mg/dl	9.11	7.93	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.21	8.01	10.4	0.60	1.20	
Urea	mmol/l	18.4	15.7	21.1	1.35	2.70	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	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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RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	538	457	619	40.50	81.00	Diethanolamine buffer DEA 37°C
	U/l	350	298	402	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	276	235	317	20.50	41.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	302	257	347	22.50	45.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	165	132	198	16.50	33.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	47.2	37.8	56.6	4.70	9.40	5th Generation Colorimetric
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Vanadate Oxidation
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	91.5	72.3	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.35	4.23	6.47	0.56	1.12	
	µmol/l	94.2	74.4	114	9.90	19.80	Vanadate Oxidation
	mg/dl	5.51	4.35	6.67	0.58	1.16	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Cholesterol	mmol/l	7.07	6.15	7.99	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	112	103	121	4.50	9.00	ISE direct
CK Total	U/l	517	424	610	46.50	93.00	CK-NAC substrate start (DGKC) 37°C
	U/l	575	471	679	52.00	104.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	307	246	368	30.50	61.00	Alkaline picrate no deproteinization
	mg/dl	3.47	2.78	4.16	0.35	0.69	
	µmol/l	360	288	432	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.07	3.25	4.89	0.41	0.82	
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (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	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
Iron	µmol/l	35.4	29.0	41.8	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	162	234	18.00	36.00	
Lactate	mmol/l	5.17	4.24	6.10	0.47	0.93	Colorimetric Lactate Oxidase
	mg/dl	46.6	38.2	55.0	4.20	8.40	
LD (LDH)	U/l	701	596	806	52.50	105.00	P->L German methods 37°C
	U/l	340	289	391	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	69	55	83	7.00	14.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.86	1.64	2.08	0.11	0.22	Colorimetric
	mg/dl	1.29	1.14	1.44	0.08	0.15	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Xylidyl Blue
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Phosphate Inorganic	mmol/l	2.30	1.84	2.76	0.23	0.46	Phosphomolybdate UV
	mg/dl	7.13	5.70	8.56	0.72	1.43	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	Enzymatic
	mmol/l	5.93	5.45	6.41	0.24	0.48	ISE method - direct
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	
Sodium	mmol/l	155	147	163	4.00	8.00	Enzymatic
	mmol/l	155	148	162	3.50	7.00	ISE method - direct
TIBC	µmol/l	59.1	46.7	71.5	6.20	12.40	Direct Colorimetric
	µg/dl	330	261	399	34.50	69.00	
Triglycerides	mmol/l	2.68	2.25	3.11	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	237	199	275	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.64	8.38	10.9	0.63	1.26	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	8.32	10.8	0.62	1.24	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.9	23.7	32.1	2.10	4.20	Bromocresol Green
	g/dl	2.79	2.37	3.21	0.21	0.42	
	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Purple
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	471	400	542	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	345	293	397	26.00	52.00	AMP optimised to IFCC 37°C
	U/l	345	293	397	26.00	52.00	AMP non-optimised 37°C
ALT (GPT)	U/l	122	97	147	12.50	25.00	Tris buffer without P5P 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	157	125	189	16.00	32.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	45.3	36.3	54.3	4.50	9.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	18.2	14.5	21.9	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	31.6	25.0	38.2	3.30	6.60	Oxidation to Biliverdin
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Bilirubin Total	µmol/l	96.2	76.0	116	10.10	20.20	Oxidation to Biliverdin
	mg/dl	5.63	4.45	6.81	0.59	1.18	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	6.78	5.90	7.66	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	228	296	17.00	34.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholinesterase	U/l	5323	4259	6387	532.00	1064.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	529	434	624	47.50	95.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	358	286	430	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.05	3.23	4.87	0.41	0.82	
	µmol/l	357	286	428	35.50	71.00	Randox Enzymatic UV method
	mg/dl	4.03	3.23	4.83	0.40	0.80	
	µmol/l	351	281	421	35.00	70.00	Jaffe rate blanked
	mg/dl	3.97	3.18	4.76	0.40	0.79	
	µmol/l	359	287	431	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.06	3.24	4.88	0.41	0.82	
gamma-GT	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	14.8	12.5	17.1	1.15	2.30	Hexokinase
	mg/dl	267	225	309	21.00	42.00	
	mmol/l	14.9	12.7	17.1	1.10	2.20	Glucose oxidase
	mg/dl	268	229	307	19.50	39.00	
HDL - Cholesterol	mmol/l	2.11	1.80	2.42	0.16	0.31	Direct Clearance Method
	mg/dl	81.4	69.5	93.3	5.95	11.90	
Iron	µmol/l	34.9	28.6	41.2	3.15	6.30	Colorimetric without ppt.
	µg/dl	195	160	230	17.50	35.00	
Lactate	mmol/l	5.27	4.32	6.22	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.5	38.9	56.1	4.30	8.60	
LD (LDH)	U/l	330	280	380	25.00	50.00	L->P 37°C
	U/l	683	580	786	51.50	103.00	P->L German methods 37°C

