RANDOX 0086 CE

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

CAT. NO. HE1532 **LOT NO.** 849UE
GTIN: 05055273203608
CAT. NO. HS2611
GTIN: 05055273203813
SIZE: 20 x 5ml / 5 x 5ml **EXPIRY:** 2020-01-28

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

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY
OPENED: Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 8 hours at +15°C to +25°C or 7 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C. (See Limitations)

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

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

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

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.
2. Refer to the Control section of the individual analyser application.
3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

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

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

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

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

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

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

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Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.9	24.5	33.3	2.20	4.40	Bromocresol Green
	g/dl	2.89	2.45	3.33	0.22	0.44	
	g/l	26.7	22.7	30.7	2.00	4.00	Bromocresol Purple
	g/dl	2.67	2.27	3.07	0.20	0.40	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	283	240	326	21.50	43.00	AMP non-optimised 37°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	279	237	321	21.00	42.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	344	293	395	25.50	51.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	391	332	450	29.50	59.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	49.9	39.9	59.9	5.00	10.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Bilirubin Total	µmol/l	88.1	69.6	107	9.25	18.50	Diazo with Dichloroaniline (DCA)
	mg/dl	5.15	4.07	6.23	0.54	1.08	
	µmol/l	91.2	72.0	110	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.34	4.21	6.47	0.57	1.13	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	87.8	69.3	106	9.25	18.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.14	4.05	6.23	0.55	1.09	
	µmol/l	87.3	69.0	106	9.15	18.30	Nitrobenzenediazonium salt
	mg/dl	5.11	4.04	6.18	0.54	1.07	
	µmol/l	87.8	69.4	106	9.20	18.40	Diazonium ion
	mg/dl	5.14	4.06	6.22	0.54	1.08	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Cholesterol	mmol/l	7.04	6.13	7.95	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholinesterase	U/l	6072	4858	7286	607.00	1214.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5856	4685	7027	585.50	1171.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	508	416	600	46.00	92.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	378	303	453	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	367	294	440	36.50	73.00	Enzymatic UV method
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	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	376	301	451	37.50	75.00	Jaffe rate blanked
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	377	302	452	37.50	75.00	IDMS traceable
	mg/dl	4.26	3.41	5.11	0.43	0.85	
gamma-GT	U/l	144	122	166	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	144	123	165	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	117	159	10.50	21.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	16.4	13.9	18.9	1.25	2.50	Glucose dehydrogenase
	mg/dl	296	250	342	23.00	46.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct HDL PPD
	mg/dl	105	89.6	120	7.70	15.40	
	mmol/l	2.62	2.23	3.01	0.20	0.39	Direct Clearance Method
	mg/dl	101	86.1	116	7.45	14.90	
	mmol/l	2.65	2.25	3.05	0.20	0.40	HDL - Ultra
	mg/dl	102	86.9	117	7.55	15.10	
Iron	µmol/l	35.3	29.0	41.6	3.15	6.30	Colorimetric with ppt.
	µg/dl	197	162	232	17.50	35.00	
	µmol/l	35.0	28.7	41.3	3.15	6.30	Colorimetric without ppt.
	µg/dl	196	160	232	18.00	36.00	
Lactate	mmol/l	5.37	4.40	6.34	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.4	39.6	57.2	4.40	8.80	
LD (LDH)	U/l	365	310	420	27.50	55.00	L->P 37°C
	U/l	725	616	834	54.50	109.00	P->L German methods 37°C
	U/l	363	309	417	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	59	47	71	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.20	1.54	0.09	0.17	

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	1.71	1.51	1.91	0.10	0.20	Enzymatic
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Osmolality	mOsm/kg	362	290	434	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.67	5.67	7.67	0.50	1.00	
	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.16	5.66	6.66	0.25	0.50	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	
	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction kinetic
	g/dl	4.59	3.67	5.51	0.46	0.92	
PSA Total	ng/ml =	32.5	24.4	40.6	4.05	8.10	Abbott Architect
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.07	0.86	1.28	0.11	0.21	Abbott Architect
TIBC	µmol/l	56.2	44.4	68.0	5.90	11.80	FE+UIBC(saturation with iron)
	µg/dl	314	248	380	33.00	66.00	
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.86	2.41	3.31	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	253	213	293	20.00	40.00	

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Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	254	213	295	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.09	7.91	10.3	0.59	1.18	
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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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.23	0.45	
Alkaline Phosphatase	U/l	281	239	323	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	158	127	189	15.50	31.00	Tris buffer without P5P 37°C
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	7.27	6.32	8.22	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	
CK Total	U/l	514	422	606	46.00	92.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	356	285	427	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.02	3.22	4.82	0.40	0.80	
	µmol/l	378	302	454	38.00	76.00	Creatinine PAP method
	mg/dl	4.27	3.41	5.13	0.43	0.86	
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
Iron	µmol/l	34.1	28.0	40.2	3.05	6.10	Colorimetric without ppt.
	µg/dl	191	157	225	17.00	34.00	
Phosphate Inorganic	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	
Protein Total	g/l	50.5	40.4	60.6	5.05	10.10	Biuret reaction end point
	g/dl	5.05	4.04	6.06	0.51	1.01	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Triglycerides	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.77	7.63	9.91	0.57	1.14	
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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Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C
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	2.82	3.46	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
Creatinine	µmol/l	341	273	409	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.85	3.08	4.62	0.39	0.77	
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
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	
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	

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

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.19	8.00	10.4	0.60	1.19	
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	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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RANDOX

