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. 1133UN **EXPIRY:** 2020-06-28

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. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	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	147	125	169	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	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	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	102	87	117	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	98	84	112	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	107	91	123	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.8	21.4	32.2	2.70	5.40	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.4	11.4	17.4	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
	µmol/l	16.9	13.4	20.4	1.75	3.50	Diazo with Dichloroaniline (DCA)
	mg/dl	0.989	0.784	1.19	0.10	0.21	
Bilirubin Total	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Total	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	2.36	2.12	2.60	0.12	0.24	Arsenazo III
	mg/dl	9.46	8.50	10.4	0.48	0.96	
Cholesterol	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
Chloride	mmol/l	97.1	89.3	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	6638	5310	7966	664.00	1328.00	Colorimetric Butyrylthiocholine 37°C
	U/l	6759	5408	8110	675.50	1351.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
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	124	98.8	149	12.60	25.20	Enzymatic UV method (340nm)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.6	146	12.20	24.40	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	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	123	98.8	147	12.10	24.20	IDMS traceable
	mg/dl	1.39	1.12	1.66	0.14	0.27	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	43	57	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
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	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.34	1.14	1.54	0.10	0.20	HDL - Ultra
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric with ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
	µmol/l	17.9	14.6	21.2	1.65	3.30	Colorimetric without ppt.
	µg/dl	100	81.6	118	9.20	18.40	
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	199	169	229	15.00	30.00	L->P 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.06	0.13	Spectrophotometric
	mg/dl	0.757	0.669	0.845	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.18	1.91	2.45	0.14	0.27	
	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	305	244	366	30.50	61.00	Calculated

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.7	46.1	69.3	5.80	11.60	Biuret reaction end point
	g/dl	5.77	4.61	6.93	0.58	1.16	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction kinetic
	g/dl	5.73	4.58	6.88	0.58	1.15	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.1	38.0	58.2	5.05	10.10	FE+UIBC(saturation with iron)
	µg/dl	269	212	326	28.50	57.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.2	107	7.40	14.80	
	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	78.1	108	7.40	14.80	
	mmol/l	1.03	0.87	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.4	106	7.40	14.80	
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	0.39	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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Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.28	6.18	8.38	0.55	1.10	Urease kinetic
	mg/dl	43.8	37.1	50.5	3.35	6.70	
	mmol/l	7.28	6.19	8.37	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.9	34.7	47.1	3.10	6.20	Bromocresol Green
	g/dl	4.09	3.47	4.71	0.31	0.62	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	23.5	18.6	28.4	2.45	4.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	4.29	3.73	4.85	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
Chloride	mmol/l	96.8	89.0	105	3.90	7.80	ISE direct
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	122	97.6	146	12.20	24.40	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Glucose	mmol/l	6.10	5.18	7.02	0.46	0.92	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Iron	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.68	4.00	5.36	0.34	0.68	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - direct
Protein Total	g/l	60.1	48.0	72.2	6.05	12.10	Biuret reaction end point
	g/dl	6.01	4.80	7.22	0.61	1.21	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.96	6.46	0.38	0.75	
Urea	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	
	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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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	85	72	98	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	89	75	103	7.00	14.00	Beckman Olympus - blocked pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.9	22.1	33.7	2.90	5.80	DPD (Beckman AU)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.58	8.62	10.5	0.48	0.96	
	mmol/l	2.39	2.15	2.63	0.12	0.24	Arsenazo III
	mg/dl	9.58	8.62	10.5	0.48	0.96	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	95.0	87.4	103	3.80	7.60	ISE indirect
Cholinesterase	U/l	5165	4132	6198	516.50	1033.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
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	
	µmol/l	120	96.3	144	11.85	23.70	Enzymatic UV method (340nm)
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	122	97.9	146	12.05	24.10	Creatinine PAP method
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	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	117	93.4	141	11.80	23.60	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	117	93.5	141	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	120	95.7	144	12.15	24.30	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.43	5.46	7.40	0.49	0.97	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
alpha-HBDH	U/l	206	163	249	21.50	43.00	Oxobutyrate < 10 mmol/l 37°C
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct Clearance Method
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.37	1.17	1.57	0.10	0.20	HDL - Ultra
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.9	120	9.05	18.10	
	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P 37°C
	U/l	434	369	499	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	197	168	226	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.06	0.94	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.649	0.823	0.04	0.09	
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.8	38.5	59.1	5.15	10.30	FE+UIBC(saturation with iron)
	µg/dl	273	215	331	29.00	58.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
UIBC	µmol/l	31.1	25.5	36.7	2.80	5.60	Direct Colorimetric
	µg/dl	174	143	205	15.50	31.00	
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	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease end point
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	
	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Purple
	g/dl	4.37	3.71	5.03	0.33	0.66	
Alkaline Phosphatase	U/l	165	141	189	12.00	24.00	p-Nitrophenylphosphate AMP 37°C
	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	15.3	12.2	18.4	1.55	3.10	Differential rate pH change
	mmol/l	15.1	12.0	18.2	1.55	3.10	Ion selective electrode
Bilirubin Direct	µmol/l	12.4	9.79	15.0	1.31	2.61	Diazo with Sulphanilic Acid
	mg/dl	0.725	0.573	0.877	0.08	0.15	
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Sulphanilic Acid
	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	Ion selective electrode
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.36	2.12	2.60	0.12	0.24	Arsenazo III
	mg/dl	9.46	8.50	10.4	0.48	0.96	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	96.0	88.3	104	3.85	7.70	ISE indirect
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	208	171	245	18.50	37.00	Monothioglycerol 37°C
Creatinine	µmol/l	117	93.6	140	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	118	94.5	142	11.75	23.50	Enzymatic UV method (340nm)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	121	96.4	146	12.30	24.60	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	119	95.5	143	11.75	23.50	IDMS traceable
	mg/dl	1.34	1.08	1.60	0.13	0.26	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.41	1.19	1.63	0.11	0.22	HDL - Ultra
	mg/dl	54.4	45.9	62.9	4.25	8.50	
Iron	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	169	144	194	12.50	25.00	L->P 37°C
	U/l	497	422	572	37.50	75.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
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	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction CX4/5/7
	g/dl	5.92	4.73	7.11	0.60	1.19	
	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction kinetic
	g/dl	5.67	4.54	6.80	0.57	1.13	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.1	116	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	83.1	115	8.00	16.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	
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	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	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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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	31	45	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	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.5	13.8	21.2	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Glucose	mmol/l	6.37	5.41	7.33	0.48	0.96	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.23	5.43	7.03	0.40	0.80	
Urea	mmol/l	6.80	5.78	7.82	0.51	1.02	Urease kinetic
	mg/dl	40.9	34.7	47.1	3.10	6.20	
	mmol/l	6.80	5.78	7.82	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Cholesterol	mmol/l	4.18	3.63	4.73	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Creatinine	µmol/l	121	97.0	145	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
LD (LDH)	U/l	437	372	502	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	316	269	363	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	222	189	255	16.50	33.00	P->L Scandinavian & Dutch 25°C
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction end point
	g/dl	5.78	4.62	6.94	0.58	1.16	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
Uric Acid (Urate)	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	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
Urea	mmol/l	6.83	5.80	7.86	0.52	1.03	Urease kinetic
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.83	5.81	7.85	0.51	1.02	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	

