

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

CAT. NO. HNI530	GTIN: 05055273203783	SIZE: 20 x 5ml
CAT. NO. HS2611	GTIN: 05055273203813	SIZE: 5 x 5ml
LOT NO. 1302UN	EXPIRY: 2022-05-28	

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.

- 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.
- Refer to the Control section of the individual analyser application.
- 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 $\pm 2S.D.$ This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

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

NOTES

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

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	41.8	35.6	48.0	3.10	6.20	Bromocresol Purple
	g/dl	4.18	3.56	4.80	0.31	0.62	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	146	124	168	11.00	22.00	AMP optimised to NVKC/SFBC 37°C
	U/l	151	129	173	11.00	22.00	AMP non-optimised 37°C
	U/l	145	123	167	11.00	22.00	Colorimetric 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	103	88	118	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	115	98	132	8.50	17.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Enzymatic
Bile Acids	µmol/l	25.7	20.5	30.9	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.913	1.41	0.12	0.25	
	µmol/l	19.8	15.7	23.9	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.59	1.26	1.92	0.17	0.33	


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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	μmol/l	26.5	20.9	32.1	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	μmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.31	3.75	4.87	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	145	187	10.50	21.00	
Cholinesterase	U/l	6712	5369	8055	671.50	1343.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC (IFCC) 37°C
Copper	μmol/l	13.4	10.7	16.1	1.35	2.70	Colorimetric
	μg/dl	85.2	68.1	102	8.55	17.10	
Creatinine	μmol/l	124	99.0	149	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	124	98.9	149	12.55	25.10	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	123	98.5	148	12.25	24.50	Creatinine PAP method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	μmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	124	99.5	149	12.25	24.50	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	


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Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	6.36	5.41	7.31	0.48	0.95	Glucose oxidase	
	mg/dl	115	97.5	133	8.75	17.50		
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL PPD	
	mg/dl	59.8	51.0	68.6	4.40	8.80	Direct Clearance Method	
	mmol/l	1.57	1.34	1.80	0.12	0.23		
	mg/dl	60.6	51.7	69.5	4.45	8.90		
	mmol/l	1.56	1.33	1.79	0.12	0.23	HDL - Ultra	
	mg/dl	60.2	51.3	69.1	4.45	8.90		
	Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric with ppt.
		µg/dl	113	92.8	133	10.10	20.20	
µmol/l		19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.	
µg/dl		111	91.1	131	9.95	19.90		
Lactate	mmol/l	1.50	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	188	159	217	14.50	29.00	L->P 37°C	
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C	
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C	
Lithium	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric	
	mg/dl	0.674	0.594	0.754	0.04	0.08		
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Arsenazo III	
	mg/dl	2.11	1.86	2.36	0.13	0.25		

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Enzymatic
	mg/dl	2.10	1.84	2.36	0.13	0.26	
Osmolality	mOsm/kg	301	240	362	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	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	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction kinetic
	g/dl	5.88	4.70	7.06	0.59	1.18	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.2	31.7	48.7	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	225	177	273	24.00	48.00	
	µmol/l	45.5	36.0	55.0	4.75	9.50	Calculated from Transferrin
	µg/dl	254	201	307	26.50	53.00	
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	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.0	77.0	107	7.50	15.00	
	mmol/l	1.05	0.89	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.3	108	7.30	14.60	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
UIBC	μmol/l	19.7	16.1	23.3	1.80	3.60	Direct Colorimetric
	μg/dl	110	90.0	130	10.00	20.00	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	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	
Uric Acid (Urate)	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	
	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	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.86	5.11	6.61	0.38		0.75
mmol/l	0.34	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

ABX Pentra 400®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	48	38	58	5.00	10.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
Bilirubin Total	µmol/l	26.8	21.1	32.5	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.23	1.91	0.17	0.34	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	96.7	88.9	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.50	3.91	5.09	0.30	0.59	Cholesterol Oxidase
	mg/dl	174	151	197	11.50	23.00	
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	
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
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	