Arkray Spotchem EZ/EL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.0	24.0	36.0	3.00	6.00	ARKRAY Spotchem EZ
	g/dl	3.00	2.40	3.60	0.30	0.60	
Alkaline Phosphatase	U/l	468	364	572	52.00	104.00	ARKRAY Spotchem EZ 37°C
ALT (GPT)	U/l	141	119	163	11.00	22.00	ARKRAY Spotchem EZ 37°C
Amylase Total	U/l	239	179	299	30.00	60.00	ARKRAY Spotchem EZ 37°C
AST (GOT)	U/l	151	128	174	11.50	23.00	ARKRAY Spotchem EZ 37°C
Bilirubin Total	µmol/l	85.5	73.5	97.5	6.00	12.00	ARKRAY Spotchem EZ
	mg/dl	5.00	4.30	5.70	0.35	0.70	
Bun Urea	mmol/l	21.1	17.5	24.7	1.80	3.60	ARKRAY Spotchem EZ
	mg/dl	59.0	49.0	69.0	5.00	10.00	
Calcium	mmol/l	3.57	3.12	4.02	0.23	0.45	ARKRAY Spotchem EZ
	mg/dl	14.3	12.5	16.1	0.90	1.80	
Cholesterol	mmol/l	6.40	5.42	7.38	0.49	0.98	ARKRAY Spotchem EZ
	mg/dl	247	209	285	19.00	38.00	
Chloride	mmol/l	133	124	142	4.50	9.00	ARKRAY Spotchem EL
CK Total	U/l	420	352	488	34.00	68.00	ARKRAY Spotchem EZ 37°C
Creatinine	µmol/l	363	292	434	35.50	71.00	ARKRAY Spotchem EZ (creatinine)
	mg/dl	4.10	3.30	4.90	0.40	0.80	
	µmol/l	319	265	373	27.00	54.00	ARKRAY Spotchem EZ (creatinine2)
	mg/dl	3.60	3.00	4.20	0.30	0.60	
gamma-GT	U/l	162	135	189	13.50	27.00	ARKRAY Spotchem EZ 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.6	13.5	17.7	1.05	2.10	ARKRAY Spotchem EZ
	mg/dl	281	244	318	18.50	37.00	
HDL - Cholesterol	mmol/l	2.18	1.61	2.75	0.29	0.57	ARKRAY Spotchem EZ
	mg/dl	84.0	62.0	106	11.00	22.00	
LD (LDH)	U/l	607	460	754	73.50	147.00	ARKRAY Spotchem EZ 37°C
Magnesium	mmol/l	1.69	1.44	1.94	0.13	0.25	ARKRAY Spotchem EZ
	mg/dl	4.10	3.50	4.70	0.30	0.60	
Phosphate Inorganic	mmol/l	2.00	1.71	2.29	0.15	0.29	ARKRAY Spotchem EZ
	mg/dl	6.20	5.30	7.10	0.45	0.90	
Potassium	mmol/l	5.80	5.40	6.20	0.20	0.40	ARKRAY Spotchem EL
Protein Total	g/l	50.0	42.0	58.0	4.00	8.00	ARKRAY Spotchem EZ
	g/dl	5.00	4.20	5.80	0.40	0.80	
Sodium	mmol/l	157	148	166	4.50	9.00	ARKRAY Spotchem EL
Triglycerides	mmol/l	1.81	1.61	2.01	0.10	0.20	ARKRAY Spotchem EZ
	mg/dl	160	142	178	9.00	18.00	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	ARKRAY Spotchem EZ
	mg/dl	8.80	7.70	9.90	0.55	1.10	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			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	28.6	24.3	32.9	2.15	4.30	Bromocresol Purple
	g/dl	2.86	2.43	3.29	0.22	0.43	
Alkaline Phosphatase	U/l	445	378	512	33.50	67.00	Diethanolamine buffer DEA 37°C
	U/l	347	295	399	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
Amylase Total	U/l	301	256	346	22.50	45.00	pNP Maltotrioside substrates 37°C
	U/l	313	266	360	23.50	47.00	Biotrol - blocked pNPG7 37°C
	U/l	328	279	377	24.50	49.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	312	265	359	23.50	47.00	Beckman Olympus - blocked pNPG7 37°C
AST (GOT)	U/l	158	127	189	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.7	14.8	22.6	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	23.3	18.4	28.2	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	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	90.2	71.2	109	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.28	4.17	6.39	0.56	1.11	
	µmol/l	88.7	70.1	107	9.30	18.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.19	4.10	6.28	0.55	1.09	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	86.6	68.4	105	9.10	18.20	Oxidation to Biliverdin/Vanadate
	mg/dl	5.07	4.00	6.14	0.54	1.07	
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	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.08	6.16	8.00	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	238	308	17.50	35.00	
Chloride	mmol/l	116	106	126	5.00	10.00	ISE indirect
Cholinesterase	U/l	4618	3694	5542	462.00	924.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	519	426	612	46.50	93.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	26.1	20.9	31.3	2.60	5.20	Colorimetric
	µg/dl	166	133	199	16.50	33.00	
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
	µmol/l	367	294	440	36.50	73.00	Enzymatic UV method
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	µmol/l	372	298	446	37.00	74.00	Creatinine PAP method
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	357	285	429	36.00	72.00	Jaffe rate blanked
	mg/dl	4.03	3.22	4.84	0.41	0.81	
	µmol/l	355	284	426	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.01	3.21	4.81	0.40	0.80	
	µmol/l	363	290	436	36.50	73.00	IDMS traceable
	mg/dl	4.10	3.28	4.92	0.41	0.82	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
D-3-Hydroxybutyrate	mmol/l	1.14	0.97	1.31	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	152	129	175	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	151	129	173	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	33	26	40	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	2.80	2.38	3.22	0.21	0.42	Direct Clearance Method
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	2.77	2.36	3.18	0.21	0.41	HDL - Ultra
	mg/dl	107	91.1	123	7.95	15.90	
Iron	µmol/l	35.8	29.3	42.3	3.25	6.50	Colorimetric with ppt.
	µg/dl	200	164	236	18.00	36.00	
	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.34	4.38	6.30	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.1	39.5	56.7	4.30	8.60	
LD (LDH)	U/l	363	309	417	27.00	54.00	L->P 37°C
	U/l	816	694	938	61.00	122.00	P->L Scandinavian & Dutch 37°C
	U/l	363	308	418	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	63	51	75	6.00	12.00	Other Colorimetric 37°C
	U/l	83	66	100	8.50	17.00	Randox Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.94	1.71	2.17	0.12	0.23	Spectrophotometric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Biuret reaction end point
	g/dl	4.57	3.65	5.49	0.46	0.92	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	54.9	43.3	66.5	5.80	11.60	FE+UIBC(saturation with iron)
	µg/dl	307	242	372	32.50	65.00	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	216	300	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.64	8.38	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.54	8.30	10.8	0.62	1.24	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	8.30	10.8	0.62	1.24	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease end point
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.2	16.4	22.0	1.40	2.80	Urease kinetic
	mg/dl	115	98.6	131	8.20	16.40	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	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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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.8	26.2	35.4	2.30	4.60	Bromocresol Green
	g/dl	3.08	2.62	3.54	0.23	0.46	
	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Purple
	g/dl	2.89	2.46	3.32	0.22	0.43	
Alkaline Phosphatase	U/l	320	272	368	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	319	271	367	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	127	102	152	12.50	25.00	Tris buffer SCE 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	323	275	371	24.00	48.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	145	116	174	14.50	29.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	18.7	14.8	22.6	1.95	3.90	Differential rate pH change
	mmol/l	17.4	13.8	21.0	1.80	3.60	Ion selective electrode
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	86.4	68.2	105	9.10	18.20	Diazo with Sulphanilic Acid
	mg/dl	5.05	3.99	6.11	0.53	1.06	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.25	6.31	8.19	0.47	0.94	Cholesterol Oxidase
	mg/dl	280	244	316	18.00	36.00	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
Cholinesterase	U/l	4430	3544	5316	443.00	886.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	507	415	599	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	521	427	615	47.00	94.00	Monothioglycerol 37°C
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	366	293	439	36.50	73.00	Enzymatic UV method
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	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	364	292	436	36.00	72.00	IDMS traceable
	mg/dl	4.11	3.30	4.92	0.41	0.81	
gamma-GT	U/l	123	105	141	9.00	18.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	3.19	2.71	3.67	0.24	0.48	Direct HDL PPD
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	2.91	2.48	3.34	0.22	0.43	HDL - Ultra
	mg/dl	112	95.7	128	8.15	16.30	
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.14	4.22	6.06	0.46	0.92	Colorimetric Lactate Oxidase
	mg/dl	46.3	38.0	54.6	4.15	8.30	
LD (LDH)	U/l	304	258	350	23.00	46.00	L->P 37°C
	U/l	933	793	1073	70.00	140.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	63	51	75	6.00	12.00	Other Colorimetric 37°C
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	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.91	5.86	7.96	0.53	1.05	
	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	6.15	5.65	6.65	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.8	36.6	55.0	4.60	9.20	Biuret reaction end point
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	265	222	308	21.50	43.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.79	7.64	9.94	0.58	1.15	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			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	297	253	341	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	231	197	265	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	190	162	218	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	65	99	8.50	17.00	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	89.9	71.0	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.26	4.15	6.37	0.56	1.11	
Calcium	mmol/l	3.04	2.74	3.34	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Cholesterol	mmol/l	7.27	6.32	8.22	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	
CK Total	U/l	538	441	635	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	337	276	398	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	229	187	271	21.00	42.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	333	266	400	33.50	67.00	Alkaline picrate no deproteinization
	mg/dl	3.76	3.01	4.51	0.38	0.75	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	148	125	171	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	117	99	135	9.00	18.00	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	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
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	
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.49	8.25	10.7	0.62	1.24	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.25	10.7	0.62	1.24	
Urea	mmol/l	17.6	15.0	20.2	1.30	2.60	Urease kinetic
	mg/dl	106	90.2	122	7.90	15.80	
	mmol/l	17.6	15.0	20.2	1.30	2.60	BUN
	mg/dl	49.4	42.0	56.8	3.70	7.40	

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Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			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	
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	30.7	24.3	37.1	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	88.5	69.9	107	9.30	18.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.18	4.09	6.27	0.55	1.09	
Calcium	mmol/l	2.93	2.64	3.22	0.15	0.29	Arsenazo III
	mg/dl	11.7	10.6	12.8	0.55	1.10	
Cholesterol	mmol/l	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	503	413	593	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	315	259	371	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	328	262	394	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.71	2.96	4.46	0.38	0.75	

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Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	354	284	424	35.00	70.00	Creatinine PAP method
	mg/dl	4.00	3.21	4.79	0.40	0.79	
Glucose	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	2.54	2.16	2.92	0.19	0.38	Direct HDL Immunoseparation
	mg/dl	98.0	83.4	113	7.30	14.60	
LD (LDH)	U/l	727	618	836	54.50	109.00	P->L SFBC 37°C
	U/l	525	446	604	39.50	79.00	P->L SFBC 30°C
	U/l	369	313	425	28.00	56.00	P->L SFBC 25°C
Protein Total	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction end point
	g/dl	4.63	3.70	5.56	0.47	0.93	
Triglycerides	mmol/l	2.67	2.25	3.09	0.21	0.42	Lipase/GPO-PAP no correction
	mg/dl	236	199	273	18.50	37.00	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.79	7.64	9.94	0.58	1.15	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.8	26.1	35.5	2.35	4.70	Bromocresol Green
	g/dl	3.08	2.61	3.55	0.24	0.47	
	g/l	26.8	22.8	30.8	2.00	4.00	Turbidimetric Assays
	g/dl	2.68	2.28	3.08	0.20	0.40	
Alkaline Phosphatase	U/l	244	207	281	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	190	161	219	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	156	132	180	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	279	237	321	21.00	42.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	302	256	348	23.00	46.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	298	254	342	22.00	44.00	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	17.2	13.6	20.8	1.80	3.60	Colorimetric
	mmol/l	17.8	14.1	21.5	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	30.0	23.7	36.3	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	82.5	65.2	99.8	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	82.1	64.9	99.3	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.80	3.80	5.80	0.50	1.00	
	µmol/l	81.9	64.7	99.1	8.60	17.20	Diazonium ion
	mg/dl	4.79	3.78	5.80	0.51	1.01	
Calcium	mmol/l	3.16	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	7.13	6.21	8.05	0.46	0.92	Cholesterol Oxidase
	mg/dl	275	240	310	17.50	35.00	
Chloride	mmol/l	118	108	128	5.00	10.00	ISE indirect
CK Total	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	330	270	390	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	341	273	409	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.85	3.08	4.62	0.39	0.77	
	µmol/l	381	305	457	38.00	76.00	Enzymatic UV method
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	367	294	440	36.50	73.00	Roche Creatinine Plus
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	µmol/l	340	272	408	34.00	68.00	Jaffe rate blanked
	mg/dl	3.84	3.07	4.61	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	358	287	429	35.50	71.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.05	3.24	4.86	0.41	0.81	
	µmol/l	340	272	408	34.00	68.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.84	3.07	4.61	0.39	0.77	
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	154	131	177	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	121	103	139	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	95	81	109	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	3.79	3.22	4.36	0.29	0.57	Direct HDL Roche 3rd generation
	mg/dl	146	124	168	11.00	22.00	
Iron	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric with ppt.
	µg/dl	203	167	239	18.00	36.00	
	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	165	239	18.50	37.00	
Lactate	mmol/l	5.57	4.57	6.57	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.2	41.2	59.2	4.50	9.00	
LD (LDH)	U/l	678	576	780	51.00	102.00	P->L German methods 37°C
	U/l	490	416	564	37.00	74.00	P->L German methods 30°C
	U/l	344	292	396	26.00	52.00	P->L German methods 25°C
	U/l	375	319	431	28.00	56.00	L->P IFCC 37°C
	U/l	271	230	312	20.50	41.00	L->P IFCC 30°C
	U/l	190	162	218	14.00	28.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	62	50	74	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.98	1.75	2.21	0.12	0.23	Ion selective electrode
	mg/dl	1.37	1.22	1.52	0.08	0.15	
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.19	5.70	6.68	0.25	0.49	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	44.1	35.3	52.9	4.40	8.80	Biuret reaction kinetic
	g/dl	4.41	3.53	5.29	0.44	0.88	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	55.5	43.9	67.1	5.80	11.60	FE+UIBC(saturation with iron)
	µg/dl	310	245	375	32.50	65.00	
	µmol/l	55.3	43.7	66.9	5.80	11.60	Direct Colorimetric
	µg/dl	309	244	374	32.50	65.00	
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	2.72	2.28	3.16	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	241	202	280	19.50	39.00	
	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	244	205	283	19.50	39.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.32	8.11	10.5	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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RANDOX

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.6	26.8	36.4	2.40	4.80	Bromocresol Green
	g/dl	3.16	2.68	3.64	0.24	0.48	
Alkaline Phosphatase	U/l	452	385	519	33.50	67.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	139	112	166	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.01	6.10	7.92	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	235	307	18.00	36.00	
CK Total	U/l	532	436	628	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	331	265	397	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.74	2.99	4.49	0.38	0.75	
	µmol/l	344	275	413	34.50	69.00	Jaffe rate blanked
	mg/dl	3.89	3.11	4.67	0.39	0.78	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
LD (LDH)	U/l	363	308	418	27.50	55.00	L->P IFCC 37°C
Magnesium	mmol/l	1.64	1.44	1.84	0.10	0.20	Calmagite
	mg/dl	3.99	3.50	4.48	0.25	0.49	
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	