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Biotechnica/Wiener BT and CB Series

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Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	240	204	276	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	187	159	215	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	153	130	176	11.50	23.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	35	28	42	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	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	14.7	11.6	17.8	1.55	3.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.860	0.679	1.04	0.09	0.18	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	121	97.2	145	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	122	97.7	146	12.15	24.30	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	

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Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.9	40.9	54.9	3.50	7.00	
Phosphate Inorganic	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	
Protein Total	g/l	56.6	45.3	67.9	5.65	11.30	Biuret reaction end point
	g/dl	5.66	4.53	6.79	0.57	1.13	
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.9	73.8	102	7.05	14.10	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

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COBAS INTEGRA®

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Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	39.6	33.7	45.5	2.95	5.90	Turbidimetric Assays
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	113	96	130	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	72	61	83	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	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
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Colorimetric
	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	16.4	13.0	19.8	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.959	0.761	1.16	0.10	0.20	

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Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	16.6	13.1	20.1	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.971	0.766	1.18	0.10	0.21	
	µmol/l	16.4	13.0	19.8	1.70	3.40	Diazo with Dichloroaniline (DCA)
	mg/dl	0.959	0.761	1.16	0.10	0.20	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	24.1	19.1	29.1	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.41	1.12	1.70	0.15	0.29	
	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazonium ion
	mg/dl	1.40	1.11	1.69	0.15	0.29	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.34	2.10	2.58	0.12	0.24	NM-BAPTA
	mg/dl	9.38	8.42	10.3	0.48	0.96	
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	96.0	88.3	104	3.85	7.70	ISE indirect
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	117	93.5	141	11.75	23.50	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	

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Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Enzymatic UV method (340nm)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Roche Creatinine Plus
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	116	92.6	139	11.70	23.40	Jaffe rate blanked
	mg/dl	1.31	1.05	1.57	0.13	0.26	
	µmol/l	116	92.6	139	11.70	23.40	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.31	1.05	1.57	0.13	0.26	
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	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose oxidase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PEGME
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	85.0	121	9.00	18.00	
	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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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	380	323	437	28.50	57.00	P->L German methods 37°C
	U/l	274	233	315	20.50	41.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	38	31	45	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	0.656	0.830	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.08	3.76	4.40	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.5	45.2	67.8	5.65	11.30	Biuret reaction end point
	g/dl	5.65	4.52	6.78	0.57	1.13	
	g/l	55.7	44.6	66.8	5.55	11.10	Biuret reaction kinetic
	g/dl	5.57	4.46	6.68	0.56	1.11	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	µmol/l	46.9	37.1	56.7	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	262	207	317	27.50	55.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.1	108	7.40	14.80	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	84.1	116	7.95	15.90	
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	
	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	0.35	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	6.87	5.84	7.90	0.52	1.03	Urease kinetic
	mg/dl	41.3	35.1	47.5	3.10	6.20	
	mmol/l	6.87	5.84	7.90	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	

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Elitech/Vitalab Selectra Series

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Green
	g/dl	4.17	3.55	4.79	0.31	0.62	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.37	2.13	2.61	0.12	0.24	Arsenazo III
	mg/dl	9.50	8.54	10.5	0.48	0.96	
Cholesterol	mmol/l	4.16	3.62	4.70	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	120	96.4	144	11.80	23.60	Alkaline picrate no deproteinization
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	118	94.4	142	11.80	23.60	Jaffe rate blanked
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
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	
Protein Total	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	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.7	117	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.0	48.8	3.20	6.40	
	mmol/l	7.05	5.99	8.11	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 37°C
	U/l	79	67	91	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	65	55	75	5.00	10.00	Roche Integra AMP buffer 25°C
	U/l	174	148	200	13.00	26.00	Randox AMP 37°C
	U/l	136	115	157	10.50	21.00	Randox AMP 30°C
	U/l	111	95	127	8.00	16.00	Randox AMP 25°C
ALT (GPT)	U/l	38	30	46	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	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	86	74	98	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	4.14	2.77	5.51	0.69	1.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	4.84	3.24	6.44	0.80	1.60	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	15.1	10.1	20.1	2.50	5.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	8.86	5.94	11.8	1.46	2.92	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	19.2	12.9	25.5	3.15	6.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	13.7	9.18	18.2	2.26	4.52	1-Naphthyl Phosphate substrate Kinetic 37°C