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	342	290	394	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	63	51	75	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.90	1.67	2.13	0.12	0.23	Spectrophotometric
	mg/dl	1.32	1.16	1.48	0.08	0.16	
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Xylidyl Blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	59.4	46.9	71.9	6.25	12.50	Direct Colorimetric
	µg/dl	332	262	402	35.00	70.00	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
	mmol/l	2.71	2.28	3.14	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	240	202	278	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.54	8.30	10.8	0.62	1.24	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.61	8.37	10.9	0.62	1.24	
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	

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RANDOX

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	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	
Alkaline Phosphatase	U/l	291	247	335	22.00	44.00	Siemens Dimension AMP buffer 37°C
	U/l	298	253	343	22.50	45.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer with P5P 37°C
	U/l	128	103	153	12.50	25.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	330	281	379	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	171	137	205	17.00	34.00	Tris buffer with P5P 37°C
	U/l	175	140	210	17.50	35.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	16.4	13.0	19.8	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.959	0.761	1.16	0.10	0.20	
Bilirubin Total	µmol/l	84.8	67.0	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.96	3.92	6.00	0.52	1.04	
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	6.33	5.51	7.15	0.41	0.82	Dimension-Siemens reagents
	mg/dl	244	213	275	15.50	31.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
CK Total	U/l	507	416	598	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	503	412	594	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	371	297	445	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.19	3.36	5.02	0.42	0.83	
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	182	155	209	13.50	27.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.14	2.67	3.61	0.24	0.47	Direct HDL PPD
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	3.28	2.79	3.77	0.25	0.49	Direct HDL PEGME
	mg/dl	127	108	146	9.50	19.00	
Iron	µmol/l	32.8	26.9	38.7	2.95	5.90	Colorimetric without ppt.
	µg/dl	183	150	216	16.50	33.00	
Lactate	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	
LD (LDH)	U/l	341	290	392	25.50	51.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	324	275	373	24.50	49.00	L->P IFCC 37°C
Lipase	U/l	226	182	270	22.00	44.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.69	1.48	1.90	0.11	0.21	Methylthymol blue
	mg/dl	4.11	3.60	4.62	0.26	0.51	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.05	5.56	6.54	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	158	150	166	4.00	8.00	ISE method - indirect

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RANDOX

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
	mmol/l	2.78	2.33	3.23	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	246	206	286	20.00	40.00	
Uric Acid (Urate)	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	0.56	0.49	0.64	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.46	8.23	10.7	0.62	1.23	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Green
	g/dl	2.83	2.41	3.25	0.21	0.42	
	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	
Alkaline Phosphatase	U/l	297	252	342	22.50	45.00	Siemens Dimension AMP buffer 37°C
	U/l	298	253	343	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	280	238	322	21.00	42.00	Randox AMP 37°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer with P5P 37°C
	U/l	128	102	154	13.00	26.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	321	273	369	24.00	48.00	Siemens - maltopenta/hexaoside 37°C
	U/l	331	281	381	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	174	139	209	17.50	35.00	Tris buffer with P5P 37°C
	U/l	173	138	208	17.50	35.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	84.4	66.7	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.94	3.90	5.98	0.52	1.04	
Calcium	mmol/l	3.10	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	6.35	5.52	7.18	0.42	0.83	Dimension-Siemens reagents
	mg/dl	245	213	277	16.00	32.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
CK Total	U/l	504	413	595	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	517	424	610	46.50	93.00	Dithioerythritol 37°C
Creatinine	µmol/l	368	295	441	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	359	287	431	36.00	72.00	Randox Enzymatic UV method
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	370	296	444	37.00	74.00	Creatinine PAP method
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	367	293	441	37.00	74.00	Jaffe rate blanked
	mg/dl	4.15	3.31	4.99	0.42	0.84	
gamma-GT	U/l	154	131	177	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	178	151	205	13.50	27.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.22	2.74	3.70	0.24	0.48	Direct HDL PPD
	mg/dl	124	106	142	9.00	18.00	
	mmol/l	3.20	2.72	3.68	0.24	0.48	Direct HDL PEGME
	mg/dl	124	105	143	9.50	19.00	
Iron	µmol/l	31.8	26.1	37.5	2.85	5.70	Colorimetric with ppt.
	µg/dl	178	146	210	16.00	32.00	
	µmol/l	32.5	26.7	38.3	2.90	5.80	Colorimetric without ppt.
	µg/dl	182	149	215	16.50	33.00	
LD (LDH)	U/l	334	284	384	25.00	50.00	Siemens Dimension L-P Non IFCC 37°C

