RANDOX 0086 CE

HUMAN ASSAYED MULTI-SERA - LEVEL 2 (HUM ASY CONTROL 2)

CAT. NO. HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1199UN **EXPIRY:** 2021-03-28

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 2 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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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Purple
	g/dl	4.16	3.53	4.79	0.32	0.63	
Alkaline Phosphatase	U/l	152	129	175	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	149	127	171	11.00	22.00	AMP optimised to NVKC/SFBC 37°C
	U/l	149	126	172	11.50	23.00	AMP non-optimised 37°C
	U/l	143	121	165	11.00	22.00	Colorimetric 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	97	82	112	7.50	15.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	29.9	23.9	35.9	3.00	6.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	6891	5513	8269	689.00	1378.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	14.4	11.5	17.3	1.45	2.90	Colorimetric
	µg/dl	91.6	73.1	110	9.25	18.50	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	124	99.3	149	12.35	24.70	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.2	148	12.40	24.80	Creatinine PAP method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	47	40	54	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.42	5.45	7.39	0.49	0.97	Glucose oxidase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	90.6	131	10.20	20.40	
	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.70	1.39	2.01	0.16	0.31	Colorimetric Lactate Oxidase
	mg/dl	15.3	12.5	18.1	1.40	2.80	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.646	0.826	0.05	0.09	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Enzymatic
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Osmolality	mOsm/kg	297	238	356	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.00	3.41	4.59	0.30	0.59	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.03	3.44	4.62	0.30	0.59	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction kinetic
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.0	35.5	54.5	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	252	198	306	27.00	54.00	
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.7	106	7.25	14.50	
	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.2	106	7.50	15.00	
	mmol/l	1.05	0.89	1.22	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	78.3	108	7.30	14.60	
UIBC	µmol/l	23.9	19.6	28.2	2.15	4.30	Direct Colorimetric
	µg/dl	134	110	158	12.00	24.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.97	6.49	0.38	0.76	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease end point
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.41	6.29	8.53	0.56	1.12	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
Bilirubin Total	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Cholesterol	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.41	1.19	1.63	0.11	0.22	Direct HDL PPD
	mg/dl	54.4	45.9	62.9	4.25	8.50	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.23	3.89	4.57	0.17	0.34	ISE method - direct
Protein Total	g/l	60.9	48.7	73.1	6.10	12.20	Biuret reaction end point
	g/dl	6.09	4.87	7.31	0.61	1.22	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	
Urea	mmol/l	6.88	5.85	7.91	0.52	1.03	Urease kinetic
	mg/dl	41.3	35.2	47.4	3.05	6.10	
	mmol/l	6.88	5.85	7.91	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
	g/l	44.1	37.4	50.8	3.35	6.70	Bromocresol Purple
	g/dl	4.41	3.74	5.08	0.34	0.67	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	77	65	89	6.00	12.00	pNP Maltotrioside substrates 37°C
	U/l	79	68	90	5.50	11.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	82	70	94	6.00	12.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.9	15.7	24.1	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	29.9	23.6	36.2	3.15	6.30	DPD (Beckman AU)
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.90	7.98	9.82	0.46	0.92	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Chloride	mmol/l	95.7	88.1	103	3.80	7.60	ISE indirect
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	16.6	13.3	19.9	1.65	3.30	Colorimetric
	µg/dl	106	84.6	127	10.70	21.40	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.7	150	12.65	25.30	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	122	98.0	146	12.00	24.00	Jaffe rate blanked
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	121	96.8	145	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	IDMS traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	206	163	249	21.50	43.00	Oxobutyrate < 10 mmol/l 37°C
HDL - Cholesterol	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct Clearance Method
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.35	1.15	1.55	0.10	0.20	HDL - Ultra
	mg/dl	52.1	44.4	59.8	3.85	7.70	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.6	129	9.70	19.40	
	µmol/l	19.7	16.1	23.3	1.80	3.60	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.63	1.34	1.92	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.1	17.3	1.30	2.60	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P 37°C
	U/l	438	373	503	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
	U/l	31	24	38	3.50	7.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.638	0.806	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction kinetic
	g/dl	5.93	4.75	7.11	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
UIBC	µmol/l	29.1	23.8	34.4	2.65	5.30	Direct Colorimetric
	µg/dl	163	133	193	15.00	30.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease end point
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Green
	g/dl	4.44	3.77	5.11	0.34	0.67	
	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Purple
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	173	147	199	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer SCE 37°C
Amylase Total	U/l	82	70	94	6.00	12.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	84	72	96	6.00	12.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Differential rate pH change
	mmol/l	14.8	11.7	17.9	1.55	3.10	Ion selective electrode
Bilirubin Direct	µmol/l	13.5	10.7	16.3	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.790	0.626	0.954	0.08	0.16	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Ion selective electrode
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.02	3.49	4.55	0.27	0.53	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
CK Total	U/l	191	157	225	17.00	34.00	Monothioglycerol 37°C
Creatinine	µmol/l	123	98.2	148	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	120	96.3	144	11.85	23.70	Enzymatic UV method
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	124	98.8	149	12.60	25.20	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Oxygen electrode
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.02	5.12	6.92	0.45	0.90	Glucose oxidase
	mg/dl	108	92.3	124	7.85	15.70	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.39	1.18	1.60	0.11	0.21	HDL - Ultra
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	171	145	197	13.00	26.00	L->P 37°C
	U/l	171	146	196	12.50	25.00	L->P IFCC 37°C
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.02	0.89	1.15	0.06	0.13	Spectrophotometric
	mg/dl	0.708	0.620	0.796	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Calmagite
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mOsm/kg	280	224	336	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction CX4/5/7
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction kinetic