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	24.8	19.8	29.8	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	16.2	12.8	19.6	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.948	0.749	1.15	0.10	0.20	
	µmol/l	15.4	12.2	18.6	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	24.5	19.4	29.6	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	23.7	18.7	28.7	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.09	1.69	0.15	0.30	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	2.37	2.13	2.61	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.50	8.54	10.5	0.48	0.96	
	mmol/l	2.37	2.13	2.61	0.12	0.24	NM-BAPTA
	mg/dl	9.50	8.54	10.5	0.48	0.96	
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	92.2	84.9	99.5	3.65	7.30	ISE indirect
Cholinesterase	U/l	5273	4219	6327	527.00	1054.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	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	123	98.3	148	12.35	24.70	Roche Creatinine Plus
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
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	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
	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	23	18	28	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
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	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
alpha-HBDH	U/l	239	189	289	25.00	50.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	180	143	217	18.50	37.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	135	107	163	14.00	28.00	Oxobutyrate < 10 mmol/l 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
Iron	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	
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	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	283	240	326	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
	U/l	143	121	165	11.00	22.00	L->P IFCC 30°C
	U/l	100	85	115	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Spectrophotometric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
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	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	45.4	35.8	55.0	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	254	200	308	27.00	54.00	
Triglycerides	mmol/l	1.05	0.89	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.3	108	7.30	14.60	
UIBC	µmol/l	27.1	22.3	31.9	2.40	4.80	Direct Colorimetric
	µg/dl	151	125	177	13.00	26.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	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	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
Alkaline Phosphatase	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	108	92	124	8.00	16.00	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
Amylase Total	U/l	87	74	100	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	35	28	42	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	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
CK Total	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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
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	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	23	33	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	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	
HDL - Cholesterol	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	44.8	38.1	51.5	3.35	6.70	
Lipase	U/l	47	37	57	5.00	10.00	Randox Colorimetric 37°C
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Enzymatic
	mg/dl	2.30	2.03	2.57	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.22	3.88	4.56	0.17	0.34	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.7	112	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease end point
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.7	33.7	45.7	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.97	3.37	4.57	0.30	0.60	
Alkaline Phosphatase	U/l	115	98	132	8.50	17.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Ortho Vitros Microslide Systems
Bilirubin Direct	µmol/l	12.0	9.45	14.6	1.28	2.55	Vitros Total Bil - BU
	mg/dl	0.702	0.553	0.851	0.07	0.15	
Bilirubin Total	µmol/l	24.0	18.9	29.1	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	22.4	17.7	27.1	2.35	4.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.31	1.04	1.58	0.14	0.27	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	151	132	170	9.50	19.00	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5505	4404	6606	550.50	1101.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	178	146	210	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	122	97.3	147	12.35	24.70	Vitros IDMS Traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	

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Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Vitros Magnetic HDL
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	54.8	46.3	63.3	4.25	8.50	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	
LD (LDH)	U/l	575	488	662	43.50	87.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	309	248	370	30.50	61.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.30	1.14	1.46	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.903	0.792	1.01	0.06	0.11	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	52.2	41.2	63.2	5.50	11.00	Ortho Vitros Microslide Systems
	µg/dl	292	230	354	31.00	62.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	87.8	120	8.10	16.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.54	4.82	6.26	0.36	0.72	
Urea	mmol/l	6.85	5.82	7.88	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	6.85	5.82	7.88	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	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. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	121	103	139	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	99	84	114	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	30	46	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	21	17	25	2.00	4.00	Tris buffer without P5P 25°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	28.5	22.8	34.2	2.85	5.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	15.3	12.1	18.5	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.895	0.708	1.08	0.09	0.19	
Bilirubin Total	µmol/l	21.6	17.1	26.1	2.25	4.50	Nitrobenzenediazonium salt
	mg/dl	1.26	1.00	1.52	0.13	0.26	
Calcium	mmol/l	2.40	2.16	2.64	0.12	0.24	Arsenazo III
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	99.3	91.4	107	3.95	7.90	ISE direct

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

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	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	121	96.7	145	12.15	24.30	Enzymatic UV method (340nm)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	123	98.1	148	12.45	24.90	Creatinine PAP method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	117	93.3	141	11.85	23.70	Jaffe rate blanked
	mg/dl	1.32	1.05	1.59	0.14	0.27	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
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	
	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	1.22	1.04	1.40	0.09	0.18	Direct Clearance Method
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	µmol/l	20.2	16.5	23.9	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.2	134	10.40	20.80	

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

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Calmagite
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	mmol/l	0.91	0.81	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.0	111	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.26	6.80	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.21	6.79	0.40	0.79	
Urea	mmol/l	7.12	6.06	8.18	0.53	1.06	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	39.7	33.7	45.7	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.97	3.37	4.57	0.30	0.60	
	g/l	40.2	34.2	46.2	3.00	6.00	Turbidimetric Assays
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	115	98	132	8.50	17.00	Ortho Vitros Microslide Systems 37°C
	U/l	264	225	303	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	206	175	237	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	169	144	194	12.50	25.00	Diethanolamine buffer DEA 25°C
	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
	U/l	150	128	172	11.00	22.00	AMP non-optimised 37°C
	U/l	117	100	134	8.50	17.00	AMP non-optimised 30°C
	U/l	96	82	110	7.00	14.00	AMP non-optimised 25°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	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. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	36	28	44	4.00	8.00	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
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	67	57	77	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	75	64	86	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	89	76	102	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	100	85	115	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	89	76	102	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	89	75	103	7.00	14.00	Beckman Olympus - blocked pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	90	76	104	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	98	84	112	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	107	91	123	8.00	16.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.15	0.94	1.36	0.10	0.21	Immunoturbidimetric
	mg/dl	115	94.3	136	10.35	20.70	
Apolipoprotein B	g/l	0.63	0.52	0.74	0.06	0.11	Immunoturbidimetric
	mg/dl	62.8	51.5	74.1	5.65	11.30	
Acid Phosphatase (non-prostatic)	U/l	4.84	3.24	6.44	0.80	1.60	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.14	2.77	5.51	0.69	1.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.86	5.94	11.8	1.46	2.92	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.1	10.1	20.1	2.50	5.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	13.7	9.18	18.2	2.26	4.52	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	19.2	12.9	25.5	3.15	6.30	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	35	28	42	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	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
	U/l	35	28	42	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	17	13	21	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	25.9	20.7	31.1	2.60	5.20	4th Generation Colorimetric