ABX Pentra 400®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.65	1.41	1.89	0.12	0.24	Phosphomolybdate UV
	mg/dl	5.12	4.37	5.87	0.38	0.75	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.5	119	8.25	16.50	
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
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	

Beckman Coulter AU Series®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	196	155	237	20.50	41.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Green
	g/dl	3.96	3.37	4.55	0.30	0.59	
	g/l	44.2	37.5	50.9	3.35	6.70	Bromocresol Purple
	g/dl	4.42	3.75	5.09	0.34	0.67	
Alkaline Phosphatase	U/l	248	211	285	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	180	153	207	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
	U/l	37	29	45	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	pNP Maltotrioxide substrates 37°C
	U/l	94	80	108	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	99	84	114	7.50	15.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	44	35	53	4.50	9.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	19.9	15.8	24.0	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.924	1.40	0.12	0.24	
	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.913	1.39	0.12	0.24	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.73	1.37	2.09	0.18	0.36	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	28.7	22.6	34.8	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.32	2.04	0.18	0.36	
	µmol/l	28.5	22.5	34.5	3.00	6.00	DPD (Beckman AU)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	94.6	87.0	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.36	3.80	4.92	0.28	0.56	Cholesterol Oxidase
	mg/dl	168	147	189	10.50	21.00	
Cholinesterase	U/l	5385	4308	6462	538.50	1077.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	187	154	220	16.50	33.00	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	16.1	12.8	19.4	1.65	3.30	Colorimetric
	µg/dl	102	81.4	123	10.30	20.60	
Creatinine	µmol/l	122	97.4	147	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	121	96.7	145	12.15	24.30	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	115	92.1	138	11.45	22.90	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	120	95.6	144	12.20	24.40	IDMS traceable
	mg/dl	1.36	1.08	1.64	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	57	48	66	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	57	48	66	4.50	9.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	20	15	25	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	95.7	130	8.65	17.30	
	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	6.30	5.35	7.25	0.48	0.95	Glucose oxidase
	mg/dl	114	96.4	132	8.80	17.60	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.60	1.36	1.84	0.12	0.24	Direct Clearance Method
	mg/dl	61.8	52.5	71.1	4.65	9.30	
	mmol/l	1.58	1.34	1.82	0.12	0.24	HDL - Ultra
	mg/dl	61.0	51.7	70.3	4.65	9.30	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	88.3	126	9.35	18.70	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	185	157	213	14.00	28.00	L->P 37°C
	U/l	402	342	462	30.00	60.00	P->L Scandinavian & Dutch 37°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	184	157	211	13.50	27.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	43	35	51	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.95	0.84	1.07	0.06	0.11	Spectrophotometric
	mg/dl	0.662	0.583	0.741	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
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	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
TIBC	µmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	248	196	300	26.00	52.00	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
UIBC	µmol/l	24.0	19.7	28.3	2.15	4.30	Direct Colorimetric
	µg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.14	6.66	0.38	0.76	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	162	137	187	12.50	25.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	102	87	117	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Differential rate pH change
Bilirubin Direct	µmol/l	13.5	10.7	16.3	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.790	0.626	0.954	0.08	0.16	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Ion selective electrode
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Chloride	mmol/l	95.4	87.8	103	3.80	7.60	ISE indirect
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	201	165	237	18.00	36.00	Monothioglycerol 37°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	IDMS traceable
	mg/dl	1.39	1.12	1.66	0.14	0.27	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Free T4	pmol/l	17.8	13.4	22.2	2.20	4.40	Beckman Dxl800
	ng/dl	1.39	1.05	1.73	0.17	0.34	
	pg/ml	13.9	10.5	17.3	1.70	3.40	Beckman Dxl800
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.04	5.14	6.94	0.45	0.90	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
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	
LD (LDH)	U/l	159	135	183	12.00	24.00	L->P 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.93	2.47	0.14	0.27	
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	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	56.8	45.5	68.1	5.65	11.30	Biuret reaction kinetic
	g/dl	5.68	4.55	6.81	0.57	1.13	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.28	1.02	1.54	0.13	0.26	Beckman Dxl800 Hyper TSH
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	103	85.9	120	8.55	17.10	