	g/dl	5.71	4.57	6.85	0.57	1.14	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.4	118	8.30	16.60	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	7.90	6.72	9.08	0.59	1.18	Urease end point
	mg/dl	47.5	40.4	54.6	3.55	7.10	
	mmol/l	7.71	6.56	8.86	0.58	1.15	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.71	6.55	8.87	0.58	1.16	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	92	126	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Glucose	mmol/l	6.53	5.55	7.51	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Protein Total	g/l	59.1	47.2	71.0	5.95	11.90	Biuret reaction end point
	g/dl	5.91	4.72	7.10	0.60	1.19	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.13	6.06	8.20	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	125	106	144	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	102	87	117	7.50	15.00	AMP optimised to IFCC 25°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.28	1.01	1.55	0.14	0.27	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Cholesterol	mmol/l	4.25	3.69	4.81	0.28	0.56	Cholesterol Oxidase
	mg/dl	164	142	186	11.00	22.00	
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.28	5.46	7.10	0.41	0.82	
Urea	mmol/l	6.78	5.77	7.79	0.51	1.01	Urease kinetic
	mg/dl	40.7	34.7	46.7	3.00	6.00	
	mmol/l	6.78	5.76	7.80	0.51	1.02	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	256	218	294	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	199	170	228	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	164	139	189	12.50	25.00	Diethanolamine buffer DEA 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	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	
Cholesterol	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	50.6	43.2	58.0	3.70	7.40	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Protein Total	g/l	63.2	50.6	75.8	6.30	12.60	Biuret reaction end point
	g/dl	6.32	5.06	7.58	0.63	1.26	
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.5	73.5	102	7.00	14.00	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	41.5	35.3	47.7	3.10	6.20	Turbidimetric Assays
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	76	65	87	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	59	50	68	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	81	69	93	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	81	68	94	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Colorimetric
	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.2	15.1	23.3	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	19.3	15.3	23.3	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.17	1.96	2.38	0.11	0.21	NM-BAPTA
	mg/dl	8.70	7.86	9.54	0.42	0.84	
Cholesterol	mmol/l	4.18	3.63	4.73	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Chloride	mmol/l	96.4	88.6	104	3.90	7.80	ISE indirect
CK Total	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	111	91	131	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	186	152	220	17.00	34.00	Creatinine phosphate substrate Start 37°C
	U/l	116	95	137	10.50	21.00	Creatinine phosphate substrate Start 30°C
	U/l	79	65	93	7.00	14.00	Creatinine phosphate substrate Start 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	122	97.6	146	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	91.1	131	9.95	19.90	
	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.71	1.40	2.02	0.16	0.31	Colorimetric Lactate Oxidase
	mg/dl	15.4	12.6	18.2	1.40	2.80	
LD (LDH)	U/l	386	328	444	29.00	58.00	P->L German methods 37°C
	U/l	279	237	321	21.00	42.00	P->L German methods 30°C
	U/l	196	166	226	15.00	30.00	P->L German methods 25°C
	U/l	211	179	243	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.653	0.833	0.05	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction end point
	g/dl	5.71	4.57	6.85	0.57	1.14	
	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction kinetic
	g/dl	5.74	4.59	6.89	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.2	34.9	53.5	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	247	195	299	26.00	52.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.3	112	7.60	15.20	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.5	114	7.85	15.70	
UIBC	µmol/l	25.1	20.6	29.6	2.25	4.50	Direct Colorimetric
	µg/dl	140	115	165	12.50	25.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	7.04	5.99	8.09	0.53	1.05	Urease kinetic
	mg/dl	42.3	36.0	48.6	3.15	6.30	
	mmol/l	7.17	6.10	8.24	0.54	1.07	Urease hypochlorite
	mg/dl	43.1	36.7	49.5	3.20	6.40	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.04	5.98	8.10	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.5	36.9	50.1	3.30	6.60	Bromocresol Green
	g/dl	4.35	3.69	5.01	0.33	0.66	
Alkaline Phosphatase	U/l	263	224	302	19.50	39.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	16.8	13.2	20.4	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.983	0.772	1.19	0.11	0.21	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.38	5.43	7.33	0.48	0.95	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.7	132	10.15	20.30	
LD (LDH)	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.48	1.25	1.71	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.59	3.88	5.30	0.36	0.71	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.22	5.41	7.03	0.41	0.81	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	69	59	79	5.00	10.00	Roche Integra AMP buffer 25°C
	U/l	191	162	220	14.50	29.00	Randox AMP 37°C
	U/l	149	126	172	11.50	23.00	Randox AMP 30°C
	U/l	122	104	140	9.00	18.00	Randox AMP 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	77	66	88	5.50	11.00	Roche liquid stable pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	5.01	3.36	6.66	0.83	1.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.96	2.65	5.27	0.66	1.31	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.99	6.02	12.0	1.49	2.97	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.0	10.1	19.9	2.45	4.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.0	9.38	18.6	2.31	4.62	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	19.0	12.7	25.3	3.15	6.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	26.1	20.9	31.3	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	14.7	11.6	17.8	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	25.1	19.9	30.3	2.60	5.20	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	92.2	84.9	99.5	3.65	7.30	ISE indirect
CK Total	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	75	61	89	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	55	47	63	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.68	1.38	1.98	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	15.1	12.4	17.8	1.35	2.70	
LD (LDH)	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	145	123	167	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.4	33.5	51.3	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	237	187	287	25.00	50.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.66	6.51	8.81	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	127	108	146	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	104	89	119	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	80	68	92	6.00	12.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.0	20.0	30.0	2.50	5.00	Enzymatic Colorimetric
Bilirubin Total	µmol/l	30.6	24.2	37.0	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.42	2.16	0.19	0.37	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Chloride	mmol/l	94.6	87.1	102	3.75	7.50	ISE indirect
CK Total	U/l	171	140	202	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	107	88	126	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC (IFCC) 25°C