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	24.8	19.8	29.8	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Colorimetric
	mmol/l	17.2	13.6	20.8	1.80	3.60	Ortho Vitros Microslide Systems
	mmol/l	15.3	12.2	18.4	1.55	3.10	Differential rate pH change
	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
	mmol/l	15.2	12.0	18.4	1.60	3.20	Ion selective electrode
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.00	0.790	1.21	0.11	0.21	
	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	
	µmol/l	12.0	9.45	14.6	1.28	2.55	Vitros Total Bil - BU
	mg/dl	0.702	0.553	0.851	0.07	0.15	
	µmol/l	16.9	13.3	20.5	1.80	3.60	Diazo with Dichloroaniline (DCA)
	mg/dl	0.989	0.778	1.20	0.11	0.21	
	µmol/l	17.5	13.8	21.2	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	14.9	11.8	18.0	1.55	3.10	Modified Jendrassik
	mg/dl	0.872	0.690	1.05	0.09	0.18	
Bilirubin Total	µmol/l	24.0	18.9	29.1	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	22.4	17.7	27.1	2.35	4.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.31	1.04	1.58	0.14	0.27	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Nitrobenzenediazonium salt
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	23.7	18.7	28.7	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.09	1.69	0.15	0.30	
	µmol/l	26.5	21.0	32.0	2.75	5.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	32.9	26.0	39.8	3.45	6.90	Modified Jendrassik
	mg/dl	1.92	1.52	2.32	0.20	0.40	
Calcium	mmol/l	2.33	2.09	2.57	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.34	8.38	10.3	0.48	0.96	
	mmol/l	2.39	2.15	2.63	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.58	8.62	10.5	0.48	0.96	
	mmol/l	2.30	2.07	2.53	0.12	0.23	Ion selective electrode
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.37	2.13	2.61	0.12	0.24	Methylthymol blue
	mg/dl	9.50	8.54	10.5	0.48	0.96	
	mmol/l	2.37	2.13	2.61	0.12	0.24	Arsenazo III
	mg/dl	9.50	8.54	10.5	0.48	0.96	
	mmol/l	2.36	2.13	2.59	0.12	0.23	NM-BAPTA
	mg/dl	9.46	8.54	10.4	0.46	0.92	
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	151	132	170	9.50	19.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	97.7	89.8	106	3.95	7.90	Colorimetric
	mmol/l	96.1	88.4	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.3	86.7	102	3.80	7.60	ISE indirect
	mmol/l	96.8	89.1	105	3.85	7.70	ISE direct
Cholinesterase	U/l	5423	4339	6507	542.00	1084.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	178	146	210	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	206	169	243	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	208	171	245	18.50	37.00	Monothioglycerol 37°C
	U/l	130	107	153	11.50	23.00	Monothioglycerol 30°C
	U/l	88	73	103	7.50	15.00	Monothioglycerol 25°C
	U/l	188	154	222	17.00	34.00	Dithioerythritol 37°C
	U/l	118	96	140	11.00	22.00	Dithioerythritol 30°C
	U/l	80	65	95	7.50	15.00	Dithioerythritol 25°C
	U/l	184	151	217	16.50	33.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	115	95	135	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	78	64	92	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Copper	µmol/l	17.4	13.9	20.9	1.75	3.50	Atomic absorption
	µg/dl	111	88.4	134	11.30	22.60	
	µmol/l	17.4	13.9	20.9	1.75	3.50	Colorimetric
	µg/dl	111	88.4	134	11.30	22.60	
Cortisol	nmol/l	493	370	616	61.50	123.00	Roche Cobas E411
	µg/dl	17.7	13.3	22.1	2.20	4.40	
Creatinine	µmol/l	118	94.7	141	11.65	23.30	Alkaline picrate with deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	122	97.7	146	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.3	147	12.35	24.70	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.5	147	12.25	24.50	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	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	124	99.2	149	12.40	24.80	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	119	95.0	143	12.00	24.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	122	97.3	147	12.35	24.70	Vitros IDMS Traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	120	95.8	144	12.10	24.20	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	119	95.3	143	11.85	23.70	Agappe - Jaffe Kinetic
	mg/dl	1.34	1.08	1.60	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.96	1.57	2.35	0.20	0.39	Immunoturbidimetric
	ng/ml	1.53	1.23	1.83	0.15	0.30	
Folate	nmol/l	42.6	32.4	52.8	5.10	10.20	Roche Cobas E411
	ng/ml	18.8	14.3	23.3	2.25	4.50	
Free T4	pmol/l	17.0	12.7	21.3	2.15	4.30	Abbott Architect
	ng/dl	1.33	0.991	1.67	0.17	0.34	
	pg/ml	13.3	9.91	16.7	1.70	3.39	Abbott Architect
	pmol/l	18.9	14.1	23.7	2.40	4.80	Siemens Centaur XP/XPT/Classic
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Siemens Centaur XP/XPT/Classic
	pmol/l	19.9	14.9	24.9	2.50	5.00	Beckman Access
	ng/dl	1.55	1.16	1.94	0.20	0.39	
	pg/ml	15.5	11.6	19.4	1.95	3.90	Beckman Access
	pmol/l	19.3	14.4	24.2	2.45	4.90	Beckman DxI800
	ng/dl	1.51	1.12	1.90	0.20	0.39	
	pg/ml	15.1	11.2	19.0	1.95	3.90	Beckman DxI800
	pmol/l	36.2	27.1	45.3	4.55	9.10	Vitros ECi
	ng/dl	2.82	2.11	3.53	0.36	0.71	
	pg/ml	28.2	21.1	35.3	3.55	7.10	Vitros ECi
	pmol/l	23.0	17.2	28.8	2.90	5.80	Roche Elecsys
	ng/dl	1.79	1.34	2.24	0.23	0.45	
	pg/ml	17.9	13.4	22.4	2.25	4.50	Roche Elecsys

