RANDOX 0086 CE

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

CAT. NO. HE1532 **GTIN:** 05055273203608 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 913UE **EXPIRY:** 2021-01-28

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 (25µl - 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. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Green
	g/dl	2.78	2.36	3.20	0.21	0.42	
	g/l	26.4	22.5	30.3	1.95	3.90	Bromocresol Purple
	g/dl	2.64	2.25	3.03	0.20	0.39	
Alkaline Phosphatase	U/l	259	220	298	19.50	39.00	AMP optimised to IFCC 37°C
	U/l	254	216	292	19.00	38.00	AMP non-optimised 37°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	264	225	303	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	319	271	367	24.00	48.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	344	292	396	26.00	52.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.7	15.6	23.8	2.05	4.10	Enzymatic
Bile Acids	µmol/l	45.3	36.2	54.4	4.55	9.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.1	22.2	34.0	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Bilirubin Total	µmol/l	84.3	66.6	102	8.85	17.70	Diazo with Dichloroaniline (DCA)
	mg/dl	4.93	3.90	5.96	0.52	1.03	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	87.6	69.2	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.12	4.05	6.19	0.54	1.07	
	µmol/l	84.5	66.8	102	8.85	17.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.94	3.91	5.97	0.52	1.03	
	µmol/l	83.6	66.0	101	8.80	17.60	Diazonium ion
	mg/dl	4.89	3.86	5.92	0.52	1.03	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.95	6.04	7.86	0.46	0.91	Cholesterol Oxidase
	mg/dl	268	233	303	17.50	35.00	
Cholinesterase	U/l	5749	4599	6899	575.00	1150.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	21.9	17.5	26.3	2.20	4.40	Colorimetric
	µg/dl	139	111	167	14.00	28.00	
Creatinine	µmol/l	390	312	468	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	393	314	472	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	383	306	460	38.50	77.00	Creatinine PAP method
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	394	315	473	39.50	79.00	Jaffe rate blanked
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	390	312	468	39.00	78.00	IDMS traceable
	mg/dl	4.41	3.53	5.29	0.44	0.88	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	148	126	170	11.00	22.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°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	16.4	14.0	18.8	1.20	2.40	Glucose oxidase
	mg/dl	296	252	340	22.00	44.00	
HDL - Cholesterol	mmol/l	2.77	2.35	3.19	0.21	0.42	Direct HDL PPD
	mg/dl	107	90.7	123	8.15	16.30	
	mmol/l	2.62	2.22	3.02	0.20	0.40	Direct Clearance Method
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.70	2.29	3.11	0.21	0.41	HDL - Ultra
	mg/dl	104	88.4	120	7.80	15.60	
Iron	µmol/l	37.5	30.7	44.3	3.40	6.80	Colorimetric with ppt.
	µg/dl	210	172	248	19.00	38.00	
	µmol/l	37.4	30.7	44.1	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	172	246	18.50	37.00	
Lactate	mmol/l	5.61	4.60	6.62	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	330	280	380	25.00	50.00	L->P 37°C
	U/l	328	279	377	24.50	49.00	L->P IFCC 37°C
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.16	1.90	2.42	0.13	0.26	Spectrophotometric
	mg/dl	1.50	1.32	1.68	0.09	0.18	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Arsenazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Enzymatic
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Osmolality	mOsm/kg	352	282	422	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.33	1.98	2.68	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.22	6.14	8.30	0.54	1.08	
	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	6.28	5.77	6.79	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.93	0.75	1.12	0.09	0.19	Abbott Architect
TIBC	µmol/l	58.2	46.0	70.4	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	325	257	393	34.00	68.00	
Triglycerides	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
	mmol/l	2.99	2.52	3.46	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	265	223	307	21.00	42.00	
	mmol/l	3.05	2.56	3.54	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	270	227	313	21.50	43.00	
	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	265	222	308	21.50	43.00	
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease kinetic
	mg/dl	124	105	143	9.50	19.00	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	BUN
	mg/dl	57.8	49.1	66.5	4.35	8.70	
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	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.24	8.03	10.5	0.61	1.21	

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ABX Pentra 400®

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
Alkaline Phosphatase	U/l	263	224	302	19.50	39.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Bilirubin Total	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.22	4.12	6.32	0.55	1.10	
Calcium	mmol/l	3.35	3.02	3.68	0.17	0.33	Arsenazo III
	mg/dl	13.4	12.1	14.7	0.65	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.13	6.21	8.05	0.46	0.92	Cholesterol Oxidase
	mg/dl	275	240	310	17.50	35.00	
CK Total	U/l	470	386	554	42.00	84.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	376	301	451	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.25	3.40	5.10	0.43	0.85	
Glucose	mmol/l	16.6	14.1	19.1	1.25	2.50	Hexokinase
	mg/dl	299	254	344	22.50	45.00	
	mmol/l	16.6	14.1	19.1	1.25	2.50	Glucose oxidase
	mg/dl	299	254	344	22.50	45.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
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	2.55	2.17	2.93	0.19	0.38	Phosphomolybdate UV
	mg/dl	7.91	6.73	9.09	0.59	1.18	
Potassium	mmol/l	5.88	5.41	6.35	0.24	0.47	ISE method - direct
Protein Total	g/l	44.6	35.7	53.5	4.45	8.90	Biuret reaction end point
	g/dl	4.46	3.57	5.35	0.45	0.89	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	3.07	2.58	3.56	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	272	228	316	22.00	44.00	
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	
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	