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	27	23	31	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.17	5.25	7.09	0.46	0.92	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.19	1.01	1.37	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.9	39.0	52.8	3.45	6.90	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
LD (LDH)	U/l	384	326	442	29.00	58.00	P->L German methods 37°C
	U/l	277	235	319	21.00	42.00	P->L German methods 30°C
	U/l	195	165	225	15.00	30.00	P->L German methods 25°C
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.99	0.87	1.11	0.06	0.12	Enzymatic
	mg/dl	2.41	2.12	2.70	0.15	0.29	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.18	3.84	4.52	0.17	0.34	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Urea	mmol/l	7.69	6.54	8.84	0.58	1.15	Urease end point
	mg/dl	46.2	39.3	53.1	3.45	6.90	
	mmol/l	7.69	6.54	8.84	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.9	34.7	47.1	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.09	3.47	4.71	0.31	0.62	
Alkaline Phosphatase	U/l	125	106	144	9.50	19.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	61	51	71	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.24	2.02	2.46	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.10	9.86	0.44	0.88	
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5707	4565	6849	571.00	1142.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	180	148	212	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	118	94.2	142	11.90	23.80	Vitros IDMS Traceable
	mg/dl	1.33	1.06	1.60	0.14	0.27	
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Vitros Magnetic HDL
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	574	488	660	43.00	86.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	191	153	229	19.00	38.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	49.3	38.9	59.7	5.20	10.40	Ortho Vitros Microslide Systems
	µg/dl	276	217	335	29.50	59.00	
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	109	91.2	127	8.90	17.80	

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RANDOX

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.56	4.84	6.28	0.36	0.72	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	288	244	332	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	224	190	258	17.00	34.00	Diethanolamine buffer DEA 30°C
	U/l	184	156	212	14.00	28.00	Diethanolamine buffer DEA 25°C
	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	98	84	112	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	29.5	23.6	35.4	2.95	5.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	24.0	19.0	29.0	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.40	1.11	1.69	0.15	0.29	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Arsenazo III
	mg/dl	8.70	7.86	9.54	0.42	0.84	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	101	92.5	110	4.25	8.50	ISE direct
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL PEGME
	mg/dl	50.6	43.2	58.0	3.70	7.40	
Iron	µmol/l	21.5	17.7	25.3	1.90	3.80	Colorimetric without ppt.
	µg/dl	120	98.9	141	10.55	21.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.95	3.64	4.26	0.16	0.31	ISE method - direct
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
	g/l	40.9	34.7	47.1	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.09	3.47	4.71	0.31	0.62	
	g/l	41.7	35.5	47.9	3.10	6.20	Turbidimetric Assays
	g/dl	4.17	3.55	4.79	0.31	0.62	
Alkaline Phosphatase	U/l	125	106	144	9.50	19.00	Ortho Vitros Microslide Systems 37°C
	U/l	274	233	315	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	213	182	244	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	175	149	201	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	145	123	167	11.00	22.00	AMP optimised to NVKC/SFBC 37°C
	U/l	113	96	130	8.50	17.00	AMP optimised to NVKC/SFBC 30°C
	U/l	93	79	107	7.00	14.00	AMP optimised to NVKC/SFBC 25°C
	U/l	157	134	180	11.50	23.00	AMP non-optimised 37°C
	U/l	122	104	140	9.00	18.00	AMP non-optimised 30°C
	U/l	100	86	114	7.00	14.00	AMP non-optimised 25°C