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	22.7	17.0	28.4	2.85	5.70	Roche Modular E170
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Modular E170
	pmol/l	22.8	17.1	28.5	2.85	5.70	Roche Cobas E411
	ng/dl	1.78	1.33	2.23	0.23	0.45	
	pg/ml	17.8	13.3	22.3	2.25	4.50	Roche Cobas E411
	pmol/l	22.7	17.0	28.4	2.85	5.70	Roche Cobas 6000/8000
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Cobas 6000/8000
	pmol/l	20.5	15.4	25.6	2.55	5.10	Biomerieux Vidas FT4N Kit
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.95	6.36	9.54	0.80	1.59	Immunoturbidimetric
	µg/ml	3.80	3.04	4.56	0.38	0.76	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose dehydrogenase
	mg/dl	114	97.1	131	8.45	16.90	
	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	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	
alpha-HBDH	U/l	239	189	289	25.00	50.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	180	143	217	18.50	37.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	135	107	163	14.00	28.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Vitros Magnetic HDL
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Direct HDL PEGME
	mg/dl	53.7	45.9	61.5	3.90	7.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct Clearance Method
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	54.8	46.3	63.3	4.25	8.50	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	52.1	44.4	59.8	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	
Immunoglobulin A	g/l	2.01	1.51	2.51	0.25	0.50	Immunoturbidimetric
	mg/dl	201	151	251	25.00	50.00	
Immunoglobulin G	g/l	6.30	5.17	7.43	0.57	1.13	Immunoturbidimetric
	mg/dl	630	517	743	56.50	113.00	
Immunoglobulin M	g/l	0.75	0.60	0.89	0.07	0.15	Immunoturbidimetric
	mg/dl	74.5	59.6	89.4	7.45	14.90	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	µmol/l	18.9	15.5	22.3	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Ion selective electrode
	mg/dl	13.2	10.8	15.6	1.20	2.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	1.20	2.40	
	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	
	mmol/l	1.66	1.36	1.96	0.15	0.30	Enzymatic Electrode
	mg/dl	15.0	12.3	17.7	1.35	2.70	
	mmol/l	1.47	1.21	1.73	0.13	0.26	UV LDH
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	575	488	662	43.50	87.00	Ortho Vitros Microslide Systems 37°C
	U/l	183	155	211	14.00	28.00	L->P 37°C
	U/l	132	112	152	10.00	20.00	L->P 30°C
	U/l	93	79	107	7.00	14.00	L->P 25°C
	U/l	433	368	498	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	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	283	240	326	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	385	327	443	29.00	58.00	P->L SFBC 37°C
	U/l	278	236	320	21.00	42.00	P->L SFBC 30°C
	U/l	195	166	224	14.50	29.00	P->L SFBC 25°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
	U/l	309	248	370	30.50	61.00	Ortho Vitros Microslide Systems 37°C
	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
	U/l	213	171	255	21.00	42.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.30	1.14	1.46	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.903	0.792	1.01	0.06	0.11	
	mmol/l	1.07	0.95	1.19	0.06	0.12	Ion selective electrode
	mg/dl	0.743	0.657	0.829	0.04	0.09	
	mmol/l	1.08	0.95	1.21	0.07	0.13	Spectrophotometric
	mg/dl	0.750	0.659	0.841	0.05	0.09	
	mmol/l	1.12	0.99	1.25	0.07	0.13	Randox Colorimetric
	mg/dl	0.778	0.685	0.871	0.05	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.18	1.91	2.45	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.20	1.94	2.46	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	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	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	1.95	1.66	2.24	0.15	0.29	Colorimetric
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
	mOsm/kg	308	246	370	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.07	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.2	8.93	13.5	1.14	2.27	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.59	3.91	5.27	0.34	0.68	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	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	4.13	3.80	4.46	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.00	3.68	4.32	0.16	0.32	Flame photometry
	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - direct
	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction kinetic
	g/dl	5.76	4.61	6.91	0.58	1.15	
PSA Total	ng/ml =	17.1	12.8	21.4	2.15	4.30	Roche Elecsys Modular E170

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	16.1	12.1	20.1	2.00	4.00	Beckman Access standardised to Hybritech
	ng/ml =	15.1	11.3	18.9	1.90	3.80	bioMerieux VIDAS TPSA
	ng/ml =	12.7	9.56	15.8	1.57	3.14	Siemens Centaur XP/XPT/Classic
	ng/ml =	14.5	10.9	18.1	1.80	3.60	Abbott Architect
	ng/ml =	17.4	13.0	21.8	2.20	4.40	Cobas E411
	ng/ml =	16.7	12.5	20.9	2.10	4.20	Roche Cobas 6000/8000
Salicylate	mmol/l	0.45	0.36	0.55	0.05	0.09	Enzymatic
	mg/dl	6.27	5.01	7.53	0.63	1.26	
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	Flame photometry
	mmol/l	143	135	151	4.00	8.00	ISE method - direct
	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	28.4	22.7	34.1	2.85	5.70	Immunoturbidimetric
	µg/ml	5.12	4.09	6.15	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.11	0.89	1.34	0.11	0.23	Abbott Architect
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.49	1.19	1.79	0.15	0.30	bioMerieux VIDAS TSH
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Vitros ECi
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Elecsys
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Modular E170
	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas E411
	µU/ml =	1.43	1.15	1.71	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.23	0.99	1.48	0.12	0.25	Beckman DxI800 Hyper TSH

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.23	0.98	1.48	0.12	0.25	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	52.2	41.2	63.2	5.50	11.00	Ortho Vitros Microslide Systems
	µg/dl	292	230	354	31.00	62.00	
	µmol/l	43.8	34.6	53.0	4.60	9.20	Removal of excess free iron
	µg/dl	245	193	297	26.00	52.00	
	µmol/l	47.0	37.1	56.9	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	263	207	319	28.00	56.00	
	µmol/l	49.5	39.1	59.9	5.20	10.40	Direct Colorimetric
	µg/dl	277	219	335	29.00	58.00	
	µmol/l	43.0	34.0	52.0	4.50	9.00	Calculated from Transferrin
	µg/dl	240	190	290	25.00	50.00	
	µmol/l	54.5	43.1	65.9	5.70	11.40	Randox Direct
	µg/dl	305	241	369	32.00	64.00	
Tobramycin	µmol/l	5.58	4.46	6.70	0.56	1.12	Immunoturbidimetric
	µg/ml	2.61	2.09	3.13	0.26	0.52	
Total T3	nmol/l	2.29	1.72	2.86	0.29	0.57	Abbott Architect
	ng/ml	1.49	1.12	1.86	0.19	0.37	
	ng/dl	149	112	186	18.50	37.00	Abbott Architect
	nmol/l	2.73	2.05	3.41	0.34	0.68	Siemens Centaur XP/XPT/Classic
	ng/ml	1.78	1.33	2.23	0.23	0.45	
	ng/dl	178	133	223	22.50	45.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.64	1.98	3.30	0.33	0.66	BioMerieux Vidas
	ng/ml	1.72	1.29	2.15	0.22	0.43	
	ng/dl	172	129	215	21.50	43.00	BioMerieux Vidas
	nmol/l	2.71	2.03	3.39	0.34	0.68	Roche Cobas E411
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Roche Cobas E411