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Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	50.4	40.3	60.5	5.05	10.10	Biuret reaction end point
	g/dl	5.04	4.03	6.05	0.51	1.01	
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.9	26.3	35.5	2.30	4.60	Bromocresol Green
	g/dl	3.09	2.63	3.55	0.23	0.46	
	g/l	27.7	23.5	31.9	2.10	4.20	Bromocresol Purple
	g/dl	2.77	2.35	3.19	0.21	0.42	
Alkaline Phosphatase	U/l	219	186	252	16.50	33.00	Roche Integra AMP buffer 37°C
	U/l	171	145	197	13.00	26.00	Roche Integra AMP buffer 30°C
	U/l	140	119	161	10.50	21.00	Roche Integra AMP buffer 25°C
	U/l	313	266	360	23.50	47.00	Randox AMP 37°C
	U/l	244	207	281	18.50	37.00	Randox AMP 30°C
	U/l	200	170	230	15.00	30.00	Randox AMP 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
Amylase Pancreatic	U/l	307	261	353	23.00	46.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	290	247	333	21.50	43.00	Roche liquid stable pNPG7 37°C
	U/l	339	288	390	25.50	51.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	8.76	5.87	11.7	1.45	2.89	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	39.4	26.4	52.4	6.50	13.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	25.4	17.0	33.8	4.20	8.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	48.1	32.2	64.0	7.95	15.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	39.9	26.7	53.1	6.60	13.20	1-Naphthyl Phosphate substrate Kinetic 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	48.4	38.7	58.1	4.85	9.70	5th Generation Colorimetric
Bicarbonate	mmol/l	17.5	13.9	21.1	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	26.8	21.2	32.4	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Bilirubin Total	µmol/l	81.3	64.2	98.4	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	µmol/l	81.7	64.5	98.9	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.78	3.77	5.79	0.51	1.01	
	µmol/l	80.9	63.9	97.9	8.50	17.00	Diazonium ion
	mg/dl	4.73	3.74	5.72	0.50	0.99	
Calcium	mmol/l	3.14	2.82	3.46	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.04	6.12	7.96	0.46	0.92	Cholesterol Oxidase
	mg/dl	272	236	308	18.00	36.00	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholinesterase	U/l	5017	4013	6021	502.00	1004.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	508	417	599	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	318	261	375	28.50	57.00	CK-NAC substrate start (DGKC) 30°C
	U/l	216	177	255	19.50	39.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	478	392	564	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	299	245	353	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	369	295	443	37.00	74.00	Creatinine PAP method
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	369	295	443	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	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	
D-3-Hydroxybutyrate	mmol/l	1.08	0.92	1.25	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	129	109	149	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	102	86	118	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	80	67	93	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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
	U/l	160	136	184	12.00	24.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	126	107	145	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	84	114	7.50	15.00	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	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
alpha-HBDH	U/l	440	348	532	46.00	92.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	332	263	401	34.50	69.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	249	197	301	26.00	52.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	3.32	2.83	3.81	0.25	0.49	Direct HDL PEGME
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	3.64	3.09	4.19	0.28	0.55	Direct HDL Roche 3rd generation
	mg/dl	141	119	163	11.00	22.00	
Iron	µmol/l	35.1	28.8	41.4	3.15	6.30	Colorimetric without ppt.
	µg/dl	196	161	231	17.50	35.00	
Lactate	mmol/l	5.39	4.42	6.36	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.6	39.8	57.4	4.40	8.80	
LD (LDH)	U/l	700	595	805	52.50	105.00	P->L German methods 37°C
	U/l	505	430	580	37.50	75.00	P->L German methods 30°C
	U/l	355	302	408	26.50	53.00	P->L German methods 25°C
	U/l	352	299	405	26.50	53.00	L->P IFCC 37°C
	U/l	254	216	292	19.00	38.00	L->P IFCC 30°C
	U/l	178	152	204	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.04	1.80	2.28	0.12	0.24	Spectrophotometric
	mg/dl	1.42	1.25	1.59	0.09	0.17	
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	

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Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.9	41.8	64.0	5.55	11.10	FE+UIBC(saturation with iron)
	µg/dl	296	234	358	31.00	62.00	
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	0.53	0.47	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.97	7.81	10.1	0.58	1.16	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.99	7.81	10.2	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	7.90	10.2	0.59	1.17	
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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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.7	25.2	34.2	2.25	4.50	Bromocresol Green
	g/dl	2.97	2.52	3.42	0.23	0.45	
Alkaline Phosphatase	U/l	316	269	363	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	246	210	282	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	202	172	232	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
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	3.23	2.91	3.55	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Cholesterol	mmol/l	6.99	6.08	7.90	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
CK Total	U/l	455	373	537	41.00	82.00	CK-NAC (IFCC) 37°C
	U/l	285	233	337	26.00	52.00	CK-NAC (IFCC) 30°C
	U/l	193	159	227	17.00	34.00	CK-NAC (IFCC) 25°C

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
gamma-GT	U/l	137	116	158	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	108	91	125	8.50	17.00	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
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	Direct HDL Immunoseparation
	mg/dl	95.3	81.1	110	7.10	14.20	
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.12	1.80	2.44	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.57	5.58	7.56	0.50	0.99	
Potassium	mmol/l	6.12	5.63	6.61	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.9	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	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.89	2.42	3.36	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	256	214	298	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.57	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	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.5	23.4	31.6	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.75	2.34	3.16	0.21	0.41	
Alkaline Phosphatase	U/l	218	186	250	16.00	32.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	179	152	206	13.50	27.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	189	151	227	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	20.9	16.6	25.2	2.15	4.30	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	80.6	63.7	97.5	8.45	16.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	78.2	61.8	94.6	8.20	16.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.57	3.62	5.52	0.48	0.95	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	6.53	5.68	7.38	0.43	0.85	Ortho Vitros Microslide Systems
	mg/dl	252	219	285	16.50	33.00	
Chloride	mmol/l	117	107	127	5.00	10.00	Ortho Vitros Microslide Systems
Cholinesterase	U/l	4805	3844	5766	480.50	961.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	429	352	506	38.50	77.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	374	299	449	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.23	3.38	5.08	0.43	0.85	
gamma-GT	U/l	178	151	205	13.50	27.00	Ortho Vitros Microslide Systems 37°C

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	14.4	12.3	16.5	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	259	222	296	18.50	37.00	
HDL - Cholesterol	mmol/l	2.55	2.17	2.93	0.19	0.38	Vitros Magnetic HDL
	mg/dl	98.4	83.8	113	7.30	14.60	
	mmol/l	2.66	2.26	3.06	0.20	0.40	Vitros 5.1 FS microtip assay
	mg/dl	103	87.2	119	7.90	15.80	
	mmol/l	2.58	2.19	2.97	0.20	0.39	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	99.6	84.5	115	7.55	15.10	
Iron	µmol/l	37.3	30.6	44.0	3.35	6.70	Ortho Vitros Microslide Systems
	µg/dl	209	171	247	19.00	38.00	
Lactate	mmol/l	4.96	4.07	5.85	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	44.7	36.7	52.7	4.00	8.00	
LD (LDH)	U/l	1079	917	1241	81.00	162.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	683	548	818	67.50	135.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.37	2.08	2.66	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.65	1.44	1.86	0.11	0.21	
Magnesium	mmol/l	1.76	1.54	1.98	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.74	4.82	0.27	0.54	
Phosphate Inorganic	mmol/l	2.16	1.83	2.49	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.70	5.67	7.73	0.52	1.03	
Potassium	mmol/l	6.10	5.62	6.58	0.24	0.48	Ortho Vitros Microslide Systems
Protein Total	g/l	46.2	37.0	55.4	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.62	3.70	5.54	0.46	0.92	
PSA Total	ng/ml =	36.4	27.3	45.5	4.55	9.10	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	162	154	170	4.00	8.00	Ortho Vitros Microslide Systems

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
Triglycerides	mmol/l	3.15	2.64	3.66	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	279	234	324	22.50	45.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.72	7.59	9.85	0.57	1.13	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	17.5	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. 849UE Cat. No. HE1532 / HS2611

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

			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	439	373	505	33.00	66.00	Diethanolamine buffer DEA 37°C
	U/l	342	291	393	25.50	51.00	Diethanolamine buffer DEA 30°C
	U/l	281	238	324	21.50	43.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	141	112	170	14.50	29.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	165	132	198	16.50	33.00	Tris buffer without P5P 37°C
	U/l	112	89	135	11.50	23.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	51.7	41.3	62.1	5.20	10.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
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	
	µmol/l	83.4	65.9	101	8.75	17.50	Nitrobenzenediazonium salt
	mg/dl	4.88	3.86	5.90	0.51	1.02	
Calcium	mmol/l	3.24	2.91	3.57	0.17	0.33	Arsenazo III
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Cholesterol	mmol/l	6.87	5.97	7.77	0.45	0.90	Cholesterol Oxidase
	mg/dl	265	230	300	17.50	35.00	

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

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	119	109	129	5.00	10.00	ISE direct
CK Total	U/l	500	410	590	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	313	257	369	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	213	174	252	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	350	280	420	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.96	3.16	4.76	0.40	0.80	
	µmol/l	365	292	438	36.50	73.00	Enzymatic UV method
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	354	283	425	35.50	71.00	Creatinine PAP method
	mg/dl	4.00	3.20	4.80	0.40	0.80	
D-3-Hydroxybutyrate	mmol/l	1.12	0.96	1.28	0.08	0.16	Tris buffer 100mmol pH 8.5
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	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	3.40	2.89	3.91	0.26	0.51	Direct HDL PEGME
	mg/dl	131	112	150	9.50	19.00	
Iron	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Calmagite
	mg/dl	4.03	3.55	4.51	0.24	0.48	