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	328	279	377	24.50	49.00	L->P IFCC 37°C
Lipase	U/l	224	179	269	22.50	45.00	Colorimetric Siemens Dimension (LIPL Kit) 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	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Methylthymol blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	
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	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction end point
	g/dl	4.56	3.65	5.47	0.46	0.91	
	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction kinetic
	g/dl	4.56	3.65	5.47	0.46	0.91	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
TIBC	µmol/l	48.8	38.6	59.0	5.10	10.20	Removal of excess free iron
	µg/dl	273	216	330	28.50	57.00	
	µmol/l	48.8	38.5	59.1	5.15	10.30	Direct Colorimetric
	µg/dl	273	215	331	29.00	58.00	
Triglycerides	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	
	mmol/l	2.75	2.31	3.19	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	247	207	287	20.00	40.00	

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RANDOX

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	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 no ascorbate oxidase
	mg/dl	9.37	8.15	10.6	0.61	1.22	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.12	7.93	10.3	0.60	1.19	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease end point
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease hypochlorite
	mg/dl	112	95.0	129	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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RANDOX

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Purple
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	304	258	350	23.00	46.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer with P5P 37°C
Amylase Total	U/l	320	272	368	24.00	48.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	173	139	207	17.00	34.00	Tris buffer with P5P 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	87.0	68.7	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.09	4.02	6.16	0.54	1.07	
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	6.27	5.45	7.09	0.41	0.82	Dimension-Siemens reagents
	mg/dl	242	210	274	16.00	32.00	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
CK Total	U/l	506	415	597	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	372	298	446	37.00	74.00	IDMS traceable
	mg/dl	4.20	3.37	5.03	0.42	0.83	
gamma-GT	U/l	179	152	206	13.50	27.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	

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Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	3.02	2.57	3.47	0.23	0.45	Direct HDL PEGME
	mg/dl	117	99.2	135	8.90	17.80	
Lactate	mmol/l	4.98	4.08	5.88	0.45	0.90	UV LDH
	mg/dl	44.9	36.8	53.0	4.05	8.10	
LD (LDH)	U/l	328	279	377	24.50	49.00	L->P IFCC 37°C
Lipase	U/l	261	210	312	25.50	51.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.70	1.49	1.91	0.11	0.21	Methylthymol blue
	mg/dl	4.13	3.62	4.64	0.26	0.51	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	5.88	5.41	6.35	0.24	0.47	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	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.37	8.16	10.6	0.61	1.21	
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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RANDOX

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.7	26.1	35.3	2.30	4.60	Bromocresol Green
	g/dl	3.07	2.61	3.53	0.23	0.46	
ALT (GPT)	U/l	124	100	148	12.00	24.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	158	126	190	16.00	32.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	86.7	68.5	105	9.10	18.20	Diazo with Sulphanilic Acid
	mg/dl	5.07	4.01	6.13	0.53	1.06	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Cholesterol	mmol/l	7.14	6.22	8.06	0.46	0.92	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Creatinine	µmol/l	334	267	401	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.77	3.02	4.52	0.38	0.75	
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
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	
Triglycerides	mmol/l	2.72	2.28	3.16	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	241	202	280	19.50	39.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	

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RANDOX

Weiner Lab CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			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	
Alkaline Phosphatase	U/l	526	447	605	39.50	79.00	Diethanolamine buffer DEA 37°C
	U/l	410	348	472	31.00	62.00	Diethanolamine buffer DEA 30°C
	U/l	336	286	386	25.00	50.00	Diethanolamine buffer DEA 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
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
Cholesterol	mmol/l	6.80	5.92	7.68	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	229	295	16.50	33.00	
Creatinine	µmol/l	329	263	395	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.72	2.97	4.47	0.38	0.75	
Glucose	mmol/l	14.7	12.5	16.9	1.10	2.20	Glucose oxidase
	mg/dl	265	225	305	20.00	40.00	
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Triglycerides	mmol/l	2.62	2.20	3.04	0.21	0.42	Lipase/GPO-PAP no correction
	mg/dl	232	195	269	18.50	37.00	

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RANDOX

Weiner Lab CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 809UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2019-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.41	8.18	10.6	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	
	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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