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	31	25	37	3.00	6.00	Colorimetric 37°C
	U/l	23	19	27	2.00	4.00	Colorimetric 30°C
	U/l	17	14	20	1.50	3.00	Colorimetric 25°C
	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer with P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer with P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer with P5P 25°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	33	26	40	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	57	49	65	4.00	8.00	Immunoinhibition EPS substrate 37°C
	U/l	58	49	67	4.50	9.00	Roche liquid stable pNPG7 37°C
	U/l	67	57	77	5.00	10.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	78	66	90	6.00	12.00	pNP Maltotrioside substrates 37°C
	U/l	82	70	94	6.00	12.00	Siemens - blocked pNPG7 37°C
	U/l	66	56	76	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	80	68	92	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	81	68	94	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	76	65	87	5.50	11.00	Saccharogenic 37°C
	U/l	80	68	92	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	61	51	71	5.00	10.00	Ortho Vitros Microslide Systems 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	80	68	92	6.00	12.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	79	67	91	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	86	73	99	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	81	69	93	6.00	12.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	84	72	96	6.00	12.00	Beckman Synchron AMY7 37°C
	U/l	87	74	100	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	97	82	112	7.50	15.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.17	0.96	1.38	0.11	0.21	Immunoturbidimetric
	mg/dl	117	95.9	138	10.55	21.10	
Apolipoprotein B	g/l	0.62	0.51	0.73	0.06	0.11	Immunoturbidimetric
	mg/dl	62.2	51.0	73.4	5.60	11.20	
Acid Phosphatase (non-prostatic)	U/l	5.01	3.36	6.66	0.83	1.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.96	2.65	5.27	0.66	1.31	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.99	6.02	12.0	1.49	2.97	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.0	10.1	19.9	2.45	4.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.0	9.38	18.6	2.31	4.62	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	19.0	12.7	25.3	3.15	6.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Colorimetric 37°C
	U/l	22	18	26	2.00	4.00	Colorimetric 30°C
	U/l	16	13	19	1.50	3.00	Colorimetric 25°C
	U/l	52	42	62	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	28	40	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer with P5P 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer SCE 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	30.2	24.2	36.2	3.00	6.00	4th Generation Colorimetric
	µmol/l	26.1	20.9	31.3	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	14.7	11.6	17.8	1.55	3.10	Colorimetric
	mmol/l	15.3	12.1	18.5	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	14.1	11.2	17.0	1.45	2.90	Differential rate pH change
	mmol/l	14.8	11.8	17.8	1.50	3.00	Enzymatic
	mmol/l	14.9	11.8	18.0	1.55	3.10	Ion selective electrode
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	16.7	13.2	20.2	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.977	0.772	1.18	0.10	0.21	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Modified Jendrassik
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.61	1.27	1.95	0.17	0.34	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	36.0	28.4	43.6	3.80	7.60	Diazo with Dichloroaniline (DCA)
	mg/dl	2.11	1.66	2.56	0.23	0.45	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.3	22.4	34.2	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	24.0	19.0	29.0	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	28.9	22.9	34.9	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.34	2.04	0.18	0.35	
	µmol/l	34.7	27.4	42.0	3.65	7.30	Modified Jendrassik
	mg/dl	2.03	1.60	2.46	0.22	0.43	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Ion selective electrode
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.26	2.04	2.48	0.11	0.22	Methylthymol blue
	mg/dl	9.06	8.18	9.94	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	97.2	89.5	105	3.85	7.70	Colorimetric
	mmol/l	96.3	88.6	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.9	87.3	103	3.80	7.60	ISE indirect
	mmol/l	97.2	89.4	105	3.90	7.80	ISE direct
Cholinesterase	U/l	5795	4636	6954	579.50	1159.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	197	161	233	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	187	153	221	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	191	157	225	17.00	34.00	Monothioglycerol 37°C
	U/l	120	98	142	11.00	22.00	Monothioglycerol 30°C
	U/l	81	67	95	7.00	14.00	Monothioglycerol 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	169	138	200	15.50	31.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	106	86	126	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	72	59	85	6.50	13.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	17.5	14.0	21.0	1.75	3.50	Atomic absorption
	µg/dl	111	89.0	133	11.00	22.00	
	µmol/l	17.6	14.1	21.1	1.75	3.50	Colorimetric
	µg/dl	112	89.7	134	11.15	22.30	
Cortisol	nmol/l	456	342	570	57.00	114.00	Roche Cobas E411
	µg/dl	16.4	12.3	20.5	2.05	4.10	
Creatinine	µmol/l	120	95.9	144	12.05	24.10	Alkaline picrate with deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	124	99.0	149	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	118	94.2	142	11.90	23.80	Vitros IDMS Traceable
	mg/dl	1.33	1.06	1.60	0.14	0.27	
	µmol/l	123	98.3	148	12.35	24.70	IDMS traceable
	mg/dl	1.39	1.11	1.67	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.20	1.76	2.64	0.22	0.44	Immunoturbidimetric
	ng/ml	1.72	1.37	2.07	0.18	0.35	
Folate	nmol/l	43.5	33.1	53.9	5.20	10.40	Roche Cobas E411
	ng/ml	19.2	14.6	23.8	2.30	4.60	
Free T4	pmol/l	15.4	11.5	19.3	1.95	3.90	Abbott Architect
	ng/dl	1.20	0.897	1.50	0.15	0.30	
	pg/ml	12.0	8.97	15.0	1.52	3.03	Abbott Architect
	pmol/l	17.0	12.8	21.2	2.10	4.20	Siemens Centaur XP/XPT/Classic
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Siemens Centaur XP/XPT/Classic
	pmol/l	17.7	13.3	22.1	2.20	4.40	Beckman Access
	ng/dl	1.38	1.04	1.72	0.17	0.34	
	pg/ml	13.8	10.4	17.2	1.70	3.40	Beckman Access
	pmol/l	17.1	12.8	21.4	2.15	4.30	Beckman DxI800
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Beckman DxI800
	pmol/l	20.4	15.3	25.5	2.55	5.10	Siemens Immulite 2000/2500
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Siemens Immulite 2000/2500
	pmol/l	30.6	22.9	38.3	3.85	7.70	Vitros ECi
	ng/dl	2.39	1.79	2.99	0.30	0.60	
	pg/ml	23.9	17.9	29.9	3.00	6.00	Vitros ECi