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

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.10	5.61	6.59	0.25	0.49	ISE method - direct
Protein Total	g/l	46.5	37.2	55.8	4.65	9.30	Biuret reaction end point
	g/dl	4.65	3.72	5.58	0.47	0.93	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	251	212	290	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.00	10.4	0.61	1.21	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.59	8.33	10.9	0.63	1.26	
Urea	mmol/l	17.9	15.3	20.5	1.30	2.60	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
	g/l	27.7	23.6	31.8	2.05	4.10	Bromocresol Purple
	g/dl	2.77	2.36	3.18	0.21	0.41	
	g/l	27.5	23.4	31.6	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.75	2.34	3.16	0.21	0.41	
	g/l	26.7	22.7	30.7	2.00	4.00	Turbidimetric Assays
	g/dl	2.67	2.27	3.07	0.20	0.40	
Alkaline Phosphatase	U/l	218	186	250	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	448	381	515	33.50	67.00	Diethanolamine buffer DEA 37°C
	U/l	349	297	401	26.00	52.00	Diethanolamine buffer DEA 30°C
	U/l	286	243	329	21.50	43.00	Diethanolamine buffer DEA 25°C
	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	244	207	281	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	200	170	230	15.00	30.00	AMP optimised to IFCC 25°C
	U/l	294	250	338	22.00	44.00	AMP non-optimised 37°C
	U/l	229	195	263	17.00	34.00	AMP non-optimised 30°C
	U/l	188	160	216	14.00	28.00	AMP non-optimised 25°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	166	133	199	16.50	33.00	Tris buffer with P5P 37°C
	U/l	123	98	148	12.50	25.00	Tris buffer with P5P 30°C
	U/l	93	75	111	9.00	18.00	Tris buffer with P5P 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	132	105	159	13.50	27.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
	U/l	138	111	165	13.50	27.00	Phosphate buffer DGKC 37°C
	U/l	102	82	122	10.00	20.00	Phosphate buffer DGKC 30°C
	U/l	78	62	94	8.00	16.00	Phosphate buffer DGKC 25°C
	U/l	127	102	152	12.50	25.00	Tris buffer SCE 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer SCE 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	279	237	321	21.00	42.00	Immunoinhibition EPS substrate 37°C
	U/l	270	230	310	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	307	261	353	23.00	46.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	303	258	348	22.50	45.00	pNP Maltotrioside substrates 37°C
	U/l	305	259	351	23.00	46.00	Siemens - blocked pNPG7 37°C
	U/l	313	266	360	23.50	47.00	Biotrol - blocked pNPG7 37°C
	U/l	253	215	291	19.00	38.00	Randox - Ethylidene pNPG7 37°C
	U/l	339	288	390	25.50	51.00	Randox liquid stable pNPG7 37°C
	U/l	295	251	339	22.00	44.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	319	271	367	24.00	48.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	353	300	406	26.50	53.00	Siemens - maltopenta/hexaoside 37°C
	U/l	299	254	344	22.50	45.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	179	152	206	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	299	254	344	22.50	45.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	293	249	337	22.00	44.00	Roche liquid stable pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	363	309	417	27.00	54.00	Siemens 2-chloro-pNPG3 37°C
	U/l	266	226	306	20.00	40.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	312	265	359	23.50	47.00	Beckman Olympus - blocked pNPG7 37°C
	U/l	323	275	371	24.00	48.00	Beckman Synchron AMY7 37°C
	U/l	344	293	395	25.50	51.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	391	332	450	29.50	59.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.00	0.82	1.18	0.09	0.18	Immunoturbidimetric
	mg/dl	100	82.0	118	9.00	18.00	
Apolipoprotein B	g/l	0.55	0.45	0.65	0.05	0.10	Immunoturbidimetric
	mg/dl	54.8	44.9	64.7	4.95	9.90	
Acid Phosphatase (non-prostatic)	U/l	14.5	9.72	19.3	2.39	4.78	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	8.76	5.87	11.7	1.45	2.89	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	25.4	17.0	33.8	4.20	8.40	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	39.4	26.4	52.4	6.50	13.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	39.9	26.7	53.1	6.60	13.20	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	48.1	32.2	64.0	7.95	15.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	189	151	227	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
	U/l	202	162	242	20.00	40.00	Tris buffer with P5P 37°C
	U/l	137	110	164	13.50	27.00	Tris buffer with P5P 30°C
	U/l	96	77	115	9.50	19.00	Tris buffer with P5P 25°C
	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
	U/l	157	126	188	15.50	31.00	Phosphate buffer DGKC 37°C
	U/l	106	85	127	10.50	21.00	Phosphate buffer DGKC 30°C
	U/l	75	60	90	7.50	15.00	Phosphate buffer DGKC 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer SCE 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer SCE 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	46.9	37.5	56.3	4.70	9.40	4th Generation Colorimetric
	µmol/l	48.4	38.7	58.1	4.85	9.70	5th Generation Colorimetric
Bicarbonate	mmol/l	17.5	13.9	21.1	1.80	3.60	Colorimetric
	mmol/l	20.9	16.6	25.2	2.15	4.30	Ortho Vitros Microslide Systems
	mmol/l	18.7	14.8	22.6	1.95	3.90	Differential rate pH change
	mmol/l	18.3	14.5	22.1	1.90	3.80	Enzymatic
	mmol/l	17.9	14.2	21.6	1.85	3.70	Ion selective electrode
Bilirubin Direct	µmol/l	27.5	21.7	33.3	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	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	27.8	22.0	33.6	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	33.6	26.6	40.6	3.50	7.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.97	1.56	2.38	0.21	0.41	
	µmol/l	31.5	24.9	38.1	3.30	6.60	Modified Jendrassik
	mg/dl	1.84	1.46	2.22	0.19	0.38	
Bilirubin Total	µmol/l	80.6	63.7	97.5	8.45	16.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	78.2	61.8	94.6	8.20	16.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.57	3.62	5.52	0.48	0.95	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	100	79.0	121	10.50	21.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.85	4.62	7.08	0.62	1.23	
	µmol/l	86.3	68.1	105	9.10	18.20	Diazo with Sulphanilic Acid
	mg/dl	5.05	3.98	6.12	0.54	1.07	
	µmol/l	101	79.8	122	10.60	21.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.91	4.67	7.15	0.62	1.24	
	µmol/l	84.0	66.4	102	8.80	17.60	Nitrobenzenediazonium salt
	mg/dl	4.91	3.88	5.94	0.52	1.03	
	µmol/l	82.3	65.0	99.6	8.65	17.30	Diazonium ion
	mg/dl	4.81	3.80	5.82	0.51	1.01	
	µmol/l	94.2	74.4	114	9.90	19.80	Oxidation to Biliverdin/Vanadate
	mg/dl	5.51	4.35	6.67	0.58	1.16	
	µmol/l	102	80.6	123	10.70	21.40	Modified Jendrassik
	mg/dl	5.97	4.72	7.22	0.63	1.25	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Methylthymol blue
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	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	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.53	5.68	7.38	0.43	0.85	Ortho Vitros Microslide Systems
	mg/dl	252	219	285	16.50	33.00	
	mmol/l	7.07	6.15	7.99	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
Chloride	mmol/l	115	106	124	4.50	9.00	Colorimetric
	mmol/l	117	107	127	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	116	107	125	4.50	9.00	ISE indirect
	mmol/l	117	108	126	4.50	9.00	ISE direct
Cholinesterase	U/l	5113	4090	6136	511.50	1023.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	429	352	506	38.50	77.00	Ortho Vitros Microslide Systems 37°C
	U/l	518	425	611	46.50	93.00	CK-NAC serum start (DGKC) 37°C
	U/l	324	266	382	29.00	58.00	CK-NAC serum start (DGKC) 30°C
	U/l	220	181	259	19.50	39.00	CK-NAC serum start (DGKC) 25°C
	U/l	514	422	606	46.00	92.00	CK-NAC substrate start (DGKC) 37°C
	U/l	322	264	380	29.00	58.00	CK-NAC substrate start (DGKC) 30°C
	U/l	218	179	257	19.50	39.00	CK-NAC substrate start (DGKC) 25°C
	U/l	516	423	609	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	323	265	381	29.00	58.00	CK-NAC (IFCC) 30°C
	U/l	219	180	258	19.50	39.00	CK-NAC (IFCC) 25°C
	U/l	521	427	615	47.00	94.00	Monothioglycerol 37°C
	U/l	326	267	385	29.50	59.00	Monothioglycerol 30°C
	U/l	221	181	261	20.00	40.00	Monothioglycerol 25°C
	U/l	484	397	571	43.50	87.00	Dithioerythritol 37°C
	U/l	303	249	357	27.00	54.00	Dithioerythritol 30°C
	U/l	206	169	243	18.50	37.00	Dithioerythritol 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	471	386	556	42.50	85.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	295	242	348	26.50	53.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	28.4	22.8	34.0	2.80	5.60	Atomic absorption
	µg/dl	181	145	217	18.00	36.00	
	µmol/l	27.4	21.9	32.9	2.75	5.50	Colorimetric
	µg/dl	174	139	209	17.50	35.00	
Cortisol	nmol/l	1112	834	1390	139.00	278.00	Roche Cobas E411
	µg/dl	40.0	30.0	50.0	5.00	10.00	
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	278	416	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.92	3.14	4.70	0.39	0.78	
	µmol/l	368	294	442	37.00	74.00	Enzymatic UV method
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	364	291	437	36.50	73.00	Creatinine PAP method
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	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	361	289	433	36.00	72.00	Jaffe rate blanked
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	361	289	433	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	350	280	420	35.00	70.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.96	3.16	4.76	0.40	0.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	374	299	449	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	366	293	439	36.50	73.00	IDMS traceable
	mg/dl	4.14	3.31	4.97	0.42	0.83	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.33	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.56	2.85	4.27	0.36	0.71	Immunoturbidimetric
	ng/ml	2.78	2.23	3.33	0.28	0.55	
Folate	nmol/l	16.6	12.6	20.6	2.00	4.00	Roche Cobas E411
	ng/ml	7.32	5.56	9.08	0.88	1.76	
Free T4	pmol/l	57.2	42.9	71.5	7.15	14.30	Abbott Architect
	ng/dl	4.46	3.35	5.57	0.56	1.11	
	pg/ml	44.6	33.5	55.7	5.55	11.10	Abbott Architect
	pmol/l	71.7	53.8	89.6	8.95	17.90	Siemens Centaur XP/XPT/Classic
	ng/dl	5.59	4.20	6.98	0.70	1.39	
	pg/ml	55.9	42.0	69.8	6.95	13.90	Siemens Centaur XP/XPT/Classic
	pmol/l	87.1	65.3	109	10.90	21.80	Roche Elecsys
	ng/dl	6.79	5.09	8.49	0.85	1.70	
	pg/ml	67.9	50.9	84.9	8.50	17.00	Roche Elecsys
	pmol/l	88.9	66.7	111	11.10	22.20	Roche Modular E170
	ng/dl	6.93	5.20	8.66	0.87	1.73	
	pg/ml	69.3	52.0	86.6	8.65	17.30	Roche Modular E170
	pmol/l	82.7	62.0	103	10.35	20.70	Roche Cobas E411
	ng/dl	6.45	4.84	8.06	0.81	1.61	
	pg/ml	64.5	48.4	80.6	8.05	16.10	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	84.9	63.7	106	10.60	21.20	Roche Cobas 6000/8000
	ng/dl	6.62	4.97	8.27	0.83	1.65	
	pg/ml	66.2	49.7	82.7	8.25	16.50	Roche Cobas 6000/8000
	pmol/l	76.5	57.4	95.6	9.55	19.10	Biomerieux Vidas FT4N Kit
	ng/dl	5.97	4.48	7.46	0.75	1.49	
	pg/ml	59.7	44.8	74.6	7.45	14.90	Biomerieux Vidas FT4N Kit
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	140	119	161	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	110	94	126	8.00	16.00	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	178	151	205	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	123	105	141	9.00	18.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	97	83	111	7.00	14.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	76	65	87	5.50	11.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	151	128	174	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	119	101	137	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	93	79	107	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	160	136	184	12.00	24.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	126	107	145	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	84	114	7.50	15.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	31	24	38	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	24	18	30	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.4	12.3	16.5	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	259	222	296	18.50	37.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	16.5	14.0	19.0	1.25	2.50	Glucose dehydrogenase
	mg/dl	297	252	342	22.50	45.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Oxygen electrode
	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	
alpha-HBDH	U/l	440	348	532	46.00	92.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	332	263	401	34.50	69.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	249	197	301	26.00	52.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.75	2.34	3.16	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	106	90.3	122	7.85	15.70	
	mmol/l	2.55	2.17	2.93	0.19	0.38	Vitros Magnetic HDL
	mg/dl	98.4	83.8	113	7.30	14.60	
	mmol/l	3.45	2.93	3.97	0.26	0.52	Direct HDL PEGME
	mg/dl	133	113	153	10.00	20.00	
	mmol/l	2.61	2.22	3.00	0.20	0.39	Direct Clearance Method
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.58	2.19	2.97	0.20	0.39	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	99.6	84.5	115	7.55	15.10	
	mmol/l	3.66	3.11	4.21	0.28	0.55	Direct HDL Roche 3rd generation
	mg/dl	141	120	162	10.50	21.00	
	mmol/l	2.69	2.28	3.10	0.21	0.41	HDL - Ultra
	mg/dl	104	88.0	120	8.00	16.00	