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

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	283	240	326	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	220	187	253	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	181	153	209	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	136	108	164	14.00	28.00	Tris buffer without P5P 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
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	6.97	6.06	7.88	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
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	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
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	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	343	271	415	36.00	72.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	26.3	22.3	30.3	2.00	4.00	Bromocresol Green
	g/dl	2.63	2.23	3.03	0.20	0.40	
	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Purple
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	444	377	511	33.50	67.00	Diethanolamine buffer DEA 37°C
	U/l	322	273	371	24.50	49.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
Amylase Total	U/l	284	241	327	21.50	43.00	pNP Maltotrioside substrates 37°C
	U/l	278	236	320	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	280	238	322	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	290	246	334	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	21.2	16.8	25.6	2.20	4.40	Enzymatic
Bilirubin Direct	µmol/l	22.6	17.8	27.4	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.32	1.04	1.60	0.14	0.28	
Bilirubin Total	µmol/l	86.9	68.6	105	9.15	18.30	DPD (Beckman AU)
	mg/dl	5.08	4.01	6.15	0.54	1.07	
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	
	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.99	6.08	7.90	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
Cholinesterase	U/l	4477	3581	5373	448.00	896.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	483	396	570	43.50	87.00	CK-NAC serum start (DGKC) 37°C
	U/l	500	410	590	45.00	90.00	CK-NAC substrate start (DGKC) 37°C
	U/l	487	400	574	43.50	87.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	26.2	21.0	31.4	2.60	5.20	Colorimetric
	µg/dl	167	134	200	16.50	33.00	
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	383	307	459	38.00	76.00	Enzymatic UV method (340nm)
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	384	307	461	38.50	77.00	Creatinine PAP method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	371	297	445	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	374	299	449	37.50	75.00	IDMS traceable
	mg/dl	4.23	3.38	5.08	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.11	0.94	1.28	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	158	134	182	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	114	156	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	157	134	180	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	30	24	36	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	16.4	13.9	18.9	1.25	2.50	Hexokinase
	mg/dl	296	250	342	23.00	46.00	
	mmol/l	16.4	13.9	18.9	1.25	2.50	Glucose oxidase
	mg/dl	296	250	342	23.00	46.00	
HDL - Cholesterol	mmol/l	2.84	2.41	3.27	0.22	0.43	Direct HDL Immunoseparation
	mg/dl	110	93.0	127	8.50	17.00	
	mmol/l	2.83	2.40	3.26	0.22	0.43	Direct Clearance Method
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	2.82	2.40	3.24	0.21	0.42	HDL - Ultra
	mg/dl	109	92.6	125	8.20	16.40	
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric with ppt.
	µg/dl	217	178	256	19.50	39.00	
	µmol/l	38.4	31.5	45.3	3.45	6.90	Colorimetric without ppt.
	µg/dl	215	176	254	19.50	39.00	
Lactate	mmol/l	5.42	4.45	6.39	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.8	40.1	57.5	4.35	8.70	
LD (LDH)	U/l	326	277	375	24.50	49.00	L->P 37°C
	U/l	729	620	838	54.50	109.00	P->L Scandinavian & Dutch 37°C
	U/l	680	578	782	51.00	102.00	P->L German methods 37°C
	U/l	329	279	379	25.00	50.00	L->P IFCC 37°C
Lipase	U/l	69	55	83	7.00	14.00	Other Colorimetric 37°C
	U/l	58	47	69	5.50	11.00	Roche Colorimetric 37°C
	U/l	79	64	94	7.50	15.00	Randox Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Xylidyl Blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
Phosphate Inorganic	mmol/l	2.40	2.04	2.76	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.44	6.32	8.56	0.56	1.12	
	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Potassium	mmol/l	6.21	5.72	6.70	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.7	35.0	52.4	4.35	8.70	Biuret reaction end point
	g/dl	4.37	3.50	5.24	0.44	0.87	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.5	46.2	70.8	6.15	12.30	FE+UIBC(saturation with iron)
	µg/dl	327	258	396	34.50	69.00	
Triglycerides	mmol/l	3.06	2.57	3.55	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	271	227	315	22.00	44.00	
	mmol/l	3.12	2.62	3.62	0.25	0.50	L/G Kinase EP. no correction
	mg/dl	276	232	320	22.00	44.00	
UIBC	µmol/l	20.0	16.4	23.6	1.80	3.60	Direct Colorimetric
	µg/dl	112	91.7	132	10.15	20.30	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease end point
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	Urease kinetic
	mg/dl	122	104	140	9.00	18.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	BUN
	mg/dl	57.0	48.5	65.5	4.25	8.50	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.76	8.48	11.0	0.64	1.28	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	8.33	10.8	0.63	1.25	
Zinc	µmol/l	35.4	28.3	42.5	3.55	7.10	Colorimetric with deproteinisation
	µg/dl	231	185	277	23.00	46.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	27.8	23.7	31.9	2.05	4.10	Bromocresol Purple
	g/dl	2.78	2.37	3.19	0.21	0.41	
Alkaline Phosphatase	U/l	298	253	343	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	297	253	341	22.00	44.00	AMP non-optimised 37°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	122	97	147	12.50	25.00	Tris buffer SCE 37°C
Amylase Total	U/l	299	254	344	22.50	45.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	302	257	347	22.50	45.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	139	112	166	13.50	27.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	20.5	16.2	24.8	2.15	4.30	Differential rate pH change
	mmol/l	20.1	15.9	24.3	2.10	4.20	Ion selective electrode
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	84.2	66.5	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.89	5.97	0.52	1.04	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Ion selective electrode
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.16	2.85	3.47	0.16	0.31	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.09	6.17	8.01	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
CK Total	U/l	477	391	563	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	488	400	576	44.00	88.00	Monothioglycerol 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	384	307	461	38.50	77.00	Jaffe rate blanked
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	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	128	109	147	9.50	19.00	Gamma glutamyl-4-nitroanilide 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	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	2.96	2.51	3.41	0.23	0.45	Direct HDL PPD
	mg/dl	114	96.9	131	8.55	17.10	
	mmol/l	2.88	2.45	3.31	0.22	0.43	HDL - Ultra
	mg/dl	111	94.6	127	8.20	16.40	
Iron	µmol/l	38.5	31.6	45.4	3.45	6.90	Colorimetric without ppt.
	µg/dl	215	177	253	19.00	38.00	
Lactate	mmol/l	5.09	4.17	6.01	0.46	0.92	Colorimetric Lactate Oxidase
	mg/dl	45.9	37.6	54.2	4.15	8.30	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	280	238	322	21.00	42.00	L->P 37°C
	U/l	870	740	1000	65.00	130.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	64	51	77	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.12	1.86	2.38	0.13	0.26	Spectrophotometric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Calmagite
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Osmolality	mOsm/kg	344	275	413	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.41	2.05	2.77	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.47	6.36	8.58	0.56	1.11	
	mmol/l	2.45	2.08	2.82	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.60	6.45	8.75	0.58	1.15	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction CX4/5/7
	g/dl	4.43	3.54	5.32	0.45	0.89	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
	g/l	42.3	33.8	50.8	4.25	8.50	Biuret reaction kinetic
	g/dl	4.23	3.38	5.08	0.43	0.85	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.08	2.58	3.58	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	273	228	318	22.50	45.00	
	mmol/l	3.15	2.64	3.66	0.26	0.51	L/G Kinase EP. no correction
	mg/dl	279	234	324	22.50	45.00	
Urea	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease end point
	mg/dl	125	106	144	9.50	19.00	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	20.9	17.8	24.0	1.55	3.10	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	20.9	17.8	24.0	1.55	3.10	BUN
	mg/dl	58.7	49.9	67.5	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.87	7.71	10.0	0.58	1.16	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	289	246	332	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	225	192	258	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	185	157	213	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	137	109	165	14.00	28.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	161	128	194	16.50	33.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
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	3.36	3.03	3.69	0.17	0.33	Arsenazo III
	mg/dl	13.5	12.1	14.9	0.70	1.40	
Cholesterol	mmol/l	7.15	6.22	8.08	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Creatinine	µmol/l	345	276	414	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.90	3.12	4.68	0.39	0.78	
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.45	2.09	2.81	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.60	6.48	8.72	0.56	1.12	
Protein Total	g/l	43.4	34.7	52.1	4.35	8.70	Biuret reaction end point
	g/dl	4.34	3.47	5.21	0.44	0.87	
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease kinetic
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	BUN
	mg/dl	50.8	43.2	58.4	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	
Alkaline Phosphatase	U/l	262	223	301	19.50	39.00	AMP optimised to IFCC 37°C
	U/l	204	174	234	15.00	30.00	AMP optimised to IFCC 30°C
	U/l	167	142	192	12.50	25.00	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	162	130	194	16.00	32.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.2	66.5	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.89	5.97	0.52	1.04	
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Cholesterol	mmol/l	7.04	6.12	7.96	0.46	0.92	Cholesterol Oxidase
	mg/dl	272	236	308	18.00	36.00	
CK Total	U/l	510	418	602	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	319	262	376	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	346	277	415	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.91	3.13	4.69	0.39	0.78	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	156	133	179	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	123	105	141	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	96	82	110	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.3	13.9	18.7	1.20	2.40	Glucose oxidase
	mg/dl	294	250	338	22.00	44.00	
LD (LDH)	U/l	639	544	734	47.50	95.00	P->L German methods 37°C
	U/l	461	393	529	34.00	68.00	P->L German methods 30°C
	U/l	324	276	372	24.00	48.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.45	2.08	2.82	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.60	6.45	8.75	0.58	1.15	
Protein Total	g/l	43.3	34.6	52.0	4.35	8.70	Biuret reaction end point
	g/dl	4.33	3.46	5.20	0.44	0.87	
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease kinetic
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.55	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	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.2	24.0	32.4	2.10	4.20	Bromocresol Green
	g/dl	2.82	2.40	3.24	0.21	0.42	
Alkaline Phosphatase	U/l	428	363	493	32.50	65.00	Diethanolamine buffer DEA 37°C
	U/l	333	283	383	25.00	50.00	Diethanolamine buffer DEA 30°C
	U/l	273	232	314	20.50	41.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.28	2.95	3.61	0.17	0.33	Arsenazo III
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Cholesterol	mmol/l	6.97	6.06	7.88	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
CK Total	U/l	409	335	483	37.00	74.00	CK-NAC (IFCC) 37°C
	U/l	256	210	302	23.00	46.00	CK-NAC (IFCC) 30°C
	U/l	174	142	206	16.00	32.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	344	275	413	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.89	3.11	4.67	0.39	0.78	
	µmol/l	397	318	476	39.50	79.00	Creatinine PAP method
	mg/dl	4.49	3.59	5.39	0.45	0.90	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	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	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
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	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
Triglycerides	mmol/l	2.98	2.51	3.45	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	264	222	306	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.92	7.76	10.1	0.58	1.16	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	0.22	0.44	
	g/l	25.2	21.5	28.9	1.85	3.70	Turbidimetric Assays
	g/dl	2.52	2.15	2.89	0.19	0.37	
Alkaline Phosphatase	U/l	200	170	230	15.00	30.00	Roche Integra AMP buffer 37°C
	U/l	156	132	180	12.00	24.00	Roche Integra AMP buffer 30°C
	U/l	128	109	147	9.50	19.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	262	223	301	19.50	39.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	259	220	298	19.50	39.00	Saccharogenic 37°C
	U/l	282	239	325	21.50	43.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	281	239	323	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	21.4	16.9	25.9	2.25	4.50	Colorimetric
	mmol/l	19.9	15.8	24.0	2.05	4.10	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	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	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	
Bilirubin Total	µmol/l	75.8	59.8	91.8	8.00	16.00	Diazo with Dichloroaniline (DCA)
	mg/dl	4.43	3.50	5.36	0.47	0.93	
	µmol/l	79.5	62.8	96.2	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.65	3.67	5.63	0.49	0.98	
	µmol/l	78.9	62.4	95.4	8.25	16.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.62	3.65	5.59	0.49	0.97	
	µmol/l	77.9	61.5	94.3	8.20	16.40	Diazonium ion
	mg/dl	4.56	3.60	5.52	0.48	0.96	
Calcium	mmol/l	3.27	2.95	3.59	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.26	2.93	3.59	0.17	0.33	NM-BAPTA
	mg/dl	13.1	11.7	14.5	0.70	1.40	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.04	6.13	7.95	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
CK Total	U/l	473	388	558	42.50	85.00	CK-NAC substrate start (DGKC) 37°C
	U/l	296	243	349	26.50	53.00	CK-NAC substrate start (DGKC) 30°C
	U/l	201	165	237	18.00	36.00	CK-NAC substrate start (DGKC) 25°C
	U/l	480	394	566	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	300	247	353	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	398	318	478	40.00	80.00	Enzymatic UV method (340nm)
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	386	309	463	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	359	287	431	36.00	72.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.06	3.24	4.88	0.41	0.82	
gamma-GT	U/l	142	120	164	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	112	95	129	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	88	74	102	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	126	107	145	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	99	84	114	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Glucose dehydrogenase
	mg/dl	285	243	327	21.00	42.00	
	mmol/l	16.4	13.9	18.9	1.25	2.50	Hexokinase
	mg/dl	296	250	342	23.00	46.00	
HDL - Cholesterol	mmol/l	4.07	3.46	4.68	0.31	0.61	Direct HDL PEGME
	mg/dl	157	134	180	11.50	23.00	
	mmol/l	4.12	3.51	4.73	0.31	0.61	Direct HDL Roche 3rd generation
	mg/dl	159	135	183	12.00	24.00	
Iron	µmol/l	38.8	31.8	45.8	3.50	7.00	Colorimetric with ppt.
	µg/dl	217	178	256	19.50	39.00	
	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.80	4.75	6.85	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.3	42.8	61.8	4.75	9.50	
LD (LDH)	U/l	615	523	707	46.00	92.00	P->L German methods 37°C
	U/l	444	378	510	33.00	66.00	P->L German methods 30°C
	U/l	312	265	359	23.50	47.00	P->L German methods 25°C
	U/l	341	290	392	25.50	51.00	L->P IFCC 37°C
	U/l	246	209	283	18.50	37.00	L->P IFCC 30°C
	U/l	173	147	199	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	65	52	78	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.21	1.94	2.48	0.14	0.27	Ion selective electrode
	mg/dl	1.53	1.35	1.71	0.09	0.18	
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Methylthymol blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.50	6.39	8.61	0.56	1.11	
	mmol/l	2.45	2.08	2.82	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.60	6.45	8.75	0.58	1.15	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	42.4	33.9	50.9	4.25	8.50	Biuret reaction end point
	g/dl	4.24	3.39	5.09	0.43	0.85	
	g/l	42.5	34.0	51.0	4.25	8.50	Biuret reaction kinetic
	g/dl	4.25	3.40	5.10	0.43	0.85	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	µmol/l	59.5	47.0	72.0	6.25	12.50	FE+UIBC(saturation with iron)
	µg/dl	333	263	403	35.00	70.00	
Triglycerides	mmol/l	3.02	2.53	3.51	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	267	224	310	21.50	43.00	
	mmol/l	3.11	2.61	3.61	0.25	0.50	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	275	231	319	22.00	44.00	
	mmol/l	3.03	2.55	3.51	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	268	226	310	21.00	42.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.42	8.20	10.6	0.61	1.22	

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RANDOX

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	420	357	483	31.50	63.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	87.0	68.7	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.09	4.02	6.16	0.54	1.07	
Calcium	mmol/l	3.19	2.87	3.51	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	6.93	6.03	7.83	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	233	301	17.00	34.00	
CK Total	U/l	471	386	556	42.50	85.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	361	289	433	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.08	3.27	4.89	0.41	0.81	
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
HDL - Cholesterol	mmol/l	2.35	2.00	2.70	0.18	0.35	HDL - Ultra
	mg/dl	90.7	77.2	104	6.75	13.50	
Phosphate Inorganic	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Protein Total	g/l	46.7	37.4	56.0	4.65	9.30	Biuret reaction end point
	g/dl	4.67	3.74	5.60	0.47	0.93	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	262	220	304	21.00	42.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (non-prostatic)	U/l	3.16	2.12	4.20	0.52	1.04	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	5.29	3.54	7.04	0.88	1.75	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	31.1	20.8	41.4	5.15	10.30	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	49.6	33.2	66.0	8.20	16.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	34.3	23.0	45.6	5.65	11.30	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	54.9	36.8	73.0	9.05	18.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	176	149	203	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	137	116	158	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	112	95	129	8.50	17.00	Roche Integra AMP buffer 25°C
	U/l	294	250	338	22.00	44.00	Randox AMP 37°C
	U/l	229	195	263	17.00	34.00	Randox AMP 30°C
	U/l	188	160	216	14.00	28.00	Randox AMP 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
Amylase Pancreatic	U/l	295	251	339	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	268	228	308	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	304	258	350	23.00	46.00	Randox Liquid Ethylidene 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