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	2.71	2.03	3.39	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Roche Cobas 6000/8000
Total T4	nmol/l	88.6	66.5	111	11.05	22.10	Abbott Architect
	µg/dl	6.91	5.19	8.63	0.86	1.72	
	ng/ml	69.1	51.9	86.3	8.60	17.20	Abbott Architect
	nmol/l	88.7	66.6	111	11.05	22.10	Siemens Centaur XP/XPT/Classic
	µg/dl	6.92	5.19	8.65	0.87	1.73	
	ng/ml	69.2	51.9	86.5	8.65	17.30	Siemens Centaur XP/XPT/Classic
	nmol/l	87.9	65.9	110	11.00	22.00	BioMerieux Vidas
	µg/dl	6.86	5.14	8.58	0.86	1.72	
	ng/ml	68.6	51.4	85.8	8.60	17.20	BioMerieux Vidas
	nmol/l	86.2	64.6	108	10.80	21.60	Siemens Immulite 1000
	µg/dl	6.72	5.04	8.40	0.84	1.68	
	ng/ml	67.2	50.4	84.0	8.40	16.80	Siemens Immulite 1000
	nmol/l	89.0	66.8	111	11.10	22.20	Siemens Immulite 2000/2500
	µg/dl	6.94	5.21	8.67	0.87	1.73	
	ng/ml	69.4	52.1	86.7	8.65	17.30	Siemens Immulite 2000/2500
	nmol/l	92.6	69.4	116	11.60	23.20	Roche Modular E170
	µg/dl	7.22	5.41	9.03	0.91	1.81	
	ng/ml	72.2	54.1	90.3	9.05	18.10	Roche Modular E170
	nmol/l	93.5	70.1	117	11.70	23.40	Roche Cobas E411
	µg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	91.4	68.6	114	11.40	22.80	Roche Cobas 6000/8000
	µg/dl	7.13	5.35	8.91	0.89	1.78	
	ng/ml	71.3	53.5	89.1	8.90	17.80	Roche Cobas 6000/8000
Transferrin	g/l	1.98	1.58	2.38	0.20	0.40	Immunoturbidimetric
	mg/dl	198	158	238	20.00	40.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	78.1	108	7.40	14.80	
	mmol/l	1.08	0.90	1.26	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
	mmol/l	1.04	0.88	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.4	107	7.30	14.60	
	mmol/l	1.18	0.99	1.37	0.09	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	87.8	120	8.10	16.20	
UIBC	µmol/l	28.3	23.2	33.4	2.55	5.10	Direct Colorimetric
	µg/dl	158	130	186	14.00	28.00	
	µmol/l	31.5	25.8	37.2	2.85	5.70	TIBC - FE
	µg/dl	176	144	208	16.00	32.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	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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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	6.85	5.82	7.88	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease end point
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease hypochlorite
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease Berthelot
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Vitamin B12	pmol/l	506	405	607	50.50	101.00	Roche Cobas E411
	pg/ml	686	549	823	68.50	137.00	
Zinc	µmol/l	28.9	23.1	34.7	2.90	5.80	Atomic absorption
	µg/dl	189	151	227	19.00	38.00	
	µmol/l	28.7	23.0	34.4	2.85	5.70	Colorimetric with deproteinisation
	µg/dl	187	150	224	18.50	37.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		5.9	4.5	7.3	0.71	1.42	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		67.8	61.1	74.5	3.35	6.70	% of total Protein (Beckman Capillary)
beta-globulin		9.7	7.4	12.0	1.17	2.33	% of total Protein (Beckman Capillary)
gamma-globulin		10.3	7.8	12.8	1.24	2.47	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	244	208	280	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	190	162	218	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	156	133	179	11.50	23.00	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	237	202	272	17.50	35.00	Agappe - DGKC-SCE 37°C
	U/l	185	157	213	14.00	28.00	Agappe - DGKC-SCE 30°C
	U/l	151	129	173	11.00	22.00	Agappe - DGKC-SCE 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	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 Direct	µmol/l	17.3	13.6	21.0	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	24.9	19.7	30.1	2.60	5.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.46	1.15	1.77	0.16	0.31	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.35	2.11	2.59	0.12	0.24	Arsenazo III
	mg/dl	9.42	8.46	10.4	0.48	0.96	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	117	93.7	140	11.65	23.30	Alkaline picrate with deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	121	97.2	145	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	117	93.7	140	11.65	23.30	Enzymatic UV method (340nm)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	116	93.0	139	11.50	23.00	Agappe - Jaffe Kinetic
	mg/dl	1.31	1.05	1.57	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
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	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL PPD
	mg/dl	49.8	42.5	57.1	3.65	7.30	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	17.6	14.5	20.7	1.55	3.10	Colorimetric without ppt.
	µg/dl	98.4	81.1	116	8.65	17.30	
LD (LDH)	U/l	434	369	499	32.50	65.00	P->L German methods 37°C
	U/l	313	266	360	23.50	47.00	P->L German methods 30°C
	U/l	220	187	253	16.50	33.00	P->L German methods 25°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	97	83	111	7.00	14.00	L->P IFCC 25°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease kinetic
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease hypochlorite
	mg/dl	42.4	36.0	48.8	3.20	6.40	
	mmol/l	7.43	6.32	8.54	0.56	1.11	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. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	247	210	284	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	192	164	220	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	158	134	182	12.00	24.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	38	30	46	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	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.6	13.1	20.1	1.75	3.50	Diazo with Dichloroaniline (DCA)
	mg/dl	0.971	0.766	1.18	0.10	0.21	
Bilirubin Total	µmol/l	23.2	18.4	28.0	2.40	4.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.6	41.3	55.9	3.65	7.30	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
Protein Total	g/l	59.8	47.9	71.7	5.95	11.90	Biuret reaction end point
	g/dl	5.98	4.79	7.17	0.60	1.19	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	
	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Purple
	g/dl	4.16	3.54	4.78	0.31	0.62	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	116	99	133	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	74	63	85	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	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	66	56	76	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.2	20.2	30.2	2.50	5.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Colorimetric