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Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Immunoglobulin A	g/l	1.30	0.98	1.63	0.16	0.33	Immunoturbidimetric
	mg/dl	130	97.5	163	16.25	32.50	
Immunoglobulin G	g/l	6.05	4.96	7.14	0.55	1.09	Immunoturbidimetric
	mg/dl	605	496	714	54.50	109.00	
Immunoglobulin M	g/l	0.77	0.61	0.92	0.08	0.15	Immunoturbidimetric
	mg/dl	76.8	61.4	92.2	7.70	15.40	
Iron	µmol/l	35.4	29.0	41.8	3.20	6.40	Colorimetric with ppt.
	µg/dl	198	162	234	18.00	36.00	
	µmol/l	35.5	29.1	41.9	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	163	233	17.50	35.00	
	µmol/l	37.3	30.6	44.0	3.35	6.70	Ortho Vitros Microslide Systems
	µg/dl	209	171	247	19.00	38.00	
Lactate	mmol/l	5.27	4.32	6.22	0.48	0.95	Ion selective electrode
	mg/dl	47.5	38.9	56.1	4.30	8.60	
	mmol/l	5.37	4.40	6.34	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.4	39.6	57.2	4.40	8.80	
	mmol/l	4.96	4.07	5.85	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	44.7	36.7	52.7	4.00	8.00	
	mmol/l	5.72	4.69	6.75	0.52	1.03	Enzymatic Electrode
	mg/dl	51.5	42.3	60.7	4.60	9.20	
	mmol/l	5.24	4.29	6.19	0.48	0.95	UV LDH
	mg/dl	47.2	38.7	55.7	4.25	8.50	
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1079	917	1241	81.00	162.00	Ortho Vitros Microslide Systems 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	333	283	383	25.00	50.00	L->P 37°C
	U/l	240	204	276	18.00	36.00	L->P 30°C
	U/l	169	143	195	13.00	26.00	L->P 25°C
	U/l	800	680	920	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	578	491	665	43.50	87.00	P->L Scandinavian & Dutch 30°C
	U/l	406	345	467	30.50	61.00	P->L Scandinavian & Dutch 25°C
	U/l	703	598	808	52.50	105.00	P->L German methods 37°C
	U/l	508	432	584	38.00	76.00	P->L German methods 30°C
	U/l	356	303	409	26.50	53.00	P->L German methods 25°C
	U/l	726	617	835	54.50	109.00	P->L SFBC 37°C
	U/l	524	445	603	39.50	79.00	P->L SFBC 30°C
	U/l	368	313	423	27.50	55.00	P->L SFBC 25°C
	U/l	360	306	414	27.00	54.00	L->P IFCC 37°C
	U/l	260	221	299	19.50	39.00	L->P IFCC 30°C
	U/l	183	155	211	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	63	51	75	6.00	12.00	Other Colorimetric 37°C
	U/l	683	548	818	67.50	135.00	Ortho Vitros Microslide Systems 37°C
	U/l	55	44	66	5.50	11.00	Roche Colorimetric 37°C
	U/l	84	67	101	8.50	17.00	Randox Colorimetric 37°C
	U/l	461	370	552	45.50	91.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.37	2.08	2.66	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.65	1.44	1.86	0.11	0.21	
	mmol/l	2.03	1.79	2.27	0.12	0.24	Ion selective electrode
	mg/dl	1.41	1.24	1.58	0.09	0.17	
	mmol/l	1.99	1.75	2.23	0.12	0.24	Spectrophotometric
	mg/dl	1.38	1.22	1.54	0.08	0.16	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.96	1.72	2.20	0.12	0.24	Randox Colorimetric
	mg/dl	1.36	1.19	1.53	0.09	0.17	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Arsenazo III
	mg/dl	4.16	3.65	4.67	0.26	0.51	
	mmol/l	1.76	1.54	1.98	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.74	4.82	0.27	0.54	
	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	
	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	1.72	1.51	1.93	0.11	0.21	Methylthymol blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	
	mmol/l	1.69	1.48	1.90	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.11	3.60	4.62	0.26	0.51	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Enzymatic
	mg/dl	4.16	3.67	4.65	0.25	0.49	
NEFA	mmol/l	0.60	0.51	0.69	0.05	0.09	Colorimetric
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
	mOsm/kg	386	309	463	38.50	77.00	Freezing point depression
Paracetamol	mmol/l	0.62	0.50	0.74	0.06	0.12	Colorimetric
	mg/l	93.8	75.0	113	9.40	18.80	
Phosphate Inorganic	mmol/l	2.16	1.83	2.49	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.70	5.67	7.73	0.52	1.03	
	mmol/l	2.16	1.84	2.48	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.70	5.70	7.70	0.50	1.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Potassium	mmol/l	6.10	5.62	6.58	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	6.25	5.75	6.75	0.25	0.50	Enzymatic
	mmol/l	5.92	5.45	6.39	0.24	0.47	Flame photometry
	mmol/l	6.09	5.61	6.57	0.24	0.48	ISE method - direct
	mmol/l	6.19	5.69	6.69	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.2	37.0	55.4	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.62	3.70	5.54	0.46	0.92	
	g/l	45.8	36.6	55.0	4.60	9.20	Biuret reaction end point
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction kinetic
	g/dl	4.53	3.63	5.43	0.45	0.90	
PSA Total	ng/ml =	37.4	28.0	46.8	4.70	9.40	Roche Elecsys Modular E170
	ng/ml =	33.6	25.2	42.0	4.20	8.40	bioMerieux VIDAS TPSA
	ng/ml =	28.9	21.7	36.1	3.60	7.20	Siemens Centaur XP/XPT/Classic
	ng/ml =	31.8	23.8	39.8	4.00	8.00	Abbott Architect
	ng/ml =	39.4	29.6	49.2	4.90	9.80	Cobas E411
	ng/ml =	38.6	28.9	48.3	4.85	9.70	Roche Cobas 6000/8000
Salicylate	mmol/l	0.88	0.71	1.06	0.09	0.18	Enzymatic
	mg/dl	12.2	9.76	14.6	1.22	2.44	
Sodium	mmol/l	162	154	170	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	160	152	168	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - direct
	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	114	91.2	137	11.40	22.80	Immunoturbidimetric
	µg/ml	20.5	16.4	24.6	2.05	4.10	
Thyroid Stimulating Hormone	µU/ml =	1.03	0.82	1.24	0.10	0.21	Abbott Architect
	µU/ml =	1.25	1.00	1.50	0.13	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Roche Elecsys
	µU/ml =	1.34	1.07	1.61	0.14	0.27	Roche Modular E170
	µU/ml =	1.36	1.08	1.64	0.14	0.28	Roche Cobas E411
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Cobas 6000/8000
	µU/ml =	1.11	0.89	1.33	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	50.6	40.0	61.2	5.30	10.60	Removal of excess free iron
	µg/dl	283	224	342	29.50	59.00	
	µmol/l	53.9	42.6	65.2	5.65	11.30	FE+UIBC(saturation with iron)
	µg/dl	301	238	364	31.50	63.00	
	µmol/l	51.4	40.6	62.2	5.40	10.80	Direct Colorimetric
	µg/dl	287	227	347	30.00	60.00	
	µmol/l	56.6	44.7	68.5	5.95	11.90	Randox Direct
	µg/dl	316	250	382	33.00	66.00	
Tobramycin	µmol/l	13.7	11.0	16.4	1.35	2.70	Immunoturbidimetric
	µg/ml	6.41	5.15	7.67	0.63	1.26	
Total T3	nmol/l	3.40	2.55	4.25	0.43	0.85	Abbott Architect
	ng/ml	2.21	1.66	2.76	0.28	0.55	
	ng/dl	221	166	276	27.50	55.00	Abbott Architect