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	20.8	16.5	25.1	2.15	4.30	Enzymatic
Bile Acids	µmol/l	45.1	36.1	54.1	4.50	9.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	26.0	20.5	31.5	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Bilirubin Total	µmol/l	78.6	62.1	95.1	8.25	16.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.60	3.63	5.57	0.49	0.97	
	µmol/l	80.7	63.8	97.6	8.45	16.90	Diazonium ion
	mg/dl	4.72	3.73	5.71	0.50	0.99	
Calcium	mmol/l	3.27	2.95	3.59	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.23	2.91	3.55	0.16	0.32	NM-BAPTA
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
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	450	369	531	40.50	81.00	CK-NAC (IFCC) 37°C
	U/l	282	231	333	25.50	51.00	CK-NAC (IFCC) 30°C
	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	384	307	461	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	381	304	458	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.31	3.44	5.18	0.44	0.87	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	138	117	159	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	109	92	126	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
	U/l	157	133	181	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	105	143	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	82	112	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	165	140	190	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	110	150	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	86	118	8.00	16.00	Randox 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	16.5	14.0	19.0	1.25	2.50	Glucose oxidase
	mg/dl	297	252	342	22.50	45.00	
HDL - Cholesterol	mmol/l	4.04	3.44	4.64	0.30	0.60	Direct HDL Roche 3rd generation
	mg/dl	156	133	179	11.50	23.00	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.60	4.59	6.61	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	632	538	726	47.00	94.00	P->L German methods 37°C
	U/l	456	388	524	34.00	68.00	P->L German methods 30°C
	U/l	320	273	367	23.50	47.00	P->L German methods 25°C
	U/l	329	280	378	24.50	49.00	L->P IFCC 37°C
	U/l	238	202	274	18.00	36.00	L->P IFCC 30°C
	U/l	167	142	192	12.50	25.00	L->P IFCC 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	60	48	72	6.00	12.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.35	6.23	8.47	0.56	1.12	
Potassium	mmol/l	6.32	5.81	6.83	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction end point
	g/dl	4.41	3.53	5.29	0.44	0.88	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
Urea	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease kinetic
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	8.03	10.5	0.61	1.21	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.05	10.5	0.61	1.21	

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RANDOX

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	224	191	257	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	184	157	211	13.50	27.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	290	246	334	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.3	34.6	52.0	4.35	8.70	Enzymatic Colorimetric
Bilirubin Total	µmol/l	85.1	67.2	103	8.95	17.90	Diazo with Sulphanilic Acid
	mg/dl	4.98	3.93	6.03	0.53	1.05	
Calcium	mmol/l	3.34	3.00	3.68	0.17	0.34	Cresolphthalein complexone
	mg/dl	13.4	12.0	14.8	0.70	1.40	
Chloride	mmol/l	111	103	119	4.00	8.00	ISE indirect
Cholesterol	mmol/l	6.96	6.06	7.86	0.45	0.90	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
CK Total	U/l	433	355	511	39.00	78.00	CK-NAC (IFCC) 37°C
	U/l	271	222	320	24.50	49.00	CK-NAC (IFCC) 30°C
	U/l	184	151	217	16.50	33.00	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. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	344	275	413	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.89	3.11	4.67	0.39	0.78	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.32	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	143	122	164	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	113	96	130	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	88	75	101	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	141	120	162	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	111	95	127	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	87	74	100	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	16.3	13.8	18.8	1.25	2.50	Hexokinase
	mg/dl	294	249	339	22.50	45.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	
HDL - Cholesterol	mmol/l	2.57	2.18	2.96	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.2	84.1	114	7.55	15.10	
Iron	µmol/l	36.5	29.9	43.1	3.30	6.60	Colorimetric without ppt.
	µg/dl	204	167	241	18.50	37.00	
LD (LDH)	U/l	680	578	782	51.00	102.00	P->L German methods 37°C
	U/l	491	417	565	37.00	74.00	P->L German methods 30°C
	U/l	345	293	397	26.00	52.00	P->L German methods 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	662	563	761	49.50	99.00	P->L SFBC 37°C
	U/l	478	406	550	36.00	72.00	P->L SFBC 30°C
	U/l	336	285	387	25.50	51.00	P->L SFBC 25°C
Lipase	U/l	85	68	102	8.50	17.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.79	1.58	2.00	0.11	0.21	Xylidyl Blue
	mg/dl	4.35	3.84	4.86	0.26	0.51	
	mmol/l	1.83	1.61	2.05	0.11	0.22	Enzymatic
	mg/dl	4.45	3.91	4.99	0.27	0.54	
Phosphate Inorganic	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Potassium	mmol/l	6.28	5.78	6.78	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.03	2.55	3.51	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	268	226	310	21.00	42.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
Urea	mmol/l	20.7	17.6	23.8	1.55	3.10	Urease end point
	mg/dl	124	106	142	9.00	18.00	
	mmol/l	20.7	17.6	23.8	1.55	3.10	BUN
	mg/dl	58.1	49.4	66.8	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	

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RANDOX

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	26.6	22.6	30.6	2.00	4.00	Ortho Vitros Microslide Systems
	g/dl	2.66	2.26	3.06	0.20	0.40	
Alkaline Phosphatase	U/l	179	153	205	13.00	26.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	143	115	171	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	171	145	197	13.00	26.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	191	153	229	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	23.3	18.4	28.2	2.45	4.90	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	77.0	60.8	93.2	8.10	16.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.50	3.56	5.44	0.47	0.94	
	µmol/l	79.1	62.5	95.7	8.30	16.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.63	3.66	5.60	0.49	0.97	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	6.47	5.63	7.31	0.42	0.84	Ortho Vitros Microslide Systems
	mg/dl	250	217	283	16.50	33.00	
Cholinesterase	U/l	5007	4005	6009	501.00	1002.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	381	312	450	34.50	69.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	386	309	463	38.50	77.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	382	305	459	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.32	3.45	5.19	0.44	0.87	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	189	161	217	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.9	12.6	17.2	1.15	2.30	Ortho Vitros Microslide Systems
	mg/dl	268	227	309	20.50	41.00	
Iron	µmol/l	41.6	34.1	49.1	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	233	191	275	21.00	42.00	
Lactate	mmol/l	4.95	4.06	5.84	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	44.6	36.6	52.6	4.00	8.00	
LD (LDH)	U/l	971	826	1116	72.50	145.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	710	569	851	70.50	141.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.48	2.18	2.78	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.72	1.51	1.93	0.11	0.21	
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.37	3.86	4.88	0.26	0.51	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Ortho Vitros Microslide Systems
	mg/dl	7.25	6.17	8.33	0.54	1.08	
Potassium	mmol/l	6.17	5.67	6.67	0.25	0.50	Ortho Vitros Microslide Systems
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Ortho Vitros Microslide Systems
	g/dl	4.53	3.62	5.44	0.46	0.91	
Sodium	mmol/l	161	153	169	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.10	0.88	1.32	0.11	0.22	Vitros ECi
Triglycerides	mmol/l	3.30	2.78	3.82	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	292	246	338	23.00	46.00	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Ortho Vitros Microslide Systems
	mg/dl	114	96.8	131	8.60	17.20	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.77	7.63	9.91	0.57	1.14	

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

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
Alkaline Phosphatase	U/l	265	225	305	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 30°C
	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	163	131	195	16.00	32.00	Tris buffer without P5P 37°C
	U/l	110	89	131	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	31.5	24.9	38.1	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.46	2.22	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	79.7	62.9	96.5	8.40	16.80	Nitrobenzenediazonium salt
	mg/dl	4.66	3.68	5.64	0.49	0.98	
Calcium	mmol/l	3.38	3.04	3.72	0.17	0.34	Arsenazo III
	mg/dl	13.5	12.2	14.8	0.65	1.30	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.83	5.94	7.72	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	229	299	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. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	488	401	575	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	305	251	359	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	368	295	441	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.33	4.99	0.42	0.83	
gamma-GT	U/l	158	134	182	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	125	106	144	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.6	14.1	19.1	1.25	2.50	Hexokinase
	mg/dl	299	254	344	22.50	45.00	
	mmol/l	16.5	14.0	19.0	1.25	2.50	Glucose oxidase
	mg/dl	297	252	342	22.50	45.00	
HDL - Cholesterol	mmol/l	3.84	3.26	4.42	0.29	0.58	Direct HDL PEGME
	mg/dl	148	126	170	11.00	22.00	
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
Lithium	mmol/l	2.16	1.90	2.42	0.13	0.26	Ion selective electrode
	mg/dl	1.50	1.32	1.68	0.09	0.18	
Magnesium	mmol/l	1.64	1.44	1.84	0.10	0.20	Xylidyl Blue
	mg/dl	3.99	3.50	4.48	0.25	0.49	
Phosphate Inorganic	mmol/l	2.50	2.13	2.87	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.75	6.60	8.90	0.58	1.15	
Potassium	mmol/l	6.09	5.60	6.58	0.25	0.49	ISE method - direct
Protein Total	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction end point
	g/dl	4.49	3.59	5.39	0.45	0.90	

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

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.99	2.52	3.46	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	265	223	307	21.00	42.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	8.30	10.8	0.61	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	8.32	10.8	0.62	1.24	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	356	281	431	37.50	75.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	269	212	326	28.50	57.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	201	159	243	21.00	42.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	3.16	2.12	4.20	0.52	1.04	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	5.29	3.54	7.04	0.88	1.75	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	31.1	20.8	41.4	5.15	10.30	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	49.6	33.2	66.0	8.20	16.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	34.3	23.0	45.6	5.65	11.30	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	54.9	36.8	73.0	9.05	18.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Bromocresol Green
	g/dl	2.86	2.43	3.29	0.22	0.43	
	g/l	26.9	22.9	30.9	2.00	4.00	Bromocresol Purple
	g/dl	2.69	2.29	3.09	0.20	0.40	
	g/l	26.6	22.6	30.6	2.00	4.00	Ortho Vitros Microslide Systems
	g/dl	2.66	2.26	3.06	0.20	0.40	
	g/l	25.4	21.6	29.2	1.90	3.80	Turbidimetric Assays
	g/dl	2.54	2.16	2.92	0.19	0.38	
Alkaline Phosphatase	U/l	179	153	205	13.00	26.00	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