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	20.7	15.5	25.9	2.60	5.20	Roche Elecsys
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Elecsys
	pmol/l	20.7	15.5	25.9	2.60	5.20	Roche Modular E170
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Modular E170
	pmol/l	20.3	15.3	25.3	2.50	5.00	Roche Cobas E411
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas E411
	pmol/l	20.1	15.1	25.1	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Roche Cobas 6000/8000
	pmol/l	18.7	14.0	23.4	2.35	4.70	Biomerieux Vidas FT4N Kit
	ng/dl	1.46	1.09	1.83	0.19	0.37	
	pg/ml	14.6	10.9	18.3	1.85	3.70	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	9.12	7.30	10.9	0.91	1.82	Immunoturbidimetric
	µg/ml	4.36	3.49	5.23	0.44	0.87	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	2.00	4.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	1.50	3.00	Gamma glutamyl-4-nitroanilide 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	55	47	63	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	95.9	130	8.55	17.10	
	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Oxygen electrode
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.29	5.34	7.24	0.48	0.95	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
alpha-HBDH	U/l	215	170	260	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	162	128	196	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	122	96	148	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PPD
	mg/dl	51.7	44.0	59.4	3.85	7.70	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Vitros Magnetic HDL
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PEGME
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct Clearance Method
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Immunoglobulin A	g/l	1.85	1.39	2.31	0.23	0.46	Immunoturbidimetric
	mg/dl	185	139	231	23.00	46.00	
Immunoglobulin G	g/l	6.43	5.27	7.59	0.58	1.16	Immunoturbidimetric
	mg/dl	643	527	759	58.00	116.00	
Immunoglobulin M	g/l	0.80	0.64	0.97	0.08	0.16	Immunoturbidimetric
	mg/dl	80.4	64.3	96.5	8.05	16.10	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Ion selective electrode
	mg/dl	14.5	11.9	17.1	1.30	2.60	
	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.9	12.2	17.6	1.35	2.70	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.71	1.40	2.02	0.16	0.31	Enzymatic Electrode
	mg/dl	15.4	12.6	18.2	1.40	2.80	
	mmol/l	1.62	1.33	1.91	0.15	0.29	UV LDH
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	574	488	660	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	183	156	210	13.50	27.00	L->P 37°C
	U/l	132	113	151	9.50	19.00	L->P 30°C
	U/l	93	79	107	7.00	14.00	L->P 25°C
	U/l	434	369	499	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	313	266	360	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	220	187	253	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	284	242	326	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	392	333	451	29.50	59.00	P->L SFBC 37°C
	U/l	283	240	326	21.50	43.00	P->L SFBC 30°C
	U/l	199	169	229	15.00	30.00	P->L SFBC 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
	U/l	191	153	229	19.00	38.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
	U/l	149	119	179	15.00	30.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.22	1.07	1.37	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.847	0.743	0.951	0.05	0.10	
	mmol/l	1.11	0.98	1.24	0.07	0.13	Flame photometry
	mg/dl	0.771	0.678	0.864	0.05	0.09	
	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.654	0.832	0.04	0.09	
	mmol/l	1.06	0.93	1.19	0.07	0.13	Spectrophotometric
	mg/dl	0.736	0.646	0.826	0.05	0.09	
	mmol/l	1.09	0.96	1.22	0.07	0.13	Randox Colorimetric
	mg/dl	0.757	0.666	0.848	0.05	0.09	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Calmagite
	mg/dl	2.22	1.95	2.49	0.14	0.27	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.91	2.41	0.13	0.25	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Enzymatic
	mg/dl	2.16	1.90	2.42	0.13	0.26	
NEFA	mmol/l	1.91	1.62	2.20	0.15	0.29	Colorimetric
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
	mOsm/kg	306	245	367	30.50	61.00	Freezing point depression
	mOsm/kg	305	244	366	30.50	61.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.07	0.10	0.01	0.02	Colorimetric
	mg/l	12.4	9.99	14.8	1.21	2.41	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.09	3.76	4.42	0.17	0.33	Enzymatic
	mmol/l	3.98	3.66	4.30	0.16	0.32	Flame photometry
	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - direct

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
	mmol/l	4.02	3.70	4.34	0.16	0.32	Colorimetric
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction CX4/5/7
	g/dl	5.95	4.76	7.14	0.60	1.19	
	g/l	59.6	47.7	71.5	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction kinetic
	g/dl	5.81	4.65	6.97	0.58	1.16	
PSA Total	ng/ml =	13.9	10.4	17.4	1.75	3.50	Roche Elecsys Modular E170
	ng/ml =	12.8	9.59	16.0	1.61	3.21	Beckman Access standardised to Hybritech
	ng/ml =	13.8	10.3	17.3	1.75	3.50	bioMerieux VIDAS TPSA
	ng/ml =	10.3	7.70	12.9	1.30	2.60	Siemens Centaur XP/XPT/Classic
	ng/ml =	11.7	8.81	14.6	1.45	2.89	Abbott Architect
	ng/ml =	14.1	10.5	17.7	1.80	3.60	Cobas E411
	ng/ml =	13.8	10.3	17.3	1.75	3.50	Roche Cobas 6000/8000
	ng/ml =	12.2	9.17	15.2	1.52	3.03	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.38	0.30	0.46	0.04	0.08	Enzymatic
	mg/dl	5.24	4.20	6.28	0.52	1.04	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	Flame photometry
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	140	133	147	3.50	7.00	Colorimetric
Theophylline	µmol/l	30.2	24.2	36.3	3.02	6.04	Immunoturbidimetric
	µg/ml	5.45	4.36	6.54	0.55	1.09	
Thyroid Stimulating Hormone	µU/ml =	1.08	0.86	1.30	0.11	0.22	Abbott Architect
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Beckman Access Fast TSH
	µU/ml =	1.38	1.10	1.66	0.14	0.28	bioMerieux VIDAS TSH
	µU/ml =	1.40	1.12	1.68	0.14	0.28	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Immulite 2000/2500
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Vitros ECi
	µU/ml =	1.52	1.21	1.83	0.16	0.31	Roche Elecsys
	µU/ml =	1.47	1.17	1.77	0.15	0.30	Roche Modular E170
	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas E411
	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000
	µU/ml =	1.23	0.98	1.48	0.13	0.25	Beckman DxI800 Hyper TSH
	µU/ml =	1.19	0.96	1.42	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	49.3	38.9	59.7	5.20	10.40	Ortho Vitros Microslide Systems
	µg/dl	276	217	335	29.50	59.00	
	µmol/l	43.1	34.1	52.1	4.50	9.00	Removal of excess free iron
	µg/dl	241	191	291	25.00	50.00	
	µmol/l	45.0	35.6	54.4	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	252	199	305	26.50	53.00	
	µmol/l	48.0	37.9	58.1	5.05	10.10	Direct Colorimetric
	µg/dl	268	212	324	28.00	56.00	
	µmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	µg/dl	255	202	308	26.50	53.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	52.0	41.1	62.9	5.45	10.90	Randox Direct
	µg/dl	291	230	352	30.50	61.00	
Tobramycin	µmol/l	5.81	4.65	6.97	0.58	1.16	Immunoturbidimetric
	µg/ml	2.72	2.18	3.26	0.27	0.54	
Total T3	nmol/l	2.22	1.66	2.78	0.28	0.56	Abbott Architect
	ng/ml	1.45	1.08	1.82	0.19	0.37	
	ng/dl	145	108	182	18.50	37.00	Abbott Architect
	nmol/l	2.32	1.74	2.90	0.29	0.58	BioMerieux Vidas
	ng/ml	1.51	1.13	1.89	0.19	0.38	
	ng/dl	151	113	189	19.00	38.00	BioMerieux Vidas
	nmol/l	2.84	2.13	3.55	0.36	0.71	Vitros ECi
	ng/ml	1.85	1.39	2.31	0.23	0.46	
	ng/dl	185	139	231	23.00	46.00	Vitros ECi
	nmol/l	2.41	1.81	3.01	0.30	0.60	Roche Cobas E411
	ng/ml	1.57	1.18	1.96	0.20	0.39	
	ng/dl	157	118	196	19.50	39.00	Roche Cobas E411
	nmol/l	2.40	1.80	3.00	0.30	0.60	Roche Cobas 6000/8000
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Roche Cobas 6000/8000
Total T4	nmol/l	82.5	61.9	103	10.30	20.60	Abbott Architect
	µg/dl	6.44	4.83	8.05	0.81	1.61	
	ng/ml	64.4	48.3	80.5	8.05	16.10	Abbott Architect
	nmol/l	83.3	62.5	104	10.40	20.80	Siemens Centaur XP/XPT/Classic
	µg/dl	6.50	4.88	8.12	0.81	1.62	
	ng/ml	65.0	48.8	81.2	8.10	16.20	Siemens Centaur XP/XPT/Classic