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	5.16	3.87	6.45	0.65	1.29	Siemens Centaur XP/XPT/Classic
	ng/ml	3.36	2.52	4.20	0.42	0.84	
	ng/dl	336	252	420	42.00	84.00	Siemens Centaur XP/XPT/Classic
	nmol/l	4.12	3.09	5.15	0.52	1.03	BioMerieux Vidas
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	BioMerieux Vidas
	nmol/l	4.31	3.23	5.39	0.54	1.08	Roche Modular E170
	ng/ml	2.81	2.10	3.52	0.36	0.71	
	ng/dl	281	210	352	35.50	71.00	Roche Modular E170
	nmol/l	4.51	3.38	5.64	0.57	1.13	Roche Cobas E411
	ng/ml	2.94	2.20	3.68	0.37	0.74	
	ng/dl	294	220	368	37.00	74.00	Roche Cobas E411
	nmol/l	4.56	3.42	5.70	0.57	1.14	Roche Cobas 6000/8000
	ng/ml	2.97	2.23	3.71	0.37	0.74	
	ng/dl	297	223	371	37.00	74.00	Roche Cobas 6000/8000
Total T4	nmol/l	239	179	299	30.00	60.00	Abbott Architect
	µg/dl	18.6	14.0	23.2	2.30	4.60	
	ng/ml	186	140	232	23.00	46.00	Abbott Architect
	nmol/l	229	172	286	28.50	57.00	Siemens Centaur XP/XPT/Classic
	µg/dl	17.9	13.4	22.4	2.25	4.50	
	ng/ml	179	134	224	22.50	45.00	Siemens Centaur XP/XPT/Classic
	nmol/l	218	164	272	27.00	54.00	BioMerieux Vidas
	µg/dl	17.0	12.8	21.2	2.10	4.20	
	ng/ml	170	128	212	21.00	42.00	BioMerieux Vidas
	nmol/l	209	157	261	26.00	52.00	Roche Modular E170
	µg/dl	16.3	12.2	20.4	2.05	4.10	
	ng/ml	163	122	204	20.50	41.00	Roche Modular E170

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	211	158	264	26.50	53.00	Roche Cobas E411
	µg/dl	16.5	12.3	20.7	2.10	4.20	
	ng/ml	165	123	207	21.00	42.00	Roche Cobas E411
	nmol/l	214	160	268	27.00	54.00	Roche Cobas 6000/8000
	µg/dl	16.7	12.5	20.9	2.10	4.20	
	ng/ml	167	125	209	21.00	42.00	Roche Cobas 6000/8000
Transferrin	g/l	1.68	1.34	2.02	0.17	0.34	Immunoturbidimetric
	mg/dl	168	134	202	17.00	34.00	
Triglycerides	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.72	2.29	3.15	0.22	0.43	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	241	203	279	19.00	38.00	
	mmol/l	2.85	2.40	3.30	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	3.15	2.64	3.66	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	279	234	324	22.50	45.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.72	7.59	9.85	0.57	1.13	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.12	7.95	10.3	0.59	1.17	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase 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	9.12	7.93	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	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 with ascorbate oxidase @ 546nm
	mg/dl	9.19	8.00	10.4	0.60	1.19	
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	Urease end point
	mg/dl	109	92.6	125	8.20	16.40	
	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	18.6	15.8	21.4	1.40	2.80	Urease hypochlorite
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease Berthelot
	mg/dl	107	90.8	123	8.10	16.20	
	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	
Vitamin B12	pmol/l	211	169	253	21.00	42.00	Roche Cobas E411
	pg/ml	286	229	343	28.50	57.00	
Zinc	µmol/l	33.0	26.4	39.6	3.30	6.60	Colorimetric with deproteinisation
	µg/dl	215	172	258	21.50	43.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		4.5	3.4	5.6	0.54	1.08	% of total Protein (Beckman Capillary)
alpha-2-globulin		4.9	3.7	6.1	0.59	1.18	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		61.5	55.4	67.6	3.05	6.10	% of total Protein (Beckman Capillary)
beta-globulin		15.3	11.6	19.0	1.85	3.70	% of total Protein (Beckman Capillary)
gamma-globulin		13.8	10.5	17.1	1.65	3.30	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	321	273	369	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	250	213	287	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	205	174	236	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
	U/l	142	114	170	14.00	28.00	Agappee - IFCC 37°C
	U/l	105	84	126	10.50	21.00	Agappee - IFCC 30°C
	U/l	80	64	96	8.00	16.00	Agappee - IFCC 25°C
AST (GOT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	58	88	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	95.1	75.2	115	9.95	19.90	Diazo with Sulphanilic Acid
	mg/dl	5.56	4.40	6.72	0.58	1.16	
	µmol/l	89.3	70.5	108	9.40	18.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.22	4.12	6.32	0.55	1.10	
Calcium	mmol/l	2.98	2.68	3.28	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
CK Total	U/l	491	402	580	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	330	264	396	33.00	66.00	Alkaline picrate with deproteinization
	mg/dl	3.73	2.98	4.48	0.38	0.75	
	µmol/l	336	268	404	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.80	3.03	4.57	0.39	0.77	
	µmol/l	351	280	422	35.50	71.00	Enzymatic UV method
	mg/dl	3.97	3.16	4.78	0.41	0.81	
gamma-GT	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	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.78	2.36	3.20	0.21	0.42	Direct HDL PPD
	mg/dl	107	91.1	123	7.95	15.90	
	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct Clearance Method
	mg/dl	109	93.0	125	8.00	16.00	
Iron	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	698	593	803	52.50	105.00	P->L German methods 37°C
	U/l	504	428	580	38.00	76.00	P->L German methods 30°C
	U/l	354	301	407	26.50	53.00	P->L German methods 25°C
	U/l	724	615	833	54.50	109.00	P->L SFBC 37°C
	U/l	523	444	602	39.50	79.00	P->L SFBC 30°C
	U/l	367	312	422	27.50	55.00	P->L SFBC 25°C
	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 25°C
Magnesium	mmol/l	1.53	1.34	1.72	0.10	0.19	Xylidyl Blue
	mg/dl	3.72	3.26	4.18	0.23	0.46	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Protein Total	g/l	47.7	38.1	57.3	4.80	9.60	Biuret reaction end point
	g/dl	4.77	3.81	5.73	0.48	0.96	
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	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.09	7.91	10.3	0.59	1.18	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.3	15.6	21.0	1.35	2.70	Urease hypochlorite
	mg/dl	110	93.8	126	8.10	16.20	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
Alkaline Phosphatase	U/l	375	318	432	28.50	57.00	Diethanolamine buffer DEA 37°C
	U/l	292	248	336	22.00	44.00	Diethanolamine buffer DEA 30°C
	U/l	240	203	277	18.50	37.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Bilirubin Total	µmol/l	85.1	67.2	103	8.95	17.90	Diazo with Dichloroaniline (DCA)
	mg/dl	4.98	3.93	6.03	0.53	1.05	
Cholesterol	mmol/l	7.22	6.28	8.16	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	242	316	18.50	37.00	
Creatinine	µmol/l	351	281	421	35.00	70.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	3.97	3.18	4.76	0.40	0.79	
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.19	1.86	2.52	0.17	0.33	Direct HDL Immunoseparation
	mg/dl	84.5	71.8	97.2	6.35	12.70	
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	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.0	22.9	31.1	2.05	4.10	Bromocresol Purple
	g/dl	2.70	2.29	3.11	0.21	0.41	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	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
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	95	75	115	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	268	227	309	20.50	41.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	291	247	335	22.00	44.00	Randox liquid stable pNPG7 37°C
	U/l	296	251	341	22.50	45.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	294	250	338	22.00	44.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	291	247	335	22.00	44.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	291	247	335	22.00	44.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	56	82	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. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	49.3	39.4	59.2	4.95	9.90	Enzymatic Colorimetric
Bicarbonate	mmol/l	18.0	14.2	21.8	1.90	3.80	Colorimetric
	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	29.2	23.1	35.3	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Bilirubin Total	µmol/l	81.6	64.5	98.7	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.77	3.77	5.77	0.50	1.00	
	µmol/l	82.2	64.9	99.5	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.81	3.80	5.82	0.51	1.01	
	µmol/l	81.9	64.7	99.1	8.60	17.20	Diazonium ion
	mg/dl	4.79	3.78	5.80	0.51	1.01	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.15	2.83	3.47	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
Chloride	mmol/l	114	104	124	5.00	10.00	ISE indirect
Cholinesterase	U/l	5021	4017	6025	502.00	1004.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	545	446	644	49.50	99.00	CK-NAC substrate start (DGKC) 37°C
	U/l	341	279	403	31.00	62.00	CK-NAC substrate start (DGKC) 30°C
	U/l	232	190	274	21.00	42.00	CK-NAC substrate start (DGKC) 25°C
	U/l	535	438	632	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	335	274	396	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	µmol/l	375	300	450	37.50	75.00	Enzymatic UV method
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	373	298	448	37.50	75.00	Roche Creatinine Plus
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	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	
	µmol/l	358	286	430	36.00	72.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.05	3.23	4.87	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.16	0.99	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	84.9	63.7	106	10.60	21.20	Roche Cobas 6000/8000
	ng/dl	6.62	4.97	8.27	0.83	1.65	
	pg/ml	66.2	49.7	82.7	8.25	16.50	Roche Cobas 6000/8000
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	152	130	174	11.00	22.00	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	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	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	3.69	3.13	4.25	0.28	0.56	Direct HDL PEGME
	mg/dl	142	121	163	10.50	21.00	
	mmol/l	3.72	3.16	4.28	0.28	0.56	Direct HDL Roche 3rd generation
	mg/dl	144	122	166	11.00	22.00	
Iron	µmol/l	35.1	28.8	41.4	3.15	6.30	Colorimetric with ppt.
	µg/dl	196	161	231	17.50	35.00	
	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric without ppt.
	µg/dl	199	163	235	18.00	36.00	
Lactate	mmol/l	5.38	4.41	6.35	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.5	39.7	57.3	4.40	8.80	
LD (LDH)	U/l	694	590	798	52.00	104.00	P->L German methods 37°C
	U/l	501	426	576	37.50	75.00	P->L German methods 30°C
	U/l	352	299	405	26.50	53.00	P->L German methods 25°C
	U/l	356	303	409	26.50	53.00	L->P IFCC 37°C
	U/l	257	219	295	19.00	38.00	L->P IFCC 30°C
	U/l	180	154	206	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	54	44	64	5.00	10.00	Roche Colorimetric 37°C
	U/l	53	43	63	5.00	10.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.00	1.76	2.24	0.12	0.24	Spectrophotometric
	mg/dl	1.39	1.22	1.56	0.09	0.17	
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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Osmolality	mOsm/kg	355	284	426	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.11	1.80	2.42	0.16	0.31	Phosphomolybdate enzymatic
	mg/dl	6.54	5.58	7.50	0.48	0.96	
	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction kinetic
	g/dl	4.56	3.65	5.47	0.46	0.91	
PSA Total	ng/ml =	38.6	28.9	48.3	4.85	9.70	Roche Cobas 6000/8000
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Cobas 6000/8000
TIBC	µmol/l	52.5	41.5	63.5	5.50	11.00	FE+UIBC(saturation with iron)
	µg/dl	293	232	354	30.50	61.00	
	µmol/l	42.2	33.3	51.1	4.45	8.90	Calculated from Transferrin
	µg/dl	236	186	286	25.00	50.00	
Total T3	nmol/l	4.56	3.42	5.70	0.57	1.14	Roche Cobas 6000/8000
	ng/ml	2.97	2.23	3.71	0.37	0.74	
	ng/dl	297	223	371	37.00	74.00	Roche Cobas 6000/8000
Total T4	nmol/l	214	160	268	27.00	54.00	Roche Cobas 6000/8000
	µg/dl	16.7	12.5	20.9	2.10	4.20	
	ng/ml	167	125	209	21.00	42.00	Roche Cobas 6000/8000