**Beckman CX4/5/7/9/LX20®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.61	6.46	8.76	0.58	1.15	Urease kinetic
	mg/dl	45.7	38.8	52.6	3.45	6.90	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	43.5	36.9	50.1	3.30	6.60	Bromocresol Purple
	g/dl	4.35	3.69	5.01	0.33	0.66	
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	158	134	182	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	102	87	117	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Differential rate pH change
	mmol/l	15.2	12.0	18.4	1.60	3.20	Ion selective electrode
Bilirubin Direct	µmol/l	13.5	10.6	16.4	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.790	0.620	0.960	0.09	0.17	
Bilirubin Total	µmol/l	29.4	23.2	35.6	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Ion selective electrode
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	mmol/l	2.07	1.87	2.27	0.10	0.20	Arsenazo III
	mg/dl	8.30	7.49	9.11	0.41	0.81	


Beckman DxC600/800®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.4	87.7	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Cholinesterase	U/l	5810	4648	6972	581.00	1162.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	Monothioglycerol 37°C
Creatinine	μmol/l	121	96.5	146	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	123	98.8	147	12.10	24.20	Enzymatic UV method
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	μmol/l	121	96.9	145	12.05	24.10	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
μmol/l	123	98.3	148	12.35	24.70	IDMS traceable	
mg/dl	1.39	1.11	1.67	0.14	0.28		
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.06	5.15	6.97	0.46	0.91	Hexokinase
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Oxygen electrode
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL PPD
	mg/dl	63.3	53.7	72.9	4.80	9.60	
	mmol/l	1.62	1.38	1.86	0.12	0.24	HDL - Ultra
	mg/dl	62.5	53.3	71.7	4.60	9.20	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.41	1.16	1.66	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.5	14.9	1.10	2.20	
LD (LDH)	U/l	158	134	182	12.00	24.00	L->P 37°C
	U/l	155	132	178	11.50	23.00	L->P IFCC 37°C
Lipase	U/l	37	29	45	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.91	0.80	1.02	0.05	0.11	Spectrophotometric
	mg/dl	0.634	0.558	0.710	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Calmagite
	mg/dl	2.20	1.94	2.46	0.13	0.26	
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	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
mg/dl	4.46	3.81	5.11	0.33	0.65		
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
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	
	g/l	56.1	44.9	67.3	5.60	11.20	Biuret reaction kinetic
	g/dl	5.61	4.49	6.73	0.56	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.6	117	8.20	16.40	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.6	118	8.20	16.40	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	Urease end point
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.8	52.6	3.45	6.90	
	mmol/l	7.60	6.46	8.74	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
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	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	109	149	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	105	89	121	8.00	16.00	AMP optimised to IFCC 25°C
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
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	31.7	25.1	38.3	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.47	2.23	0.19	0.38	
Cholesterol	mmol/l	4.48	3.90	5.06	0.29	0.58	Cholesterol Oxidase
	mg/dl	173	151	195	11.00	22.00	
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
Protein Total	g/l	55.1	44.1	66.1	5.50	11.00	Biuret reaction end point
	g/dl	5.51	4.41	6.61	0.55	1.10	
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	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	6.95	5.91	7.99	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.35	5.53	7.17	0.41	0.82	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	123	104	142	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	101	86	116	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Cholesterol	mmol/l	4.34	3.77	4.91	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
Glucose	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
LD (LDH)	U/l	377	320	434	28.50	57.00	P->L German methods 37°C
	U/l	272	231	313	20.50	41.00	P->L German methods 30°C
	U/l	191	162	220	14.50	29.00	P->L German methods 25°C
Protein Total	g/l	55.1	44.0	66.2	5.55	11.10	Biuret reaction end point
	g/dl	5.51	4.40	6.62	0.56	1.11	