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	221	188	254	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 25°C
	U/l	272	232	312	20.00	40.00	AMP non-optimised 37°C
	U/l	212	181	243	15.50	31.00	AMP non-optimised 30°C
	U/l	174	148	200	13.00	26.00	AMP non-optimised 25°C
ALT (GPT)	U/l	119	95	143	12.00	24.00	Colorimetric 37°C
	U/l	88	70	106	9.00	18.00	Colorimetric 30°C
	U/l	67	53	81	7.00	14.00	Colorimetric 25°C
	U/l	143	115	171	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	165	132	198	16.50	33.00	Tris buffer with P5P 37°C
	U/l	122	98	146	12.00	24.00	Tris buffer with P5P 30°C
	U/l	93	74	112	9.50	19.00	Tris buffer with P5P 25°C
	U/l	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
	U/l	122	97	147	12.50	25.00	Tris buffer SCE 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer SCE 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	258	220	296	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	251	213	289	19.00	38.00	Roche liquid stable pNPG7 37°C
	U/l	295	251	339	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	283	241	325	21.00	42.00	pNP Maltotrioside substrates 37°C
	U/l	290	246	334	22.00	44.00	Siemens - blocked pNPG7 37°C
	U/l	279	237	321	21.00	42.00	Biotrol - blocked pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	232	197	267	17.50	35.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	304	258	350	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	277	236	318	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	294	250	338	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	261	222	300	19.50	39.00	Saccharogenic 37°C
	U/l	277	236	318	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	171	145	197	13.00	26.00	Ortho Vitros Microslide Systems 37°C
	U/l	270	229	311	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	343	292	394	25.50	51.00	Siemens 2-chloro-pNPG3 37°C
	U/l	290	246	334	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	302	256	348	23.00	46.00	Beckman Synchron AMY7 37°C
	U/l	289	245	333	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
	U/l	319	271	367	24.00	48.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	344	292	396	26.00	52.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.03	0.85	1.22	0.09	0.19	Immunoturbidimetric
	mg/dl	103	84.5	122	9.25	18.50	
Apolipoprotein B	g/l	0.58	0.47	0.68	0.05	0.10	Immunoturbidimetric
	mg/dl	57.6	47.2	68.0	5.20	10.40	
AST (GOT)	U/l	133	107	159	13.00	26.00	Colorimetric 37°C
	U/l	90	72	108	9.00	18.00	Colorimetric 30°C
	U/l	63	51	75	6.00	12.00	Colorimetric 25°C
	U/l	191	153	229	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
	U/l	205	164	246	20.50	41.00	Tris buffer with P5P 37°C
	U/l	139	111	167	14.00	28.00	Tris buffer with P5P 30°C
	U/l	98	78	118	10.00	20.00	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. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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
	U/l	139	112	166	13.50	27.00	Tris buffer SCE 37°C
	U/l	94	76	112	9.00	18.00	Tris buffer SCE 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	20.3	16.1	24.5	2.10	4.20	Colorimetric
	mmol/l	23.3	18.4	28.2	2.45	4.90	Ortho Vitros Microslide Systems
	mmol/l	20.5	16.2	24.8	2.15	4.30	Differential rate pH change
	mmol/l	20.8	16.5	25.1	2.15	4.30	Enzymatic
	mmol/l	21.2	16.8	25.6	2.20	4.40	Ion selective electrode
Bile Acids	µmol/l	42.5	34.0	51.0	4.25	8.50	4th Generation Colorimetric
	µmol/l	45.1	36.1	54.1	4.50	9.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	27.5	21.7	33.3	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Modified Jendrassik
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Bilirubin Total	µmol/l	77.0	60.8	93.2	8.10	16.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.50	3.56	5.44	0.47	0.94	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.1	62.5	95.7	8.30	16.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.63	3.66	5.60	0.49	0.97	
	µmol/l	94.1	74.3	114	9.90	19.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.50	4.35	6.65	0.58	1.15	
	µmol/l	83.6	66.1	101	8.75	17.50	Diazo with Sulphanilic Acid
	mg/dl	4.89	3.87	5.91	0.51	1.02	
	µmol/l	93.7	74.0	113	9.85	19.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.48	4.33	6.63	0.58	1.15	
	µmol/l	80.8	63.9	97.7	8.45	16.90	Nitrobenzenediazonium salt
	mg/dl	4.73	3.74	5.72	0.50	0.99	
	µmol/l	79.5	62.8	96.2	8.35	16.70	Diazonium ion
	mg/dl	4.65	3.67	5.63	0.49	0.98	
	µmol/l	90.5	71.5	110	9.50	19.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.29	4.18	6.40	0.56	1.11	
	µmol/l	96.3	76.1	117	10.10	20.20	Modified Jendrassik
	mg/dl	5.63	4.45	6.81	0.59	1.18	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.18	2.86	3.50	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.15	2.84	3.46	0.16	0.31	Ion selective electrode
	mg/dl	12.6	11.4	13.8	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	Methylthymol blue
	mg/dl	12.6	11.3	13.9	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.22	2.89	3.55	0.17	0.33	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.27	2.94	3.60	0.17	0.33	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	112	103	121	4.50	9.00	Colorimetric
	mmol/l	114	105	123	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	113	104	122	4.50	9.00	ISE indirect
	mmol/l	114	105	123	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.47	5.63	7.31	0.42	0.84	Ortho Vitros Microslide Systems
	mg/dl	250	217	283	16.50	33.00	
	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
Cholinesterase	U/l	5007	4005	6009	501.00	1002.00	Ortho Vitros Microslide Systems 37°C
	U/l	4793	3834	5752	479.50	959.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	381	312	450	34.50	69.00	Ortho Vitros Microslide Systems 37°C
	U/l	490	402	578	44.00	88.00	CK-NAC serum start (DGKC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC serum start (DGKC) 30°C
	U/l	208	171	245	18.50	37.00	CK-NAC serum start (DGKC) 25°C
	U/l	477	391	563	43.00	86.00	CK-NAC substrate start (DGKC) 37°C
	U/l	299	245	353	27.00	54.00	CK-NAC substrate start (DGKC) 30°C
	U/l	203	166	240	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	476	390	562	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	298	244	352	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 25°C
	U/l	488	400	576	44.00	88.00	Monothioglycerol 37°C
	U/l	305	250	360	27.50	55.00	Monothioglycerol 30°C
	U/l	207	170	244	18.50	37.00	Monothioglycerol 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	449	368	530	40.50	81.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	281	230	332	25.50	51.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	191	156	226	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	27.0	21.6	32.4	2.70	5.40	Atomic absorption
	µg/dl	172	137	207	17.50	35.00	
	µmol/l	27.3	21.8	32.8	2.75	5.50	Colorimetric
	µg/dl	174	139	209	17.50	35.00	
Cortisol	nmol/l	1026	770	1282	128.00	256.00	Roche Cobas E411
	µg/dl	36.9	27.7	46.1	4.60	9.20	
Creatinine	µmol/l	339	271	407	34.00	68.00	Alkaline picrate with deproteinization
	mg/dl	3.83	3.06	4.60	0.39	0.77	
	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	382	306	458	38.00	76.00	Enzymatic UV method (340nm)
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	389	311	467	39.00	78.00	Creatinine PAP method
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	374	299	449	37.50	75.00	Jaffe rate blanked
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.12	3.30	4.94	0.41	0.82	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	382	305	459	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	µmol/l	379	303	455	38.00	76.00	IDMS traceable
	mg/dl	4.28	3.42	5.14	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.12	0.95	1.29	0.08	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.62	2.90	4.34	0.36	0.72	Immunoturbidimetric
	ng/ml	2.83	2.26	3.40	0.29	0.57	
Folate	nmol/l	12.5	9.50	15.5	1.50	3.00	Roche Cobas E411
	ng/ml	5.51	4.19	6.83	0.66	1.32	
Free T4	pmol/l	53.3	40.0	66.6	6.65	13.30	Abbott Architect
	ng/dl	4.16	3.12	5.20	0.52	1.04	
	pg/ml	41.6	31.2	52.0	5.20	10.40	Abbott Architect
	pmol/l	69.0	51.8	86.2	8.60	17.20	Siemens Centaur XP/XPT/Classic
	ng/dl	5.38	4.04	6.72	0.67	1.34	
	pg/ml	53.8	40.4	67.2	6.70	13.40	Siemens Centaur XP/XPT/Classic
	pmol/l	62.2	46.6	77.8	7.80	15.60	Beckman Access
	ng/dl	4.85	3.63	6.07	0.61	1.22	
	pg/ml	48.5	36.3	60.7	6.10	12.20	Beckman Access
	pmol/l	65.5	49.1	81.9	8.20	16.40	Beckman DxI800
	ng/dl	5.11	3.83	6.39	0.64	1.28	
	pg/ml	51.1	38.3	63.9	6.40	12.80	Beckman DxI800
	pmol/l	69.7	52.3	87.1	8.70	17.40	Siemens Immulite 2000/2500
	ng/dl	5.44	4.08	6.80	0.68	1.36	
	pg/ml	54.4	40.8	68.0	6.80	13.60	Siemens Immulite 2000/2500
	pmol/l	90.3	67.7	113	11.30	22.60	Roche Elecsys
	ng/dl	7.04	5.28	8.80	0.88	1.76	
	pg/ml	70.4	52.8	88.0	8.80	17.60	Roche Elecsys