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	84.3	63.2	105	10.55	21.10	BioMerieux Vidas
	µg/dl	6.58	4.93	8.23	0.83	1.65	
	ng/ml	65.8	49.3	82.3	8.25	16.50	BioMerieux Vidas
	nmol/l	77.6	58.2	97.0	9.70	19.40	Siemens Immulite 2000/2500
	µg/dl	6.05	4.54	7.56	0.76	1.51	
	ng/ml	60.5	45.4	75.6	7.55	15.10	Siemens Immulite 2000/2500
	nmol/l	86.9	65.2	109	10.85	21.70	Roche Cobas E411
	µg/dl	6.78	5.09	8.47	0.85	1.69	
	ng/ml	67.8	50.9	84.7	8.45	16.90	Roche Cobas E411
	nmol/l	81.2	60.9	102	10.15	20.30	Roche Cobas 6000/8000
	µg/dl	6.33	4.75	7.91	0.79	1.58	
	ng/ml	63.3	47.5	79.1	7.90	15.80	Roche Cobas 6000/8000
Transferrin	g/l	1.79	1.43	2.15	0.18	0.36	Immunoturbidimetric
	mg/dl	179	143	215	18.00	36.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.23	1.03	1.43	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	109	91.2	127	8.90	17.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
UIBC	µmol/l	25.2	20.6	29.8	2.30	4.60	Direct Colorimetric
	µg/dl	141	115	167	13.00	26.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease hypochlorite
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Vitamin B12	pmol/l	487	390	584	48.50	97.00	Roche Cobas E411
	pg/ml	660	528	792	66.00	132.00	
Zinc	µmol/l	20.7	16.6	24.8	2.05	4.10	Atomic absorption
	µg/dl	135	108	162	13.50	27.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Zinc	µmol/l	21.7	17.4	26.0	2.15	4.30	Colorimetric with deproteinisation
	µg/dl	142	114	170	14.00	28.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		3.0	2.3	3.7	0.36	0.72	% of total Protein (Beckman Capillary)
alpha-2-globulin		9.3	7.1	11.5	1.12	2.23	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		67.5	60.8	74.2	3.35	6.70	% of total Protein (Beckman Capillary)
beta-globulin		10.1	7.7	12.5	1.21	2.42	% of total Protein (Beckman Capillary)
gamma-globulin		10.1	7.7	12.5	1.21	2.42	% of total Protein (Beckman Capillary)

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
Alkaline Phosphatase	U/l	261	222	300	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Arsenazo III
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.19	3.64	4.74	0.28	0.55	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
Chloride	mmol/l	97.6	89.7	106	3.95	7.90	ISE indirect
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate with deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	124	99.5	149	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL PPD
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	19.0	15.5	22.5	1.75	3.50	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	380	323	437	28.50	57.00	P->L SFBC 37°C
	U/l	274	233	315	20.50	41.00	P->L SFBC 30°C
	U/l	193	164	222	14.50	29.00	P->L SFBC 25°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.05	2.63	0.15	0.29	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.09	3.47	4.71	0.31	0.62	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.98	3.67	4.29	0.16	0.31	ISE method - indirect
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction kinetic
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.04	6.52	0.37	0.74	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease end point
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease hypochlorite
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.36	2.13	2.59	0.12	0.23	Arsenazo III
	mg/dl	9.46	8.54	10.4	0.46	0.92	
Cholesterol	mmol/l	4.44	3.86	5.02	0.29	0.58	Cholesterol Oxidase
	mg/dl	171	149	193	11.00	22.00	
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	6.57	5.59	7.55	0.49	0.98	Glucose oxidase
	mg/dl	118	101	135	8.50	17.00	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	41.9	35.6	48.2	3.15	6.30	Turbidimetric Assays
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	120	102	138	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	77	65	89	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	77	65	89	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	78	66	90	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	78	66	90	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	26.8	21.5	32.1	2.65	5.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.8	11.8	17.8	1.50	3.00	Colorimetric