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	0.21	
	µmol/l	17.0	13.4	20.6	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	23.4	18.5	28.3	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.37	1.08	1.66	0.15	0.29	
	µmol/l	23.7	18.7	28.7	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.09	1.69	0.15	0.30	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	2.37	2.13	2.61	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.50	8.54	10.5	0.48	0.96	
	mmol/l	2.38	2.14	2.62	0.12	0.24	NM-BAPTA
	mg/dl	9.54	8.58	10.5	0.48	0.96	
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	90.7	83.4	98.0	3.65	7.30	ISE indirect
Cholinesterase	U/l	5187	4150	6224	518.50	1037.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	202	165	239	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
	µmol/l	125	99.7	150	12.65	25.30	Enzymatic UV method (340nm)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	125	99.6	150	12.70	25.40	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
	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 comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.42	1.14	1.70	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	22.7	17.0	28.4	2.85	5.70	Roche Cobas 6000/8000
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Cobas 6000/8000
gamma-GT	U/l	45	39	51	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	31	39	2.00	4.00	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	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Glucose	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	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	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	1.35	1.14	1.56	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	52.1	44.0	60.2	4.05	8.10	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric with ppt.
	µg/dl	100	82.2	118	8.90	17.80	
	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
	U/l	197	168	226	14.50	29.00	L->P IFCC 37°C
	U/l	142	121	163	10.50	21.00	L->P IFCC 30°C
	U/l	100	85	115	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
	U/l	35	28	42	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.97	2.49	0.13	0.26	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.40	3.72	5.08	0.34	0.68	
	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	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.4	69.8	5.85	11.70	Biuret reaction end point
	g/dl	5.81	4.64	6.98	0.59	1.17	
	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	
PSA Total	ng/ml =	16.7	12.5	20.9	2.10	4.20	Roche Cobas 6000/8000
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.43	1.15	1.71	0.14	0.28	Roche Cobas 6000/8000
TIBC	µmol/l	44.1	34.8	53.4	4.65	9.30	Removal of excess free iron
	µg/dl	247	195	299	26.00	52.00	
	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	
	µmol/l	44.8	35.4	54.2	4.70	9.40	Calculated from Transferrin
	µg/dl	250	198	302	26.00	52.00	
Total T3	nmol/l	2.71	2.03	3.39	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Roche Cobas 6000/8000

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	91.4	68.6	114	11.40	22.80	Roche Cobas 6000/8000
	µg/dl	7.13	5.35	8.91	0.89	1.78	
	ng/ml	71.3	53.5	89.1	8.90	17.80	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	91.2	76.7	106	7.25	14.50	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.5	109	7.65	15.30	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.7	109	7.55	15.10	
UIBC	µmol/l	27.7	22.7	32.7	2.50	5.00	Direct Colorimetric
	µg/dl	155	127	183	14.00	28.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	116	98	134	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	74	63	85	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	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 Total	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.5	13.9	21.1	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	16.2	12.8	19.6	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.948	0.749	1.15	0.10	0.20	
	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
	µmol/l	16.2	12.8	19.6	1.70	3.40	Roche JG factored
	mg/dl	0.948	0.749	1.15	0.10	0.20	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	23.7	18.7	28.7	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.09	1.69	0.15	0.30	
Calcium	mmol/l	2.34	2.11	2.57	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.38	8.46	10.3	0.46	0.92	
	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	2.29	2.06	2.52	0.12	0.23	NM-BAPTA
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.20	3.66	4.74	0.27	0.54	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
Chloride	mmol/l	96.7	89.0	104	3.85	7.70	ISE indirect
CK Total	U/l	202	165	239	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	117	93.6	140	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	122	98.0	146	12.00	24.00	Roche Creatinine Plus
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	118	94.3	142	11.85	23.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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			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
Glucose	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	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
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
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.7	110	7.50	15.00	
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	
	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	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	
Urea	mmol/l	6.95	5.91	7.99	0.52	1.04	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	7.00	5.95	8.05	0.53	1.05	Urease hypochlorite
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	6.95	5.91	7.99	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	

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			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	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	73	63	83	5.00	10.00	Roche Integra AMP buffer 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	68	58	78	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.1	11.9	18.3	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	17.4	13.7	21.1	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.801	1.24	0.11	0.22	
	µmol/l	17.0	13.4	20.6	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.784	1.21	0.11	0.21	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.01	0.796	1.22	0.11	0.21	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	23.1	18.2	28.0	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.35	1.06	1.64	0.15	0.29	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazonium ion
	mg/dl	1.40	1.11	1.69	0.15	0.29	
Calcium	mmol/l	2.38	2.15	2.61	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.54	8.62	10.5	0.46	0.92	
	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	
	mmol/l	2.38	2.14	2.62	0.12	0.24	NM-BAPTA
	mg/dl	9.54	8.58	10.5	0.48	0.96	
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	91.5	84.1	98.9	3.70	7.40	ISE indirect
Cholinesterase	U/l	5414	4331	6497	541.50	1083.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
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	125	100	150	12.50	25.00	Enzymatic UV method (340nm)
	mg/dl	1.41	1.13	1.69	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	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
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	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.23	5.29	7.17	0.47	0.94	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	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	1.34	1.14	1.54	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C

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LD (LDH)	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
	U/l	143	121	165	11.00	22.00	L->P IFCC 30°C
	U/l	100	85	115	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.93	0.81	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	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	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