**BIOSYSTEMS A25**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.32	5.49	7.15	0.42	0.83	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.8	33.9	45.7	2.95	5.90	Bromocresol Green
	g/dl	3.98	3.39	4.57	0.30	0.59	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	15	25	2.50	5.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	141	181	10.00	20.00	
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Creatinine PAP method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Glucose oxidase
	mg/dl	112	95.7	128	8.15	16.30	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Protein Total	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction end point
	g/dl	5.58	4.46	6.70	0.56	1.12	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.0	104	7.20	14.40	
Urea	mmol/l	7.29	6.19	8.39	0.55	1.10	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	40.0	34.0	46.0	3.00	6.00	Turbidimetric Assays
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	110	93	127	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	77	65	89	6.00	12.00	Roche EPS Liquid 37°C
Amylase Total	U/l	98	84	112	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.3	11.4	17.2	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.2	15.1	23.3	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	0.12	0.23	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Roche JG factored
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	Dichlorophenyl Diazonium (DPD)
	µmol/l	25.1	19.8	30.4	2.65	5.30	
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	µmol/l	25.4	20.0	30.8	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.17	1.81	0.16	0.32	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
		mg/dl	8.54	7.70	9.38	0.42	
mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA	
	mg/dl	8.62	7.74	9.50	0.44		0.88
Chloride	mmol/l	95.3	87.7	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.27	3.71	4.83	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	143	187	11.00	22.00	
CK Total	U/l	179	147	211	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	112	92	132	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	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	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose dehydrogenase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.35	5.39	7.31	0.48	0.96	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL PEGME
	mg/dl	63.3	53.7	72.9	4.80	9.60	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	64.8	55.2	74.4	4.80	9.60	
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.0	130	10.00	20.00	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	362	308	416	27.00	54.00	P->L German methods 37°C
	U/l	261	222	300	19.50	39.00	P->L German methods 30°C
	U/l	184	156	212	14.00	28.00	P->L German methods 25°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
	U/l	144	123	165	10.50	21.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.94	0.83	1.05	0.06	0.11	Ion selective electrode
	mg/dl	0.653	0.575	0.731	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
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	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction end point
	g/dl	5.53	4.42	6.64	0.56	1.11	
	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction kinetic
	g/dl	5.71	4.57	6.85	0.57	1.14	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	38.7	30.5	46.9	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	216	170	262	23.00	46.00	
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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.5	114	7.85	15.70	
Urea	mmol/l	6.93	5.89	7.97	0.52	1.04	Urease kinetic
	mg/dl	41.6	35.4	47.8	3.10	6.20	
	mmol/l	6.93	5.89	7.97	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Green
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	238	203	273	17.50	35.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.38	3.81	4.95	0.29	0.57	Cholesterol Oxidase
	mg/dl	169	147	191	11.00	22.00	
CK Total	U/l	185	152	218	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
Glucose	mmol/l	6.44	5.47	7.41	0.49	0.97	Glucose oxidase
	mg/dl	116	98.6	133	8.70	17.40	
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Biuret reaction end point
	g/dl	5.97	4.77	7.17	0.60	1.20	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.2	116	7.90	15.80	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mg/dl	20.2	17.2	23.2	1.50	3.00	BUN



Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.27	5.46	7.08	0.41	0.81	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	9.34	6.26	12.4	1.54	3.08	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	131	111	151	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	102	86	118	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	71	97	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	164	139	189	12.50	25.00	Randox AMP 37°C
	U/l	128	108	148	10.00	20.00	Randox AMP 30°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	87	74	100	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	103	88	118	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	NM-BAPTA
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	91.9	84.6	99.2	3.65	7.30	ISE indirect
Cholesterol	mmol/l	4.27	3.71	4.83	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	143	187	11.00	22.00	
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
Creatinine	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	122	97.4	147	12.30	24.60	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
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
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	6.29	5.35	7.23	0.47	0.94	Glucose oxidase
HDL - Cholesterol	mmol/l	1.66	1.41	1.91	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	64.1	54.4	73.8	4.85	9.70	
Iron	µmol/l	19.3	15.9	22.7	1.70	3.40	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
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	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
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	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	

**HITACHI SERIES®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

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Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	