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	85.4	64.1	107	10.65	21.30	Roche Modular E170
	ng/dl	6.66	5.00	8.32	0.83	1.66	
	pg/ml	66.6	50.0	83.2	8.30	16.60	Roche Modular E170
	pmol/l	79.8	59.9	99.7	9.95	19.90	Roche Cobas E411
	ng/dl	6.22	4.67	7.77	0.78	1.55	
	pg/ml	62.2	46.7	77.7	7.75	15.50	Roche Cobas E411
	pmol/l	83.2	62.4	104	10.40	20.80	Roche Cobas 6000/8000
	ng/dl	6.49	4.87	8.11	0.81	1.62	
	pg/ml	64.9	48.7	81.1	8.10	16.20	Roche Cobas 6000/8000
	pmol/l	74.6	56.0	93.2	9.30	18.60	Biomerieux Vidas FT4N Kit
	ng/dl	5.82	4.37	7.27	0.73	1.45	
	pg/ml	58.2	43.7	72.7	7.25	14.50	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	20.4	16.3	24.5	2.05	4.10	Immunoturbidimetric
	µg/ml	9.75	7.79	11.7	0.98	1.96	
gamma-GT	U/l	148	126	170	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	117	99	135	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	91	78	104	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	189	161	217	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	129	109	149	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	102	86	118	8.00	16.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	80	67	93	6.50	13.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	157	134	180	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	106	142	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	165	140	190	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	110	150	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	86	118	8.00	16.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	29	23	35	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	18	26	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.9	12.6	17.2	1.15	2.30	Ortho Vitros Microslide Systems
	mg/dl	268	227	309	20.50	41.00	
	mmol/l	16.1	13.7	18.5	1.20	2.40	Glucose dehydrogenase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
	mmol/l	16.3	13.9	18.7	1.20	2.40	Oxygen electrode
	mg/dl	294	250	338	22.00	44.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	3.92	3.33	4.51	0.30	0.59	Direct HDL PEGME
	mg/dl	151	129	173	11.00	22.00	
	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct Clearance Method
	mg/dl	95.7	81.4	110	7.15	14.30	
	mmol/l	4.03	3.43	4.63	0.30	0.60	Direct HDL Roche 3rd generation
	mg/dl	156	132	180	12.00	24.00	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.72	2.32	3.12	0.20	0.40	HDL - Ultra
	mg/dl	105	89.6	120	7.70	15.40	
Immunoglobulin A	g/l	1.54	1.16	1.92	0.19	0.38	Immunoturbidimetric
	mg/dl	154	116	192	19.00	38.00	
Immunoglobulin G	g/l	5.36	4.40	6.32	0.48	0.96	Immunoturbidimetric
	mg/dl	536	440	632	48.00	96.00	
Immunoglobulin M	g/l	0.73	0.59	0.88	0.07	0.15	Immunoturbidimetric
	mg/dl	73.2	58.6	87.8	7.30	14.60	
Iron	µmol/l	37.9	31.0	44.8	3.45	6.90	Colorimetric with ppt.
	µg/dl	212	173	251	19.50	39.00	
	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
	µmol/l	41.6	34.1	49.1	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	233	191	275	21.00	42.00	
Lactate	mmol/l	5.01	4.11	5.91	0.45	0.90	Ion selective electrode
	mg/dl	45.1	37.0	53.2	4.05	8.10	
	mmol/l	5.51	4.52	6.50	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.6	40.7	58.5	4.45	8.90	
	mmol/l	4.95	4.06	5.84	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	44.6	36.6	52.6	4.00	8.00	
	mmol/l	5.50	4.51	6.49	0.50	0.99	Enzymatic Electrode
	mg/dl	49.6	40.6	58.6	4.50	9.00	
	mmol/l	5.57	4.57	6.57	0.50	1.00	UV LDH
	mg/dl	50.2	41.2	59.2	4.50	9.00	
LAP	U/l	13	11	15	1.00	2.00	NAGEL 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	971	826	1116	72.50	145.00	Ortho Vitros Microslide Systems 37°C
	U/l	302	256	348	23.00	46.00	L->P 37°C
	U/l	218	185	251	16.50	33.00	L->P 30°C
	U/l	153	130	176	11.50	23.00	L->P 25°C
	U/l	732	622	842	55.00	110.00	P->L Scandinavian & Dutch 37°C
	U/l	529	449	609	40.00	80.00	P->L Scandinavian & Dutch 30°C
	U/l	371	315	427	28.00	56.00	P->L Scandinavian & Dutch 25°C
	U/l	641	545	737	48.00	96.00	P->L German methods 37°C
	U/l	463	393	533	35.00	70.00	P->L German methods 30°C
	U/l	325	276	374	24.50	49.00	P->L German methods 25°C
	U/l	640	544	736	48.00	96.00	P->L SFBC 37°C
	U/l	462	393	531	34.50	69.00	P->L SFBC 30°C
	U/l	324	276	372	24.00	48.00	P->L SFBC 25°C
	U/l	331	282	380	24.50	49.00	L->P IFCC 37°C
	U/l	239	204	274	17.50	35.00	L->P IFCC 30°C
	U/l	168	143	193	12.50	25.00	L->P IFCC 25°C
Lipase	U/l	67	54	80	6.50	13.00	Other Colorimetric 37°C
	U/l	710	569	851	70.50	141.00	Ortho Vitros Microslide Systems 37°C
	U/l	58	46	70	6.00	12.00	Roche Colorimetric 37°C
	U/l	82	66	98	8.00	16.00	Randox Colorimetric 37°C
	U/l	405	325	485	40.00	80.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.48	2.18	2.78	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.72	1.51	1.93	0.11	0.21	
	mmol/l	2.19	1.93	2.45	0.13	0.26	Ion selective electrode
	mg/dl	1.52	1.34	1.70	0.09	0.18	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	2.10	1.85	2.35	0.13	0.25	Spectrophotometric
	mg/dl	1.46	1.28	1.64	0.09	0.18	
	mmol/l	2.18	1.92	2.44	0.13	0.26	Randox Colorimetric
	mg/dl	1.51	1.33	1.69	0.09	0.18	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Arsenazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.80	1.59	2.01	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.37	3.86	4.88	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Calmagite
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.79	1.57	2.01	0.11	0.22	Xylidyl Blue
	mg/dl	4.35	3.82	4.88	0.27	0.53	
	mmol/l	1.78	1.57	1.99	0.11	0.21	Methylthymol blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Enzymatic
	mg/dl	4.28	3.77	4.79	0.26	0.51	
NEFA	mmol/l	0.64	0.55	0.74	0.05	0.10	Colorimetric
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
	mOsm/kg	385	308	462	38.50	77.00	Freezing point depression
	mOsm/kg	381	305	457	38.00	76.00	Vapour pressure
Paracetamol	mmol/l	0.62	0.50	0.75	0.06	0.13	Colorimetric
	mg/l	94.3	75.3	113	9.50	19.00	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Ortho Vitros Microslide Systems
	mg/dl	7.25	6.17	8.33	0.54	1.08	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.40	2.04	2.76	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.44	6.32	8.56	0.56	1.12	
	mmol/l	2.38	2.03	2.73	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.38	6.29	8.47	0.55	1.09	
Potassium	mmol/l	6.17	5.67	6.67	0.25	0.50	Ortho Vitros Microslide Systems
	mmol/l	6.36	5.85	6.87	0.26	0.51	Enzymatic
	mmol/l	5.93	5.46	6.40	0.24	0.47	Flame photometry
	mmol/l	6.19	5.69	6.69	0.25	0.50	ISE method - direct
	mmol/l	6.29	5.79	6.79	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Ortho Vitros Microslide Systems
	g/dl	4.53	3.62	5.44	0.46	0.91	
	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	43.1	34.5	51.7	4.30	8.60	Biuret reaction kinetic
	g/dl	4.31	3.45	5.17	0.43	0.86	
PSA Total	ng/ml =	32.4	24.3	40.5	4.05	8.10	Roche Elecsys Modular E170
	ng/ml =	30.6	22.9	38.3	3.85	7.70	Beckman Access standardised to Hybritech
	ng/ml =	34.9	26.2	43.6	4.35	8.70	bioMerieux VIDAS TPSA
	ng/ml =	27.2	20.4	34.0	3.40	6.80	Abbott Architect
	ng/ml =	33.1	24.8	41.4	4.15	8.30	Cobas E411
	ng/ml =	32.7	24.6	40.8	4.05	8.10	Roche Cobas 6000/8000
Salicylate	mmol/l	0.88	0.70	1.05	0.09	0.18	Enzymatic
	mg/dl	12.1	9.69	14.5	1.21	2.41	
Sodium	mmol/l	161	153	169	4.00	8.00	Ortho Vitros Microslide Systems

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	158	150	166	4.00	8.00	Enzymatic
	mmol/l	156	149	163	3.50	7.00	Flame photometry
	mmol/l	159	151	167	4.00	8.00	ISE method - direct
	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	160	128	192	16.00	32.00	Immunoturbidimetric
	µg/ml	28.8	23.1	34.5	2.85	5.70	
Thyroid Stimulating Hormone	µU/ml =	0.92	0.74	1.11	0.09	0.18	Abbott Architect
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.22	0.97	1.47	0.12	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Siemens Immulite 1000
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Siemens Immulite 2000/2500
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Vitros ECi
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Roche Elecsys
	µU/ml =	1.24	0.99	1.49	0.12	0.25	Roche Modular E170
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Tosoh AIA360
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Roche Cobas E411
	µU/ml =	1.24	1.00	1.48	0.12	0.24	Roche Cobas 6000/8000
	µU/ml =	1.00	0.80	1.20	0.10	0.20	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	54.2	42.8	65.6	5.70	11.40	Removal of excess free iron
	µg/dl	303	239	367	32.00	64.00	
	µmol/l	58.5	46.2	70.8	6.15	12.30	FE+UIBC(saturation with iron)
	µg/dl	327	258	396	34.50	69.00	
	µmol/l	55.4	43.8	67.0	5.80	11.60	Direct Colorimetric
	µg/dl	310	245	375	32.50	65.00	
	µmol/l	41.0	32.4	49.6	4.30	8.60	Calculated from Transferrin
	µg/dl	229	181	277	24.00	48.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	58.6	46.3	70.9	6.15	12.30	Randox Direct
	µg/dl	328	259	397	34.50	69.00	
Tobramycin	µmol/l	14.7	11.8	17.6	1.45	2.90	Immunoturbidimetric
	µg/ml	6.88	5.52	8.24	0.68	1.36	
Total T3	nmol/l	3.11	2.34	3.88	0.39	0.77	Abbott Architect
	ng/ml	2.02	1.52	2.52	0.25	0.50	
	ng/dl	202	152	252	25.00	50.00	Abbott Architect
	nmol/l	3.25	2.44	4.06	0.41	0.81	Beckman Access
	ng/ml	2.12	1.59	2.65	0.27	0.53	
	ng/dl	212	159	265	26.50	53.00	Beckman Access
	nmol/l	3.78	2.83	4.73	0.48	0.95	BioMerieux Vidas
	ng/ml	2.46	1.84	3.08	0.31	0.62	
	ng/dl	246	184	308	31.00	62.00	BioMerieux Vidas
	nmol/l	4.01	3.01	5.01	0.50	1.00	Roche Cobas E411
	ng/ml	2.61	1.96	3.26	0.33	0.65	
	ng/dl	261	196	326	32.50	65.00	Roche Cobas E411
	nmol/l	3.94	2.95	4.93	0.50	0.99	Roche Cobas 6000/8000
	ng/ml	2.56	1.92	3.20	0.32	0.64	
	ng/dl	256	192	320	32.00	64.00	Roche Cobas 6000/8000
Total T4	nmol/l	214	161	267	26.50	53.00	Abbott Architect
	µg/dl	16.7	12.6	20.8	2.05	4.10	
	ng/ml	167	126	208	20.50	41.00	Abbott Architect
	nmol/l	222	166	278	28.00	56.00	Siemens Centaur XP/XPT/Classic
	µg/dl	17.3	12.9	21.7	2.20	4.40	
	ng/ml	173	129	217	22.00	44.00	Siemens Centaur XP/XPT/Classic