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
	mmol/l	2.73	2.29	3.17	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	242	203	281	19.50	39.00	
	mmol/l	2.69	2.26	3.12	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	238	200	276	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.99	7.83	10.2	0.58	1.16	
	mmol/l	0.54	0.47	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.99	7.83	10.2	0.58	1.16	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.23	0.45	
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
	U/l	240	204	276	18.00	36.00	AMP optimised to IFCC 37°C
	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 30°C
	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	297	252	342	22.50	45.00	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	18.3	14.5	22.1	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	29.8	23.6	36.0	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.38	2.10	0.18	0.36	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	79.9	63.1	96.7	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.67	3.69	5.65	0.49	0.98	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.9	63.1	96.7	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.67	3.69	5.65	0.49	0.98	
	µmol/l	80.2	63.3	97.1	8.45	16.90	Diazonium ion
	mg/dl	4.69	3.70	5.68	0.50	0.99	
Calcium	mmol/l	3.12	2.80	3.44	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	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	
	mmol/l	3.21	2.88	3.54	0.17	0.33	NM-BAPTA
	mg/dl	12.9	11.5	14.3	0.70	1.40	
Cholesterol	mmol/l	7.22	6.28	8.16	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	242	316	18.50	37.00	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
CK Total	U/l	523	429	617	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	327	269	385	29.00	58.00	CK-NAC (IFCC) 30°C
	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	338	270	406	34.00	68.00	Alkaline picrate with deproteinization
	mg/dl	3.82	3.05	4.59	0.39	0.77	
	µmol/l	340	272	408	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.84	3.07	4.61	0.39	0.77	
	µmol/l	363	290	436	36.50	73.00	Roche Creatinine Plus
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	331	265	397	33.00	66.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.74	2.99	4.49	0.38	0.75	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	142	121	163	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	112	95	129	8.50	17.00	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
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	3.42	2.91	3.93	0.26	0.51	Direct HDL Roche 3rd generation
	mg/dl	132	112	152	10.00	20.00	
LD (LDH)	U/l	374	317	431	28.50	57.00	L->P IFCC 37°C
	U/l	270	229	311	20.50	41.00	L->P IFCC 30°C
	U/l	190	161	219	14.50	29.00	L->P IFCC 25°C
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Phosphate Inorganic	mmol/l	2.26	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	6.10	5.61	6.59	0.25	0.49	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
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	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	240	202	278	19.00	38.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	
Urea	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease kinetic
	mg/dl	111	93.8	128	8.60	17.20	
	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease hypochlorite
	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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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Green
	g/dl	3.03	2.58	3.48	0.23	0.45	
	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	232	197	267	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	181	153	209	14.00	28.00	Roche Integra AMP buffer 30°C
	U/l	148	126	170	11.00	22.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	95	75	115	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	295	251	339	22.00	44.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.8	14.1	21.5	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	28.4	22.4	34.4	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.70	1.35	2.05	0.18	0.35	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	82.0	64.8	99.2	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.79	5.81	0.51	1.01	
	µmol/l	81.7	64.5	98.9	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.78	3.77	5.79	0.51	1.01	
	µmol/l	82.2	65.0	99.4	8.60	17.20	Diazonium ion
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	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	7.09	6.16	8.02	0.47	0.93	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholinesterase	U/l	5058	4046	6070	506.00	1012.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	538	441	635	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	337	276	398	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	229	187	271	21.00	42.00	CK-NAC (IFCC) 25°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	366	292	440	37.00	74.00	Enzymatic UV method
	mg/dl	4.14	3.30	4.98	0.42	0.84	
	µmol/l	375	300	450	37.50	75.00	Roche Creatinine Plus
	mg/dl	4.24	3.39	5.09	0.43	0.85	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	372	297	447	37.50	75.00	Jaffe rate blanked
	mg/dl	4.20	3.36	5.04	0.42	0.84	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.11	3.29	4.93	0.41	0.82	
gamma-GT	U/l	136	116	156	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	107	91	123	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	84	72	96	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	153	130	176	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	121	102	140	9.50	19.00	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	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	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	35.7	29.3	42.1	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.58	4.58	6.58	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.3	41.3	59.3	4.50	9.00	
LD (LDH)	U/l	687	584	790	51.50	103.00	P->L German methods 37°C
	U/l	496	422	570	37.00	74.00	P->L German methods 30°C
	U/l	348	296	400	26.00	52.00	P->L German methods 25°C
	U/l	354	301	407	26.50	53.00	L->P IFCC 37°C
	U/l	256	217	295	19.50	39.00	L->P IFCC 30°C
	U/l	179	153	205	13.00	26.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	55	44	66	5.50	11.00	Roche Colorimetric 37°C
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	
	mmol/l	1.62	1.43	1.81	0.10	0.19	Chlorphosphonazo III
	mg/dl	3.94	3.47	4.41	0.24	0.47	
Phosphate Inorganic	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
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	
	mmol/l	2.67	2.25	3.09	0.21	0.42	L/G Kinase EP. no correction
	mg/dl	236	199	273	18.50	37.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.90	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.14	7.96	10.3	0.59	1.18	
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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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
Alkaline Phosphatase	U/l	218	185	251	16.50	33.00	Roche Integra AMP buffer 37°C
	U/l	170	144	196	13.00	26.00	Roche Integra AMP buffer 30°C
	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	73	58	88	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	293	249	337	22.00	44.00	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	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	30.6	24.1	37.1	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.79	1.41	2.17	0.19	0.38	
Bilirubin Total	µmol/l	82.4	65.1	99.7	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.82	3.81	5.83	0.51	1.01	
	µmol/l	80.2	63.3	97.1	8.45	16.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazonium ion
	mg/dl	4.74	3.74	5.74	0.50	1.00	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	6.98	6.07	7.89	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
CK Total	U/l	481	394	568	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	301	247	355	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	372	298	446	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	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	130	111	149	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	80	68	92	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	150	128	172	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	118	101	135	8.50	17.00	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	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.66	3.11	4.21	0.28	0.55	Direct HDL Roche 3rd generation
	mg/dl	141	120	162	10.50	21.00	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	34.7	28.4	41.0	3.15	6.30	Colorimetric without ppt.
	µg/dl	194	159	229	17.50	35.00	
Lactate	mmol/l	5.36	4.40	6.32	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.3	39.6	57.0	4.35	8.70	
LD (LDH)	U/l	358	304	412	27.00	54.00	L->P IFCC 37°C
	U/l	258	219	297	19.50	39.00	L->P IFCC 30°C
	U/l	182	154	210	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	54	43	65	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.94	1.71	2.17	0.12	0.23	Spectrophotometric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
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	2.11	1.80	2.42	0.16	0.31	Phosphomolybdate UV
	mg/dl	6.54	5.58	7.50	0.48	0.96	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	51.7	40.8	62.6	5.45	10.90	FE+UIBC(saturation with iron)
	µg/dl	289	228	350	30.50	61.00	
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	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.94	7.78	10.1	0.58	1.16	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.94	7.78	10.1	0.58	1.16	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.00	7.83	10.2	0.59	1.17	
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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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
Alkaline Phosphatase	U/l	486	413	559	36.50	73.00	Diethanolamine buffer DEA 37°C
	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	307	261	353	23.00	46.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	339	288	390	25.50	51.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	168	134	202	17.00	34.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	51.8	41.4	62.2	5.20	10.40	5th Generation Colorimetric
Bicarbonate	mmol/l	20.4	16.2	24.6	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Bilirubin Total	µmol/l	94.5	74.7	114	9.90	19.80	Diazo with Sulphanilic Acid
	mg/dl	5.53	4.37	6.69	0.58	1.16	
	µmol/l	93.6	73.9	113	9.85	19.70	Oxidation to Biliverdin/Vanadate
	mg/dl	5.48	4.32	6.64	0.58	1.16	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	7.23	6.29	8.17	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	106	124	4.50	9.00	ISE direct
CK Total	U/l	503	412	594	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	543	445	641	49.00	98.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	311	249	373	31.00	62.00	Alkaline picrate no deproteinization
	mg/dl	3.51	2.81	4.21	0.35	0.70	
	µmol/l	365	292	438	36.50	73.00	Enzymatic UV method
	mg/dl	4.12	3.30	4.94	0.41	0.82	
gamma-GT	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
Iron	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	5.34	4.38	6.30	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.1	39.5	56.7	4.30	8.60	
LD (LDH)	U/l	743	632	854	55.50	111.00	P->L German methods 37°C
	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	84	67	101	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.89	1.66	2.12	0.12	0.23	Colorimetric
	mg/dl	1.31	1.15	1.47	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	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.35	5.84	6.86	0.26	0.51	Enzymatic
	mmol/l	6.05	5.57	6.53	0.24	0.48	ISE method - direct
Protein Total	g/l	46.6	37.2	56.0	4.70	9.40	Biuret reaction end point
	g/dl	4.66	3.72	5.60	0.47	0.94	
Sodium	mmol/l	163	155	171	4.00	8.00	Enzymatic
	mmol/l	160	152	168	4.00	8.00	ISE method - direct
TIBC	µmol/l	56.6	44.7	68.5	5.95	11.90	Direct Colorimetric
	µg/dl	316	250	382	33.00	66.00	
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	247	207	287	20.00	40.00	
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	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.32	8.11	10.5	0.61	1.21	
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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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.2	32.6	2.10	4.20	Bromocresol Green
	g/dl	2.84	2.42	3.26	0.21	0.42	
	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	415	353	477	31.00	62.00	Diethanolamine buffer DEA 37°C
	U/l	296	251	341	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	287	244	330	21.50	43.00	AMP non-optimised 37°C
ALT (GPT)	U/l	137	109	165	14.00	28.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	284	241	327	21.50	43.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	305	259	351	23.00	46.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	49.9	39.9	59.9	5.00	10.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	20.0	15.9	24.1	2.05	4.10	Enzymatic
Bilirubin Direct	µmol/l	33.8	26.7	40.9	3.55	7.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.98	1.56	2.40	0.21	0.42	
Bilirubin Total	µmol/l	94.0	74.3	114	9.85	19.70	Oxidation to Biliverdin/Vanadate
	mg/dl	5.50	4.35	6.65	0.58	1.15	
Calcium	mmol/l	3.19	2.87	3.51	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.12	6.19	8.05	0.47	0.93	Cholesterol Oxidase
	mg/dl	275	239	311	18.00	36.00	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholinesterase	U/l	5358	4286	6430	536.00	1072.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	499	410	588	44.50	89.00	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	
	µmol/l	365	292	438	36.50	73.00	Enzymatic UV method
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	346	277	415	34.50	69.00	Jaffe rate blanked
	mg/dl	3.91	3.13	4.69	0.39	0.78	
	µmol/l	358	286	430	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.05	3.23	4.87	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	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	
HDL - Cholesterol	mmol/l	2.33	1.98	2.68	0.18	0.35	Direct Clearance Method
	mg/dl	89.9	76.4	103	6.75	13.50	
Iron	µmol/l	36.3	29.7	42.9	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	166	240	18.50	37.00	
Lactate	mmol/l	5.38	4.41	6.35	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.5	39.7	57.3	4.40	8.80	
LD (LDH)	U/l	357	303	411	27.00	54.00	L->P 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	717	609	825	54.00	108.00	P->L German methods 37°C
	U/l	366	311	421	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	78	62	94	8.00	16.00	Other 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	1.67	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	2.17	1.85	2.49	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.73	5.74	7.72	0.50	0.99	
Potassium	mmol/l	6.21	5.71	6.71	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction end point
	g/dl	4.70	3.76	5.64	0.47	0.94	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
TIBC	µmol/l	55.9	44.1	67.7	5.90	11.80	Direct Colorimetric
	µg/dl	312	247	377	32.50	65.00	
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	259	218	300	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	8.11	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	