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RANDOX

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	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	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	101	85	117	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	79	66	92	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	65	54	76	5.50	11.00	Roche Integra AMP buffer 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 Total	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	23.2	18.3	28.1	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.36	1.07	1.65	0.15	0.29	
	µmol/l	23.0	18.2	27.8	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
	µmol/l	22.6	17.9	27.3	2.35	4.70	Diazonium ion
	mg/dl	1.32	1.05	1.59	0.14	0.27	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.35	2.12	2.58	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.42	8.50	10.3	0.46	0.92	
	mmol/l	2.36	2.12	2.60	0.12	0.24	NM-BAPTA
	mg/dl	9.46	8.50	10.4	0.48	0.96	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	91.6	84.2	99.0	3.70	7.40	ISE indirect
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	96	136	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
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	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	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	1.28	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	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
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	198	168	228	15.00	30.00	L->P IFCC 37°C
	U/l	143	121	165	11.00	22.00	L->P IFCC 30°C
	U/l	100	85	115	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.10	0.97	1.23	0.07	0.13	Spectrophotometric
	mg/dl	0.764	0.674	0.854	0.05	0.09	
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	
Phosphate Inorganic	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	
Potassium	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	147	139	155	4.00	8.00	ISE method - indirect
TIBC	µmol/l	44.7	35.3	54.1	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	197	303	26.50	53.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.03	0.87	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.51	4.79	6.23	0.36	0.72	
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	
	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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RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	301	256	346	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	174	148	200	13.00	26.00	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	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	24.8	19.8	29.8	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	18.3	14.5	22.1	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	15.4	12.2	18.6	1.60	3.20	Oxidation to Biliverdin/Vanadate
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.46	2.21	2.71	0.13	0.25	Arsenazo III
	mg/dl	9.86	8.86	10.9	0.50	1.00	
Cholesterol	mmol/l	4.24	3.69	4.79	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	142	186	11.00	22.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	94.5	86.9	102	3.80	7.60	ISE direct
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.43	5.46	7.40	0.49	0.97	Hexokinase
	mg/dl	116	98.4	134	8.80	17.60	
	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
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	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	404	343	465	30.50	61.00	P->L German methods 37°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	52	42	62	5.00	10.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.12	0.99	1.25	0.07	0.13	Colorimetric
	mg/dl	0.778	0.685	0.871	0.05	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - direct
	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
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	144	136	152	4.00	8.00	ISE method - direct
	mmol/l	147	140	154	3.50	7.00	Enzymatic
TIBC	µmol/l	54.5	43.1	65.9	5.70	11.40	Direct Colorimetric
	µg/dl	305	241	369	32.00	64.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	
Urea	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	
	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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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	254	216	292	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	27.4	21.9	32.9	2.75	5.50	Enzymatic Colorimetric
Bicarbonate	mmol/l	17.7	14.0	21.4	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	26.5	20.9	32.1	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.55	1.22	1.88	0.17	0.33	
Calcium	mmol/l	2.33	2.09	2.57	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.34	8.38	10.3	0.48	0.96	
	mmol/l	2.38	2.14	2.62	0.12	0.24	Arsenazo III
	mg/dl	9.54	8.58	10.5	0.48	0.96	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
Chloride	mmol/l	96.7	89.0	104	3.85	7.70	ISE indirect
CK Total	U/l	198	163	233	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	97.0	145	12.00	24.00	Enzymatic UV method (340nm)
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	122	97.2	147	12.40	24.80	Jaffe rate blanked
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.10	0.94	1.26	0.08	0.16	Direct Clearance Method
	mg/dl	42.5	36.2	48.8	3.15	6.30	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.34	1.10	1.58	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.1	9.91	14.3	1.10	2.19	
LD (LDH)	U/l	196	166	226	15.00	30.00	L->P 37°C
	U/l	389	331	447	29.00	58.00	P->L German methods 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C

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RANDOX

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Spectrophotometric
	mg/dl	0.743	0.652	0.834	0.05	0.09	
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
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	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	52.8	41.7	63.9	5.55	11.10	Direct Colorimetric
	µg/dl	295	233	357	31.00	62.00	
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	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
Uric Acid (Urate)	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	
Urea	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	7.46	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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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Purple
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	140	119	161	10.50	21.00	Siemens Dimension AMP buffer 37°C
	U/l	144	122	166	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	84	112	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.3	13.0	19.6	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	11.3	8.94	13.7	1.18	2.36	Diazo with Sulphanilic Acid
	mg/dl	0.661	0.523	0.799	0.07	0.14	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	3.63	3.16	4.10	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
Chloride	mmol/l	96.2	88.5	104	3.85	7.70	ISE indirect
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	184	151	217	16.50	33.00	Dithioerythritol (DTE) IFCC correlated 37°C

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	122	97.7	146	12.15	24.30	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.30	5.36	7.24	0.47	0.94	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.48	1.25	1.71	0.12	0.23	Direct HDL PPD
	mg/dl	57.1	48.3	65.9	4.40	8.80	
	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL PEGME
	mg/dl	56.0	47.9	64.1	4.05	8.10	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric with ppt.
	µg/dl	96.1	78.8	113	8.65	17.30	
	µmol/l	17.4	14.2	20.6	1.60	3.20	Colorimetric without ppt.
	µg/dl	97.3	79.4	115	8.95	17.90	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	UV LDH
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	194	165	223	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	156	125	187	15.50	31.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	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	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.5	33.6	51.4	4.45	8.90	Removal of excess free iron
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	1.01	0.85	1.18	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	89.4	74.8	104	7.30	14.60	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			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	
	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	140	119	161	10.50	21.00	Siemens Dimension AMP buffer 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	153	130	176	11.50	23.00	Randox AMP 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.1	14.3	21.9	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	11.1	8.80	13.4	1.15	2.30	Diazo with Sulphanilic Acid
	mg/dl	0.649	0.515	0.783	0.07	0.13	
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	
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.06	8.18	9.94	0.44	0.88	
Cholesterol	mmol/l	3.69	3.21	4.17	0.24	0.48	Dimension-Siemens reagents
	mg/dl	142	124	160	9.00	18.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	190	155	225	17.50	35.00	Dithioerythritol 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	
	µmol/l	122	97.7	146	12.15	24.30	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	63	54	72	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	
	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL PEGME
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	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	
Iron	µmol/l	17.3	14.1	20.5	1.60	3.20	Colorimetric without ppt.
	µg/dl	96.7	78.8	115	8.95	17.90	
LD (LDH)	U/l	195	165	225	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	191	163	219	14.00	28.00	L->P IFCC 37°C

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	157	126	188	15.50	31.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.62	3.94	5.30	0.34	0.68	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	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	
Sodium	mmol/l	144	137	151	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	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	89.4	75.2	104	7.10	14.20	
	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	88.4	74.3	103	7.05	14.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease end point
	mg/dl	42.9	36.5	49.3	3.20	6.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1133UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	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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