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	237	178	296	29.50	59.00	Beckman Access
	µg/dl	18.5	13.9	23.1	2.30	4.60	
	ng/ml	185	139	231	23.00	46.00	Beckman Access
	nmol/l	218	163	273	27.50	55.00	BioMerieux Vidas
	µg/dl	17.0	12.7	21.3	2.15	4.30	
	ng/ml	170	127	213	21.50	43.00	BioMerieux Vidas
	nmol/l	218	164	272	27.00	54.00	Siemens Immulite 2000/2500
	µg/dl	17.0	12.8	21.2	2.10	4.20	
	ng/ml	170	128	212	21.00	42.00	Siemens Immulite 2000/2500
	nmol/l	188	141	235	23.50	47.00	Roche Cobas E411
	µg/dl	14.7	11.0	18.4	1.85	3.70	
	ng/ml	147	110	184	18.50	37.00	Roche Cobas E411
	nmol/l	188	141	235	23.50	47.00	Roche Cobas 6000/8000
	µg/dl	14.7	11.0	18.4	1.85	3.70	
	ng/ml	147	110	184	18.50	37.00	Roche Cobas 6000/8000
Transferrin	g/l	1.59	1.27	1.91	0.16	0.32	Immunoturbidimetric
	mg/dl	159	127	191	16.00	32.00	
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	3.07	2.58	3.56	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	272	228	316	22.00	44.00	
	mmol/l	3.03	2.54	3.52	0.25	0.49	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	268	225	311	21.50	43.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	3.30	2.78	3.82	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	292	246	338	23.00	46.00	
UIBC	µmol/l	20.5	16.8	24.2	1.85	3.70	Direct Colorimetric
	µg/dl	115	93.9	136	10.55	21.10	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Ortho Vitros Microslide Systems
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease end point
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	18.9	16.0	21.8	1.45	2.90	Urease hypochlorite
	mg/dl	114	96.2	132	8.90	17.80	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.77	7.63	9.91	0.57	1.14	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase 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	8.01	10.4	0.60	1.20	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.03	10.4	0.60	1.19	
Vitamin B12	pmol/l	200	160	240	20.00	40.00	Roche Cobas E411
	pg/ml	271	217	325	27.00	54.00	
Zinc	µmol/l	35.1	28.1	42.1	3.50	7.00	Atomic absorption
	µg/dl	229	183	275	23.00	46.00	
	µmol/l	38.0	30.4	45.6	3.80	7.60	Colorimetric with deproteinisation
	µg/dl	248	199	297	24.50	49.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		60.4	54.4	66.4	3.00	6.00	% of total Protein (Beckman Capillary)
alpha-1-globulin		3.5	2.7	4.3	0.42	0.84	% of total Protein (Beckman Capillary)
alpha-2-globulin		11.1	8.4	13.8	1.33	2.66	% of total Protein (Beckman Capillary)
beta-globulin		14.3	10.9	17.7	1.70	3.40	% of total Protein (Beckman Capillary)
gamma-globulin		10.7	8.1	13.3	1.29	2.57	% 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. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	304	259	349	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	237	202	272	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	194	166	222	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	31.5	24.9	38.1	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	1.46	2.22	0.19	0.38	
Bilirubin Total	µmol/l	87.7	69.3	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.13	4.05	6.21	0.54	1.08	
	µmol/l	90.5	71.5	110	9.50	19.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.29	4.18	6.40	0.56	1.11	
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	
	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	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.96	6.06	7.86	0.45	0.90	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
CK Total	U/l	474	389	559	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	297	244	350	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	338	271	405	33.50	67.00	Alkaline picrate with deproteinization
	mg/dl	3.82	3.06	4.58	0.38	0.76	
	µmol/l	352	281	423	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	3.98	3.18	4.78	0.40	0.80	
	µmol/l	379	303	455	38.00	76.00	Enzymatic UV method (340nm)
	mg/dl	4.28	3.42	5.14	0.43	0.86	
gamma-GT	U/l	143	122	164	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	113	96	130	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	88	75	101	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	155	132	178	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	122	104	140	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	96	81	111	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	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	
HDL - Cholesterol	mmol/l	2.90	2.47	3.33	0.22	0.43	Direct HDL PPD
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	2.85	2.43	3.27	0.21	0.42	Direct Clearance Method
	mg/dl	110	93.8	126	8.10	16.20	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
LD (LDH)	U/l	682	579	785	51.50	103.00	P->L German methods 37°C
	U/l	492	418	566	37.00	74.00	P->L German methods 30°C
	U/l	346	294	398	26.00	52.00	P->L German methods 25°C
	U/l	640	544	736	48.00	96.00	P->L SFBC 37°C
	U/l	462	393	531	34.50	69.00	P->L SFBC 30°C
	U/l	324	276	372	24.00	48.00	P->L SFBC 25°C
	U/l	337	287	387	25.00	50.00	L->P IFCC 37°C
	U/l	243	207	279	18.00	36.00	L->P IFCC 30°C
	U/l	171	146	196	12.50	25.00	L->P IFCC 25°C
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.13	6.05	8.21	0.54	1.08	
Protein Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction end point
	g/dl	4.52	3.62	5.42	0.45	0.90	
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	
Urea	mmol/l	21.0	17.9	24.1	1.55	3.10	Urease end point
	mg/dl	126	108	144	9.00	18.00	
	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease hypochlorite
	mg/dl	111	93.8	128	8.60	17.20	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.98	10.3	0.59	1.18	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	
ALT (GPT)	U/l	138	111	165	13.50	27.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
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	88.6	70.0	107	9.30	18.60	Diazo with Dichloroaniline (DCA)
	mg/dl	5.18	4.10	6.26	0.54	1.08	
Cholesterol	mmol/l	7.16	6.23	8.09	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
CK Total	U/l	499	409	589	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	312	256	368	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.23	1.90	2.56	0.17	0.33	Direct HDL Immunoseparation
	mg/dl	86.1	73.3	98.9	6.40	12.80	
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	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	20.5	17.4	23.6	1.55	3.10	Urease kinetic
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.5	17.4	23.6	1.55	3.10	BUN
	mg/dl	57.5	48.9	66.1	4.30	8.60	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.85	7.71	9.99	0.57	1.14	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	
	g/l	25.7	21.9	29.5	1.90	3.80	Bromocresol Purple
	g/dl	2.57	2.19	2.95	0.19	0.38	
	g/l	25.6	21.8	29.4	1.90	3.80	Turbidimetric Assays
	g/dl	2.56	2.18	2.94	0.19	0.38	
Alkaline Phosphatase	U/l	199	170	228	14.50	29.00	Roche Integra AMP buffer 37°C
	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 30°C
	U/l	127	109	145	9.00	18.00	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	248	211	285	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	271	230	312	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	270	230	310	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	270	230	310	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	20.2	16.0	24.4	2.10	4.20	Colorimetric

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	20.3	16.1	24.5	2.10	4.20	Enzymatic
Bile Acids	µmol/l	45.3	36.2	54.4	4.55	9.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.1	22.2	34.0	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Roche JG factored
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Bilirubin Total	µmol/l	79.4	62.7	96.1	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	79.1	62.5	95.7	8.30	16.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.63	3.66	5.60	0.49	0.97	
	µmol/l	79.0	62.4	95.6	8.30	16.60	Diazonium ion
	mg/dl	4.62	3.65	5.59	0.49	0.97	
Calcium	mmol/l	3.26	2.94	3.58	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.27	2.94	3.60	0.17	0.33	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	110	102	118	4.00	8.00	ISE indirect
Cholesterol	mmol/l	6.89	6.00	7.78	0.45	0.89	Cholesterol Oxidase
	mg/dl	266	232	300	17.00	34.00	
Cholinesterase	U/l	4882	3906	5858	488.00	976.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC substrate start (DGKC) 37°C
	U/l	302	247	357	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	205	168	242	18.50	37.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	472	387	557	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	295	242	348	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	201	164	238	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	378	302	454	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	385	308	462	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	386	309	463	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	374	299	449	37.50	75.00	Jaffe rate blanked
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.24	3.39	5.09	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.10	0.94	1.26	0.08	0.16	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	83.2	62.4	104	10.40	20.80	Roche Cobas 6000/8000
	ng/dl	6.49	4.87	8.11	0.81	1.62	
	pg/ml	64.9	48.7	81.1	8.10	16.20	Roche Cobas 6000/8000
gamma-GT	U/l	139	118	160	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	86	73	99	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	158	135	181	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	125	106	144	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
GLDH	U/l	27	21	33	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	21	16	26	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose dehydrogenase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	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	2.86	2.43	3.29	0.22	0.43	Direct HDL Immunoseparation
	mg/dl	110	93.8	126	8.10	16.20	
	mmol/l	4.00	3.40	4.60	0.30	0.60	Direct HDL PEGME
	mg/dl	154	131	177	11.50	23.00	
	mmol/l	4.06	3.45	4.67	0.31	0.61	Direct HDL Roche 3rd generation
	mg/dl	157	133	181	12.00	24.00	
Iron	µmol/l	37.4	30.7	44.1	3.35	6.70	Colorimetric with ppt.
	µg/dl	209	172	246	18.50	37.00	
	µmol/l	38.1	31.3	44.9	3.40	6.80	Colorimetric without ppt.
	µg/dl	213	175	251	19.00	38.00	
Lactate	mmol/l	5.48	4.50	6.46	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.4	40.5	58.3	4.45	8.90	
LD (LDH)	U/l	633	538	728	47.50	95.00	P->L German methods 37°C
	U/l	457	388	526	34.50	69.00	P->L German methods 30°C
	U/l	321	273	369	24.00	48.00	P->L German methods 25°C
	U/l	331	282	380	24.50	49.00	L->P IFCC 37°C
	U/l	239	204	274	17.50	35.00	L->P IFCC 30°C
	U/l	168	143	193	12.50	25.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.11	1.85	2.37	0.13	0.26	Spectrophotometric
	mg/dl	1.47	1.28	1.66	0.10	0.19	
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	
	mmol/l	1.78	1.56	2.00	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.33	3.79	4.87	0.27	0.54	
Osmolality	mOsm/kg	358	287	429	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.29	6.20	8.38	0.55	1.09	
	mmol/l	2.36	2.01	2.71	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.32	6.23	8.41	0.55	1.09	
Potassium	mmol/l	6.34	5.83	6.85	0.26	0.51	ISE method - indirect
Protein Total	g/l	43.0	34.4	51.6	4.30	8.60	Biuret reaction CX4/5/7
	g/dl	4.30	3.44	5.16	0.43	0.86	
	g/l	43.6	34.9	52.3	4.35	8.70	Biuret reaction end point
	g/dl	4.36	3.49	5.23	0.44	0.87	
	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction kinetic
	g/dl	4.39	3.51	5.27	0.44	0.88	
PSA Total	ng/ml =	32.7	24.6	40.8	4.05	8.10	Roche Cobas 6000/8000
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.24	1.00	1.48	0.12	0.24	Roche Cobas 6000/8000
TIBC	µmol/l	58.3	46.0	70.6	6.15	12.30	FE+UIBC(saturation with iron)
	µg/dl	326	257	395	34.50	69.00	