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.3	15.3	23.3	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
Chloride	mmol/l	90.6	83.4	97.8	3.60	7.20	ISE indirect
Cholinesterase	U/l	5530	4424	6636	553.00	1106.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	177	145	209	16.00	32.00	CK-NAC substrate start (DGKC) 37°C
	U/l	111	91	131	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	75	62	88	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	179	146	212	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C

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Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	20.1	15.1	25.1	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Roche Cobas 6000/8000
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	90.6	131	10.20	20.40	
	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.9	12.2	17.6	1.35	2.70	
LD (LDH)	U/l	395	336	454	29.50	59.00	P->L German methods 37°C
	U/l	285	243	327	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C

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Lipase	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.647	0.825	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction kinetic
	g/dl	5.88	4.70	7.06	0.59	1.18	
PSA Total	ng/ml =	13.8	10.3	17.3	1.75	3.50	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000
TIBC	µmol/l	43.9	34.7	53.1	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	245	194	296	25.50	51.00	
	µmol/l	46.5	36.7	56.3	4.90	9.80	Calculated from Transferrin
	µg/dl	260	205	315	27.50	55.00	
Total T3	nmol/l	2.40	1.80	3.00	0.30	0.60	Roche Cobas 6000/8000
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Roche Cobas 6000/8000

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Total T4	nmol/l	81.2	60.9	102	10.15	20.30	Roche Cobas 6000/8000
	µg/dl	6.33	4.75	7.91	0.79	1.58	
	ng/ml	63.3	47.5	79.1	7.90	15.80	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	100	83.8	116	8.10	16.20	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.0	116	8.00	16.00	
UIBC	µmol/l	24.3	19.9	28.7	2.20	4.40	Direct Colorimetric
	µg/dl	136	111	161	12.50	25.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
Alkaline Phosphatase	U/l	117	100	134	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	75	64	86	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.3	14.4	22.2	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.842	1.30	0.11	0.23	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE indirect
CK Total	U/l	176	145	207	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	110	91	129	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	75	62	88	6.50	13.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	115	92.4	138	11.30	22.60	Alkaline picrate with deproteinization
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	119	95.2	143	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	124	99.1	149	12.45	24.90	Roche Creatinine Plus
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.7	146	12.15	24.30	Jaffe rate blanked
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.31	5.37	7.25	0.47	0.94	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	139	133	145	3.00	6.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.2	110	7.75	15.50	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease end point
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.10	6.03	8.17	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.2	49.2	3.25	6.50	
	mmol/l	7.02	5.97	8.07	0.53	1.05	Urease hypochlorite
	mg/dl	42.2	35.9	48.5	3.15	6.30	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
	g/l	43.6	37.0	50.2	3.30	6.60	Bromocresol Purple
	g/dl	4.36	3.70	5.02	0.33	0.66	
Alkaline Phosphatase	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	76	65	87	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	60	51	69	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	20.0	15.8	24.2	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.17	0.924	1.42	0.12	0.25	
	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.20	0.948	1.45	0.13	0.25	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.24	2.02	2.46	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.27	2.05	2.49	0.11	0.22	Arsenazo III
	mg/dl	9.10	8.22	9.98	0.44	0.88	
	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.20	3.65	4.75	0.28	0.55	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
Chloride	mmol/l	91.0	83.8	98.2	3.60	7.20	ISE indirect
CK Total	U/l	180	148	212	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.64	1.35	1.93	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.8	12.2	17.4	1.30	2.60	
LD (LDH)	U/l	395	336	454	29.50	59.00	P->L German methods 37°C
	U/l	285	243	327	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.17	3.83	4.51	0.17	0.34	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.0	34.0	52.0	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	240	190	290	25.00	50.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.0	116	8.00	16.00	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.8	118	8.10	16.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Urea	mmol/l	7.44	6.32	8.56	0.56	1.12	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.44	6.32	8.56	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	105	90	120	7.50	15.00	Roche Integra AMP buffer 37°C
	U/l	82	70	94	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	67	58	76	4.50	9.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	79	67	91	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.3	15.3	23.3	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	15.9	12.6	19.2	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.930	0.737	1.12	0.10	0.19	
Bilirubin Total	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.9	19.7	30.1	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.19	1.98	2.40	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.78	7.94	9.62	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	92.2	84.8	99.6	3.70	7.40	ISE indirect
CK Total	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	75	61	89	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	25	21	29	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL Roche 3rd generation
	mg/dl	46.3	39.4	53.2	3.45	6.90	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.64	1.34	1.94	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.8	12.1	17.5	1.35	2.70	
LD (LDH)	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.07	0.95	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.656	0.830	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.9	47.2	70.6	5.85	11.70	Biuret reaction end point
	g/dl	5.89	4.72	7.06	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	198	302	26.00	52.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.9	114	7.65	15.30	
UIBC	µmol/l	27.0	22.1	31.9	2.45	4.90	Direct Colorimetric
	µg/dl	151	124	178	13.50	27.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.58	4.84	6.32	0.37	0.74	
Urea	mmol/l	7.09	6.03	8.15	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.09	6.03	8.15	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Green
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	298	253	343	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	191	162	220	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.1	20.9	31.3	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	12.4	9.83	15.0	1.29	2.57	Enzymatic
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	15.7	12.4	19.0	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	31.3	24.7	37.9	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Arsenazo III
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.44	3.86	5.02	0.29	0.58	Cholesterol Oxidase
	mg/dl	171	149	193	11.00	22.00	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	94.1	86.5	102	3.80	7.60	ISE direct
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.60	5.61	7.59	0.50	0.99	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	6.77	5.75	7.79	0.51	1.02	Glucose oxidase
	mg/dl	122	104	140	9.00	18.00	
Iron	µmol/l	21.3	17.5	25.1	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.8	140	10.60	21.20	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	414	352	476	31.00	62.00	P->L German methods 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.07	0.13	Colorimetric
	mg/dl	0.757	0.666	0.848	0.05	0.09	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Enzymatic
	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - direct
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	µmol/l	52.0	41.1	62.9	5.45	10.90	Direct Colorimetric
	µg/dl	291	230	352	30.50	61.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.14	6.66	0.38	0.76	
Urea	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.62	6.48	8.76	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	