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

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	38.9	33.1	44.7	2.90	5.80	Bromocresol Green
	g/dl	3.89	3.31	4.47	0.29	0.58	
Alkaline Phosphatase	U/l	155	131	179	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	121	102	140	9.50	19.00	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	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	47	37	57	5.00	10.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	26.6	21.3	31.9	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.9	14.1	21.7	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.825	1.28	0.11	0.23	
Bilirubin Total	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	22.9	18.1	27.7	2.40	4.80	Nitrobenzenediazonium salt
	mg/dl	1.34	1.06	1.62	0.14	0.28	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	99.3	91.4	107	3.95	7.90	ISE direct



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

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Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	192	158	226	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	99	141	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Hexokinase
	mg/dl	117	99.1	135	8.95	17.90	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.63	1.38	1.88	0.13	0.25	Direct HDL PEGME
	mg/dl	62.9	53.3	72.5	4.80	9.60	
	mmol/l	1.76	1.50	2.02	0.13	0.26	Direct Clearance Method
	mg/dl	67.9	57.9	77.9	5.00	10.00	
Iron	µmol/l	21.4	17.5	25.3	1.95	3.90	Colorimetric without ppt.
	µg/dl	120	97.8	142	11.10	22.20	
LD (LDH)	U/l	381	324	438	28.50	57.00	P->L SFBC 37°C
	U/l	275	234	316	20.50	41.00	P->L SFBC 30°C
	U/l	193	164	222	14.50	29.00	P->L SFBC 25°C

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

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.46	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	3.94	3.62	4.26	0.16	0.32	ISE method - direct
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	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.1	113	7.65	15.30	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.22	5.41	7.03	0.41	0.81	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.12	5.33	6.91	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

MEAN OF ALL INSTRUMENTS

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	200	158	242	21.00	42.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	151	119	183	16.00	32.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	113	89	137	12.00	24.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	9.34	6.26	12.4	1.54	3.08	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Purple
	g/dl	4.24	3.61	4.87	0.32	0.63	
	g/l	40.4	34.4	46.4	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.04	3.44	4.64	0.30	0.60	
	g/l	40.0	34.0	46.0	3.00	6.00	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.00	3.40	4.60	0.30	0.60	
	U/l	137	117	157	10.00	20.00	Ortho Vitros Microslide Systems 37°C
	U/l	249	212	286	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	194	165	223	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	159	135	183	12.00	24.00	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 optimised to NVKC/SFBC 37°C
U/l	117	100	134	8.50	17.00	AMP optimised to NVKC/SFBC 30°C	
U/l	96	82	110	7.00	14.00	AMP optimised to NVKC/SFBC 25°C	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP non-optimised 37°C
	U/l	119	101	137	9.00	18.00	AMP non-optimised 30°C
	U/l	98	83	113	7.50	15.00	AMP non-optimised 25°C
ALT (GPT)	U/l	49	40	58	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	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	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
	U/l	36	28	44	4.00	8.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Immunoinhibition EPS substrate 37°C
	U/l	73	62	84	5.50	11.00	Roche EPS Liquid 37°C
	U/l	87	74	100	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	100	85	115	7.50	15.00	Siemens - blocked pNPG7 37°C
	U/l	80	68	92	6.00	12.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	104	89	119	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	95	81	109	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	93	79	107	7.00	14.00	Saccharogenic 37°C
U/l	97	83	111	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	73	62	84	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	98	83	113	7.50	15.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	96	81	111	7.50	15.00	Roche liquid stable pNPG7 37°C
	U/l	109	92	126	8.50	17.00	Siemens 2-chloro-pNPG3 37°C
	U/l	99	84	114	7.50	15.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	102	87	117	7.50	15.00	Beckman Synchron AMY7 37°C
	U/l	103	88	118	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	115	98	132	8.50	17.00	Abbott Architect IFCC Cal. 37°C
	U/l	93	79	107	7.00	14.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.00	0.82	1.18	0.09	0.18	Immunoturbidimetric
	mg/dl	100	82.0	118	9.00	18.00	
Apolipoprotein B	g/l	0.62	0.51	0.73	0.06	0.11	Immunoturbidimetric
	mg/dl	61.8	50.7	72.9	5.55	11.10	
AST (GOT)	U/l	58	47	69	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	57	45	69	6.00	12.00	Tris buffer with P5P 37°C
	U/l	39	30	48	4.50	9.00	Tris buffer with P5P 30°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Colorimetric
	mmol/l	16.3	12.9	19.7	1.70	3.40	Ortho Vitros Microslide Systems