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RANDOX

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	42.8	33.8	51.8	4.50	9.00	Calculated from Transferrin
	µg/dl	239	189	289	25.00	50.00	
Total T3	nmol/l	3.94	2.95	4.93	0.50	0.99	Roche Cobas 6000/8000
	ng/ml	2.56	1.92	3.20	0.32	0.64	
	ng/dl	256	192	320	32.00	64.00	Roche Cobas 6000/8000
Total T4	nmol/l	188	141	235	23.50	47.00	Roche Cobas 6000/8000
	µg/dl	14.7	11.0	18.4	1.85	3.70	
	ng/ml	147	110	184	18.50	37.00	Roche Cobas 6000/8000
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
UIBC	µmol/l	20.1	16.5	23.7	1.80	3.60	Direct Colorimetric
	µg/dl	112	92.2	132	9.90	19.80	
Urea	mmol/l	20.5	17.4	23.6	1.55	3.10	Urease end point
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.06	7.88	10.2	0.59	1.18	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	7.90	10.2	0.59	1.17	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	194	165	223	14.50	29.00	Roche Integra AMP buffer 37°C
	U/l	151	129	173	11.00	22.00	Roche Integra AMP buffer 30°C
	U/l	124	105	143	9.50	19.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	280	238	322	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	28.7	22.7	34.7	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazo with Sulphanilic Acid
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	78.0	61.6	94.4	8.20	16.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	79.5	62.8	96.2	8.35	16.70	Diazonium ion
	mg/dl	4.65	3.67	5.63	0.49	0.98	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.26	2.94	3.58	0.16	0.32	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
CK Total	U/l	477	391	563	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	166	240	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	345	276	414	34.50	69.00	Alkaline picrate with deproteinization
	mg/dl	3.90	3.12	4.68	0.39	0.78	
	µmol/l	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	379	303	455	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.28	3.42	5.14	0.43	0.86	
	µmol/l	349	279	419	35.00	70.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.94	3.15	4.73	0.40	0.79	
gamma-GT	U/l	149	127	171	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	117	100	134	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	92	78	106	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	157	134	180	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	106	142	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	16.3	13.9	18.7	1.20	2.40	Hexokinase
	mg/dl	294	250	338	22.00	44.00	
	mmol/l	16.1	13.6	18.6	1.25	2.50	Glucose oxidase
	mg/dl	290	245	335	22.50	45.00	
HDL - Cholesterol	mmol/l	3.91	3.32	4.50	0.30	0.59	Direct HDL Roche 3rd generation
	mg/dl	151	128	174	11.50	23.00	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
LD (LDH)	U/l	346	294	398	26.00	52.00	L->P IFCC 37°C
	U/l	250	212	288	19.00	38.00	L->P IFCC 30°C
	U/l	175	149	201	13.00	26.00	L->P IFCC 25°C
Magnesium	mmol/l	1.82	1.60	2.04	0.11	0.22	Xylidyl Blue
	mg/dl	4.42	3.89	4.95	0.27	0.53	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.44	2.07	2.81	0.19	0.37	Phosphomolybdate enzymatic
	mg/dl	7.56	6.42	8.70	0.57	1.14	
	mmol/l	2.38	2.03	2.73	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.38	6.29	8.47	0.55	1.09	
Potassium	mmol/l	6.18	5.69	6.67	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.93	2.47	3.39	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	259	219	299	20.00	40.00	
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	19.1	16.3	21.9	1.40	2.80	Urease hypochlorite
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	8.11	10.6	0.62	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.06	10.5	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.1	24.8	33.4	2.15	4.30	Bromocresol Green
	g/dl	2.91	2.48	3.34	0.22	0.43	
	g/l	26.2	22.3	30.1	1.95	3.90	Bromocresol Purple
	g/dl	2.62	2.23	3.01	0.20	0.39	
Alkaline Phosphatase	U/l	199	169	229	15.00	30.00	Roche Integra AMP buffer 37°C
	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 30°C
	U/l	127	108	146	9.50	19.00	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	261	222	300	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	246	209	283	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	275	233	317	21.00	42.00	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	20.3	16.1	24.5	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	

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Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	26.8	21.1	32.5	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.23	1.91	0.17	0.34	
Bilirubin Total	µmol/l	78.4	61.9	94.9	8.25	16.50	Diazo with Sulphanilic Acid
	mg/dl	4.59	3.62	5.56	0.49	0.97	
	µmol/l	78.9	62.3	95.5	8.30	16.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.62	3.64	5.60	0.49	0.98	
	µmol/l	80.4	63.5	97.3	8.45	16.90	Diazonium ion
	mg/dl	4.70	3.71	5.69	0.50	0.99	
Calcium	mmol/l	3.29	2.97	3.61	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.2	11.9	14.5	0.65	1.30	
	mmol/l	3.21	2.89	3.53	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.29	2.96	3.62	0.17	0.33	NM-BAPTA
	mg/dl	13.2	11.9	14.5	0.65	1.30	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.95	6.05	7.85	0.45	0.90	Cholesterol Oxidase
	mg/dl	268	234	302	17.00	34.00	
Cholinesterase	U/l	5012	4010	6014	501.00	1002.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	484	397	571	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	303	249	357	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 25°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	391	313	469	39.00	78.00	Enzymatic UV method (340nm)
	mg/dl	4.42	3.54	5.30	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	391	313	469	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	388	310	466	39.00	78.00	Jaffe rate blanked
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	381	304	458	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.31	3.44	5.18	0.44	0.87	
gamma-GT	U/l	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	161	137	185	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	127	108	146	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	99	85	113	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	16.3	13.8	18.8	1.25	2.50	Glucose oxidase
	mg/dl	294	249	339	22.50	45.00	
HDL - Cholesterol	mmol/l	3.91	3.33	4.49	0.29	0.58	Direct HDL Roche 3rd generation
	mg/dl	151	129	173	11.00	22.00	
Iron	µmol/l	38.0	31.1	44.9	3.45	6.90	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	5.49	4.50	6.48	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.5	58.5	4.50	9.00	
LD (LDH)	U/l	621	528	714	46.50	93.00	P->L German methods 37°C
	U/l	448	381	515	33.50	67.00	P->L German methods 30°C
	U/l	315	268	362	23.50	47.00	P->L German methods 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	335	284	386	25.50	51.00	L->P IFCC 37°C
	U/l	242	205	279	18.50	37.00	L->P IFCC 30°C
	U/l	170	144	196	13.00	26.00	L->P IFCC 25°C
Lipase	U/l	57	45	69	6.00	12.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.79	1.58	2.00	0.11	0.21	Xylidyl Blue
	mg/dl	4.35	3.84	4.86	0.26	0.51	
	mmol/l	1.79	1.58	2.00	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.35	3.84	4.86	0.26	0.51	
Phosphate Inorganic	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	6.38	5.87	6.89	0.26	0.51	ISE method - indirect
Protein Total	g/l	43.7	34.9	52.5	4.40	8.80	Biuret reaction end point
	g/dl	4.37	3.49	5.25	0.44	0.88	
	g/l	43.8	35.0	52.6	4.40	8.80	Biuret reaction kinetic
	g/dl	4.38	3.50	5.26	0.44	0.88	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.3	46.1	70.5	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	326	258	394	34.00	68.00	
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.96	2.49	3.43	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	262	220	304	21.00	42.00	
Urea	mmol/l	20.2	17.2	23.2	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.2	17.2	23.2	1.50	3.00	BUN
	mg/dl	56.7	48.2	65.2	4.25	8.50	

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RANDOX

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.08	10.5	0.60	1.19	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	169	144	194	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	132	112	152	10.00	20.00	Roche Integra AMP buffer 30°C
	U/l	108	92	124	8.00	16.00	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	251	213	289	19.00	38.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	275	233	317	21.00	42.00	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
Bicarbonate	mmol/l	20.9	16.6	25.2	2.15	4.30	Enzymatic
Bile Acids	µmol/l	45.3	36.2	54.4	4.55	9.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.8	22.7	34.9	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	25.0	19.7	30.3	2.65	5.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Bilirubin Total	µmol/l	78.6	62.1	95.1	8.25	16.50	Diazo with Sulphanilic Acid
	mg/dl	4.60	3.63	5.57	0.49	0.97	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	77.2	61.0	93.4	8.10	16.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.52	3.57	5.47	0.48	0.95	
	µmol/l	76.9	60.8	93.0	8.05	16.10	Diazonium ion
	mg/dl	4.50	3.56	5.44	0.47	0.94	
Calcium	mmol/l	3.25	2.93	3.57	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.0	11.7	14.3	0.65	1.30	
	mmol/l	3.24	2.92	3.56	0.16	0.32	NM-BAPTA
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
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	443	363	523	40.00	80.00	CK-NAC (IFCC) 37°C
	U/l	277	227	327	25.00	50.00	CK-NAC (IFCC) 30°C
	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	389	312	466	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.40	3.53	5.27	0.44	0.87	
	µmol/l	388	311	465	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
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
	U/l	155	132	178	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	122	104	140	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	96	81	111	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
HDL - Cholesterol	mmol/l	3.94	3.35	4.53	0.30	0.59	Direct HDL Roche 3rd generation
	mg/dl	152	129	175	11.50	23.00	
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
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	330	281	379	24.50	49.00	L->P IFCC 37°C
	U/l	238	203	273	17.50	35.00	L->P IFCC 30°C
	U/l	167	142	192	12.50	25.00	L->P IFCC 25°C
Lipase	U/l	57	45	69	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	6.36	5.85	6.87	0.26	0.51	ISE method - indirect
Protein Total	g/l	43.4	34.7	52.1	4.35	8.70	Biuret reaction end point
	g/dl	4.34	3.47	5.21	0.44	0.87	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	58.4	46.2	70.6	6.10	12.20	FE+UIBC(saturation with iron)
	µg/dl	326	258	394	34.00	68.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	41.1	32.4	49.8	4.35	8.70	Calculated from Transferrin
	µg/dl	230	181	279	24.50	49.00	
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	3.04	2.55	3.53	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	269	226	312	21.50	43.00	
UIBC	µmol/l	21.5	17.7	25.3	1.90	3.80	Direct Colorimetric
	µg/dl	120	98.9	141	10.55	21.10	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.95	7.78	10.1	0.59	1.17	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.95	7.80	10.1	0.58	1.15	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.94	7.78	10.1	0.58	1.16	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			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	507	431	583	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	294	250	338	22.00	44.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	295	251	339	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	304	258	350	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	165	132	198	16.50	33.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	21.3	16.9	25.7	2.20	4.40	Enzymatic
Bile Acids	µmol/l	45.1	36.1	54.1	4.50	9.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	30.3	23.9	36.7	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	29.9	23.6	36.2	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.75	1.38	2.12	0.19	0.37	
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	
	µmol/l	92.5	73.1	112	9.70	19.40	Oxidation to Biliverdin/Vanadate
	mg/dl	5.41	4.28	6.54	0.57	1.13	
Calcium	mmol/l	3.30	2.97	3.63	0.17	0.33	Arsenazo III
	mg/dl	13.2	11.9	14.5	0.65	1.30	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.35	6.39	8.31	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
CK Total	U/l	474	389	559	42.50	85.00	CK-NAC substrate start (DGKC) 37°C
	U/l	508	417	599	45.50	91.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	320	256	384	32.00	64.00	Alkaline picrate no deproteinization
	mg/dl	3.62	2.89	4.35	0.37	0.73	
	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method (340nm)
	mg/dl	4.32	3.46	5.18	0.43	0.86	
gamma-GT	U/l	165	140	190	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.4	13.9	18.9	1.25	2.50	Hexokinase
	mg/dl	296	250	342	23.00	46.00	
	mmol/l	16.9	14.4	19.4	1.25	2.50	Glucose oxidase
	mg/dl	305	259	351	23.00	46.00	
Iron	µmol/l	39.7	32.6	46.8	3.55	7.10	Colorimetric without ppt.
	µg/dl	222	182	262	20.00	40.00	
Lactate	mmol/l	5.40	4.43	6.37	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.9	57.5	4.40	8.80	
LD (LDH)	U/l	682	580	784	51.00	102.00	P->L German methods 37°C
	U/l	333	283	383	25.00	50.00	L->P IFCC 37°C
Lipase	U/l	85	68	102	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.18	1.92	2.44	0.13	0.26	Colorimetric
	mg/dl	1.51	1.33	1.69	0.09	0.18	
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	2.46	2.09	2.83	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.63	6.48	8.78	0.58	1.15	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.36	5.85	6.87	0.26	0.51	Enzymatic
	mmol/l	6.19	5.70	6.68	0.25	0.49	ISE method - direct
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
Sodium	mmol/l	158	150	166	4.00	8.00	Enzymatic
	mmol/l	160	152	168	4.00	8.00	ISE method - direct
TIBC	µmol/l	58.6	46.3	70.9	6.15	12.30	Direct Colorimetric
	µg/dl	328	259	397	34.50	69.00	
Triglycerides	mmol/l	3.08	2.59	3.57	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	273	229	317	22.00	44.00	
Urea	mmol/l	20.3	17.3	23.3	1.50	3.00	Urease kinetic
	mg/dl	122	104	140	9.00	18.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	BUN
	mg/dl	57.0	48.5	65.5	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	8.33	10.8	0.63	1.25	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Green
	g/dl	2.78	2.36	3.20	0.21	0.42	
	g/l	26.5	22.6	30.4	1.95	3.90	Bromocresol Purple
	g/dl	2.65	2.26	3.04	0.20	0.39	
Alkaline Phosphatase	U/l	420	357	483	31.50	63.00	Diethanolamine buffer DEA 37°C
	U/l	249	212	286	18.50	37.00	AMP optimised to IFCC 37°C
	U/l	245	209	281	18.00	36.00	AMP non-optimised 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	245	208	282	18.50	37.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	290	246	334	22.00	44.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	23.4	18.6	28.2	2.40	4.80	Enzymatic
Bilirubin Direct	µmol/l	26.7	21.1	32.3	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Bilirubin Total	µmol/l	90.5	71.5	110	9.50	19.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.29	4.18	6.40	0.56	1.11	
Calcium	mmol/l	3.35	3.01	3.69	0.17	0.34	Cresolphthalein complexone
	mg/dl	13.4	12.1	14.7	0.65	1.30	
	mmol/l	3.21	2.89	3.53	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.16	6.23	8.09	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
CK Total	U/l	466	382	550	42.00	84.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	387	310	464	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	362	290	434	36.00	72.00	Jaffe rate blanked
	mg/dl	4.09	3.28	4.90	0.41	0.81	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.10	3.28	4.92	0.41	0.82	
gamma-GT	U/l	156	132	180	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.9	13.6	18.2	1.15	2.30	Hexokinase
	mg/dl	287	245	329	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	2.27	1.93	2.61	0.17	0.34	Direct Clearance Method
	mg/dl	87.6	74.5	101	6.55	13.10	
Iron	µmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.52	4.53	6.51	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.7	40.8	58.6	4.45	8.90	
LD (LDH)	U/l	311	264	358	23.50	47.00	L->P 37°C
	U/l	624	530	718	47.00	94.00	P->L German methods 37°C
	U/l	335	285	385	25.00	50.00	L->P IFCC 37°C
Lipase	U/l	76	61	91	7.50	15.00	Other 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	