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SIEMENS ADVIA 1200/1650/1800/2400®

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Green
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	137	117	157	10.00	20.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	82	70	94	6.00	12.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	28.8	23.0	34.6	2.90	5.80	Enzymatic Colorimetric
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	

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Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	97.1	89.4	105	3.85	7.70	ISE indirect
Cholinesterase	U/l	6072	4858	7286	607.00	1214.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	123	98.0	148	12.50	25.00	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.10	0.93	1.27	0.08	0.17	Direct Clearance Method
	mg/dl	42.5	36.0	49.0	3.25	6.50	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	391	333	449	29.00	58.00	P->L German methods 37°C
	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.624	0.792	0.04	0.08	

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Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.2	48.2	72.2	6.00	12.00	Biuret reaction end point
	g/dl	6.02	4.82	7.22	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	µg/dl	273	216	330	28.50	57.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.5	119	8.25	16.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Urea	mmol/l	7.57	6.44	8.70	0.57	1.13	Urease kinetic
	mg/dl	45.5	38.7	52.3	3.40	6.80	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Purple
	g/dl	4.39	3.73	5.05	0.33	0.66	
Alkaline Phosphatase	U/l	142	121	163	10.50	21.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	43	34	52	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	54	43	65	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	13.4	10.6	16.2	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.784	0.620	0.948	0.08	0.16	
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	3.72	3.23	4.21	0.25	0.49	Dimension-Siemens reagents
	mg/dl	144	125	163	9.50	19.00	
Chloride	mmol/l	96.7	88.9	105	3.90	7.80	ISE indirect
CK Total	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	169	138	200	15.50	31.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	64	54	74	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.36	1.15	1.57	0.11	0.21	Direct HDL PEGME
	mg/dl	52.5	44.4	60.6	4.05	8.10	
Iron	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	UV LDH
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	194	165	223	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	196	166	226	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	139	111	167	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - indirect
Protein Total	g/l	61.7	49.4	74.0	6.15	12.30	Biuret reaction end point
	g/dl	6.17	4.94	7.40	0.62	1.23	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.9	33.9	51.9	4.50	9.00	Removal of excess free iron
	µg/dl	240	190	290	25.00	50.00	
Triglycerides	mmol/l	1.02	0.85	1.19	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.5	105	7.40	14.80	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Purple
	g/dl	4.39	3.73	5.05	0.33	0.66	
Alkaline Phosphatase	U/l	142	120	164	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	146	124	168	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer with P5P 37°C
	U/l	42	34	50	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	13.7	10.8	16.6	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.801	0.632	0.970	0.08	0.17	
Bilirubin Total	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	3.66	3.18	4.14	0.24	0.48	Dimension-Siemens reagents
	mg/dl	141	123	159	9.00	18.00	
Chloride	mmol/l	96.2	88.5	104	3.85	7.70	ISE indirect

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	63	53	73	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Hexokinase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PPD
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL PEGME
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct Clearance Method
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
LD (LDH)	U/l	194	165	223	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	135	108	162	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.0	32.4	49.6	4.30	8.60	Removal of excess free iron
	µg/dl	229	181	277	24.00	48.00	
Triglycerides	mmol/l	1.04	0.88	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.4	107	7.30	14.60	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.9	106	7.15	14.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.54	6.41	8.67	0.57	1.13	Urease kinetic
	mg/dl	45.3	38.5	52.1	3.40	6.80	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.49	6.36	8.62	0.57	1.13	Urease hypochlorite
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.54	6.41	8.67	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

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SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Siemens Dimension AMP buffer 37°C
AST (GOT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
Bicarbonate	mmol/l	16.1	12.7	19.5	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.7	10.9	16.5	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.801	0.638	0.964	0.08	0.16	
Bilirubin Total	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PEGME
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	152	122	182	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.27	1.08	1.46	0.10	0.19	Phosphomolybdate UV
	mg/dl	3.94	3.35	4.53	0.30	0.59	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
Urea	mmol/l	7.37	6.27	8.47	0.55	1.10	Urease kinetic
	mg/dl	44.3	37.7	50.9	3.30	6.60	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.7	48.5	3.20	6.40	Bromocresol Green
	g/dl	4.21	3.57	4.85	0.32	0.64	
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	15.9	12.5	19.3	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.930	0.731	1.13	0.10	0.20	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Creatinine	µmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Protein Total	g/l	59.6	47.6	71.6	6.00	12.00	Biuret reaction end point
	g/dl	5.96	4.76	7.16	0.60	1.20	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
Urea	mmol/l	7.10	6.03	8.17	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.2	49.2	3.25	6.50	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1199UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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