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RANDOX

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.6	23.5	31.7	2.05	4.10	Bromocresol Purple
	g/dl	2.76	2.35	3.17	0.21	0.41	
Alkaline Phosphatase	U/l	273	232	314	20.50	41.00	Siemens Dimension AMP buffer 37°C
	U/l	273	232	314	20.50	41.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	150	120	180	15.00	30.00	Tris buffer with P5P 37°C
	U/l	149	119	179	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	362	308	416	27.00	54.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	175	140	210	17.50	35.00	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	19.6	15.5	23.7	2.05	4.10	Enzymatic
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	87.2	68.9	106	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.03	6.17	0.54	1.07	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	6.63	5.77	7.49	0.43	0.86	Dimension-Siemens reagents
	mg/dl	256	223	289	16.50	33.00	
Chloride	mmol/l	118	108	128	5.00	10.00	ISE indirect
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	468	383	553	42.50	85.00	Dithioerythritol (DTE) IFCC correlated 37°C

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RANDOX

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	381	304	458	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.31	3.44	5.18	0.44	0.87	
	µmol/l	370	296	444	37.00	74.00	IDMS traceable
	mg/dl	4.18	3.34	5.02	0.42	0.84	
gamma-GT	U/l	156	132	180	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	180	153	207	13.50	27.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.28	2.79	3.77	0.25	0.49	Direct HDL PPD
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	3.49	2.96	4.02	0.27	0.53	Direct HDL PEGME
	mg/dl	135	114	156	10.50	21.00	
Iron	µmol/l	34.3	28.1	40.5	3.10	6.20	Colorimetric without ppt.
	µg/dl	192	157	227	17.50	35.00	
Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	UV LDH
	mg/dl	47.6	39.0	56.2	4.30	8.60	
LD (LDH)	U/l	352	300	404	26.00	52.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	349	297	401	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	247	198	296	24.50	49.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Methylthymol blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.14	1.82	2.46	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.63	5.64	7.62	0.50	0.99	
Potassium	mmol/l	6.19	5.69	6.69	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction end point
	g/dl	4.70	3.76	5.64	0.47	0.94	

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RANDOX

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
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	2.78	2.34	3.22	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	246	207	285	19.50	39.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.11	7.93	10.3	0.59	1.18	
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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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
	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	271	230	312	20.50	41.00	Siemens Dimension AMP buffer 37°C
	U/l	273	232	314	20.50	41.00	AMP optimised to IFCC 37°C
	U/l	278	236	320	21.00	42.00	Randox AMP 37°C
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer with P5P 37°C
	U/l	149	119	179	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	353	300	406	26.50	53.00	Siemens - maltopenta/hexaoside 37°C
	U/l	366	311	421	27.50	55.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	177	141	213	18.00	36.00	Tris buffer with P5P 37°C
	U/l	178	142	214	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	20.0	15.8	24.2	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	85.5	67.5	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	mmol/l	3.08	2.78	3.38	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	6.63	5.77	7.49	0.43	0.86	Dimension-Siemens reagents
	mg/dl	256	223	289	16.50	33.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
CK Total	U/l	472	387	557	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	490	402	578	44.00	88.00	Dithioerythritol 37°C
Creatinine	µmol/l	372	297	447	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.20	3.36	5.04	0.42	0.84	
	µmol/l	365	292	438	36.50	73.00	Enzymatic UV method
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	364	291	437	36.50	73.00	Creatinine PAP method
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	368	295	441	36.50	73.00	Jaffe rate blanked
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	380	304	456	38.00	76.00	IDMS traceable
	mg/dl	4.29	3.44	5.14	0.43	0.85	
gamma-GT	U/l	156	133	179	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	180	153	207	13.50	27.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	3.48	2.96	4.00	0.26	0.52	Direct HDL PPD
	mg/dl	134	114	154	10.00	20.00	
	mmol/l	3.41	2.90	3.92	0.26	0.51	Direct HDL PEGME
	mg/dl	132	112	152	10.00	20.00	
	mmol/l	3.21	2.73	3.69	0.24	0.48	Direct Clearance Method
	mg/dl	124	105	143	9.50	19.00	
Iron	µmol/l	34.1	28.0	40.2	3.05	6.10	Colorimetric with ppt.
	µg/dl	191	157	225	17.00	34.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	33.7	27.7	39.7	3.00	6.00	Colorimetric without ppt.
	µg/dl	188	155	221	16.50	33.00	
LD (LDH)	U/l	352	300	404	26.00	52.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	248	199	297	24.50	49.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Methylthymol blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.73	5.70	7.76	0.52	1.03	
	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.76	5.74	7.78	0.51	1.02	
Potassium	mmol/l	6.16	5.67	6.65	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction end point
	g/dl	4.73	3.78	5.68	0.48	0.95	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.5	37.5	57.5	5.00	10.00	Removal of excess free iron
	µg/dl	266	210	322	28.00	56.00	
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	2.81	2.36	3.26	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	251	212	290	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.24	8.03	10.5	0.61	1.21	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.12	7.93	10.3	0.60	1.19	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease end point
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	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

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.5	23.4	31.6	2.05	4.10	Bromocresol Purple
	g/dl	2.75	2.34	3.16	0.21	0.41	
Alkaline Phosphatase	U/l	271	230	312	20.50	41.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	142	113	171	14.50	29.00	Tris buffer with P5P 37°C
Amylase Total	U/l	355	302	408	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	178	142	214	18.00	36.00	Tris buffer with P5P 37°C
Bicarbonate	mmol/l	20.0	15.9	24.1	2.05	4.10	Enzymatic
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.10	0.866	1.33	0.12	0.23	
Bilirubin Total	µmol/l	84.3	66.6	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.90	5.96	0.52	1.03	
Calcium	mmol/l	3.03	2.72	3.34	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	6.52	5.67	7.37	0.43	0.85	Dimension-Siemens reagents
	mg/dl	252	219	285	16.50	33.00	
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
CK Total	U/l	475	390	560	42.50	85.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	379	303	455	38.00	76.00	IDMS traceable
	mg/dl	4.28	3.42	5.14	0.43	0.86	
gamma-GT	U/l	177	150	204	13.50	27.00	Siemens Dimension (non IFCC) 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	

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RANDOX

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	3.27	2.78	3.76	0.25	0.49	Direct HDL PEGME
	mg/dl	126	107	145	9.50	19.00	
Lactate	mmol/l	5.58	4.57	6.59	0.51	1.01	UV LDH
	mg/dl	50.3	41.2	59.4	4.55	9.10	
LD (LDH)	U/l	348	296	400	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	305	244	366	30.50	61.00	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	2.10	1.78	2.42	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.51	5.52	7.50	0.50	0.99	
Potassium	mmol/l	6.03	5.54	6.52	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction end point
	g/dl	4.73	3.78	5.68	0.48	0.95	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	264	221	307	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	8.95	7.78	10.1	0.59	1.17	
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. 849UE Cat. No. HE1532 / HS2611

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

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.23	0.45	
Alkaline Phosphatase	U/l	438	372	504	33.00	66.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	134	108	160	13.00	26.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	144	116	172	14.00	28.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	89.5	70.7	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.24	4.14	6.34	0.55	1.10	
	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	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
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	15.1	12.9	17.3	1.10	2.20	Hexokinase
	mg/dl	272	232	312	20.00	40.00	
	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	49.5	39.6	59.4	4.95	9.90	Biuret reaction end point
	g/dl	4.95	3.96	5.94	0.50	0.99	

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RANDOX

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 849UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Triglycerides	mmol/l	2.73	2.29	3.17	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	203	281	19.50	39.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.19	8.00	10.4	0.60	1.19	
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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