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RANDOX

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.81	1.59	2.03	0.11	0.22	Xylidyl Blue
	mg/dl	4.40	3.86	4.94	0.27	0.54	
Phosphate Inorganic	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Potassium	mmol/l	6.32	5.82	6.82	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.5	36.4	54.6	4.55	9.10	Biuret reaction end point
	g/dl	4.55	3.64	5.46	0.46	0.91	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
TIBC	µmol/l	57.4	45.3	69.5	6.05	12.10	Direct Colorimetric
	µg/dl	321	253	389	34.00	68.00	
Triglycerides	mmol/l	3.14	2.64	3.64	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	278	234	322	22.00	44.00	
	mmol/l	3.07	2.58	3.56	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	272	228	316	22.00	44.00	
Urea	mmol/l	20.4	17.4	23.4	1.50	3.00	Urease kinetic
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	26.2	22.3	30.1	1.95	3.90	Bromocresol Purple
	g/dl	2.62	2.23	3.01	0.20	0.39	
Alkaline Phosphatase	U/l	240	204	276	18.00	36.00	Siemens Dimension AMP buffer 37°C
	U/l	250	213	287	18.50	37.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer with P5P 37°C
	U/l	140	112	168	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	345	293	397	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	174	139	209	17.50	35.00	Tris buffer with P5P 37°C
	U/l	178	142	214	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	22.0	17.5	26.5	2.25	4.50	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	84.0	66.4	102	8.80	17.60	Diazo with Sulphanilic Acid
	mg/dl	4.91	3.88	5.94	0.52	1.03	
Calcium	mmol/l	3.23	2.90	3.56	0.17	0.33	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.65	5.78	7.52	0.44	0.87	Dimension-Siemens reagents
	mg/dl	257	223	291	17.00	34.00	
CK Total	U/l	460	377	543	41.50	83.00	CK-NAC (IFCC) 37°C
	U/l	444	364	524	40.00	80.00	Dithioerythritol (DTE) IFCC correlated 37°C

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	383	307	459	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	376	301	451	37.50	75.00	Enzymatic UV method (340nm)
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	388	310	466	39.00	78.00	IDMS traceable
	mg/dl	4.38	3.50	5.26	0.44	0.88	
gamma-GT	U/l	164	139	189	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	189	161	217	14.00	28.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
HDL - Cholesterol	mmol/l	3.97	3.37	4.57	0.30	0.60	Direct HDL PPD
	mg/dl	153	130	176	11.50	23.00	
	mmol/l	3.87	3.29	4.45	0.29	0.58	Direct HDL PEGME
	mg/dl	149	127	171	11.00	22.00	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric with ppt.
	µg/dl	211	173	249	19.00	38.00	
	µmol/l	36.8	30.2	43.4	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
Lactate	mmol/l	5.54	4.54	6.54	0.50	1.00	UV LDH
	mg/dl	49.9	40.9	58.9	4.50	9.00	
LD (LDH)	U/l	318	270	366	24.00	48.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	311	264	358	23.50	47.00	L->P IFCC 37°C
Lipase	U/l	253	203	303	25.00	50.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.44	2.07	2.81	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.56	6.42	8.70	0.57	1.14	
Potassium	mmol/l	6.35	5.84	6.86	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.4	36.4	54.4	4.50	9.00	Biuret reaction end point
	g/dl	4.54	3.64	5.44	0.45	0.90	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.97	0.78	1.17	0.10	0.20	
TIBC	µmol/l	51.2	40.4	62.0	5.40	10.80	Removal of excess free iron
	µg/dl	286	226	346	30.00	60.00	
Triglycerides	mmol/l	2.94	2.47	3.41	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	260	219	301	20.50	41.00	
	mmol/l	3.02	2.54	3.50	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	267	225	309	21.00	42.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	224	308	21.00	42.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.19	8.00	10.4	0.60	1.19	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
	g/l	26.4	22.4	30.4	2.00	4.00	Bromocresol Purple
	g/dl	2.64	2.24	3.04	0.20	0.40	
Alkaline Phosphatase	U/l	244	208	280	18.00	36.00	Siemens Dimension AMP buffer 37°C
	U/l	240	204	276	18.00	36.00	AMP optimised to IFCC 37°C
	U/l	285	242	328	21.50	43.00	Randox AMP 37°C
ALT (GPT)	U/l	138	111	165	13.50	27.00	Tris buffer with P5P 37°C
	U/l	138	110	166	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	343	292	394	25.50	51.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	176	141	211	17.50	35.00	Tris buffer with P5P 37°C
	U/l	176	141	211	17.50	35.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	22.6	17.9	27.3	2.35	4.70	Enzymatic
Bilirubin Direct	µmol/l	17.0	13.4	20.6	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	83.0	65.5	101	8.75	17.50	Diazo with Sulphanilic Acid
	mg/dl	4.86	3.83	5.89	0.52	1.03	
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	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.86	5.97	7.75	0.45	0.89	Cholesterol Oxidase
	mg/dl	265	230	300	17.50	35.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.69	5.82	7.56	0.44	0.87	Dimension-Siemens reagents
	mg/dl	258	225	291	16.50	33.00	
CK Total	U/l	449	369	529	40.00	80.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	385	308	462	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	374	299	449	37.50	75.00	Enzymatic UV method (340nm)
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	373	298	448	37.50	75.00	IDMS traceable
	mg/dl	4.21	3.37	5.05	0.42	0.84	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	187	159	215	14.00	28.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	16.2	13.7	18.7	1.25	2.50	Hexokinase
	mg/dl	292	247	337	22.50	45.00	
HDL - Cholesterol	mmol/l	3.87	3.29	4.45	0.29	0.58	Direct HDL PPD
	mg/dl	149	127	171	11.00	22.00	
	mmol/l	3.89	3.30	4.48	0.30	0.59	Direct HDL PEGME
	mg/dl	150	127	173	11.50	23.00	
Iron	µmol/l	36.9	30.2	43.6	3.35	6.70	Colorimetric with ppt.
	µg/dl	206	169	243	18.50	37.00	
	µmol/l	36.7	30.1	43.3	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
LD (LDH)	U/l	318	271	365	23.50	47.00	Siemens Dimension L-P Non IFCC 37°C

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	316	269	363	23.50	47.00	L->P IFCC 37°C
Lipase	U/l	262	210	314	26.00	52.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.80	1.58	2.02	0.11	0.22	Methylthymol blue
	mg/dl	4.37	3.84	4.90	0.27	0.53	
Phosphate Inorganic	mmol/l	2.44	2.07	2.81	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.56	6.42	8.70	0.57	1.14	
Potassium	mmol/l	6.27	5.76	6.78	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.4	36.4	54.4	4.50	9.00	Biuret reaction end point
	g/dl	4.54	3.64	5.44	0.45	0.90	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	50.1	39.6	60.6	5.25	10.50	Removal of excess free iron
	µg/dl	280	221	339	29.50	59.00	
	µmol/l	48.7	38.5	58.9	5.10	10.20	Direct Colorimetric
	µg/dl	272	215	329	28.50	57.00	
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	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	265	222	308	21.50	43.00	
Urea	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease end point
	mg/dl	119	102	136	8.50	17.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease kinetic
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 913UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-01-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.12	7.95	10.3	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.00	7.83	10.2	0.59	1.17	

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