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Differential rate pH change
	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
	mmol/l	15.0	11.9	18.1	1.55	3.10	Ion selective electrode
Bile Acids	µmol/l	25.6	20.5	30.7	2.55	5.10	4th Generation Colorimetric
	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	19.8	15.7	23.9	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	17.0	13.4	20.6	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	34.9	27.6	42.2	3.65	7.30	Diazo with Dichloroaniline (DCA)
	mg/dl	2.04	1.61	2.47	0.22	0.43	
	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.30	2.02	0.18	0.36	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Total	µmol/l	22.9	18.1	27.7	2.40	4.80	Nitrobenzenediazonium salt	
	mg/dl	1.34	1.06	1.62	0.14	0.28		
	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazonium ion	
	mg/dl	1.52	1.20	1.84	0.16	0.32		
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.76	1.39	2.13	0.19	0.37		
	µmol/l	36.0	28.4	43.6	3.80	7.60	Modified Jendrassik	
	mg/dl	2.11	1.66	2.56	0.23	0.45		
	Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
		mg/dl	8.54	7.70	9.38	0.42	0.84	
mmol/l		2.17	1.95	2.39	0.11	0.22	Ortho Vitros Microslide Systems	
mg/dl		8.70	7.82	9.58	0.44	0.88		
mmol/l		2.09	1.88	2.30	0.11	0.21	Ion selective electrode	
mg/dl		8.38	7.54	9.22	0.42	0.84		
mmol/l		2.18	1.96	2.40	0.11	0.22	Arsenazo III	
mg/dl		8.74	7.86	9.62	0.44	0.88		
mmol/l		2.16	1.94	2.38	0.11	0.22	NM-BAPTA	
mg/dl		8.66	7.78	9.54	0.44	0.88		
mmol/l		0.87	0.78	0.95	0.04	0.09	Ionised calcium	
mg/dl		3.47	3.12	3.82	0.18	0.35		
Chloride		mmol/l	97.8	90.0	106	3.90	7.80	Colorimetric
		mmol/l	95.8	88.1	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.3	86.7	102	3.80	7.60	ISE indirect	
	mmol/l	96.0	88.3	104	3.85	7.70	ISE direct	
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Ortho Vitros Microslide Systems	
	mg/dl	158	137	179	10.50	21.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	
Cholinesterase	U/l	5676	4541	6811	567.50	1135.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	175	144	206	15.50	31.00	Ortho Vitros Microslide Systems 37°C
	U/l	194	159	229	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC serum start (DGKC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC serum start (DGKC) 25°C
	U/l	188	155	221	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	185	152	218	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	198	162	234	18.00	36.00	Monothioglycerol 37°C
	U/l	124	101	147	11.50	23.00	Monothioglycerol 30°C
	U/l	84	69	99	7.50	15.00	Monothioglycerol 25°C
	U/l	179	147	211	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	112	92	132	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C
U/l	76	62	90	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	17.1	13.7	20.5	1.70	3.40	Atomic absorption
	µg/dl	109	87.1	131	10.95	21.90	
	µmol/l	16.4	13.1	19.7	1.65	3.30	Colorimetric
	µg/dl	104	83.3	125	10.35	20.70	
Cortisol	nmol/l	538	404	672	67.00	134.00	Roche Cobas E411
	µg/dl	19.4	14.5	24.3	2.45	4.90	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Alkaline picrate with deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	123	98.6	147	12.20	24.40	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
µmol/l	120	96.4	144	11.80	23.60	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.36	1.09	1.63	0.14	0.27		
µmol/l	119	94.9	143	12.05	24.10	Vitros IDMS Traceable	
mg/dl	1.34	1.07	1.61	0.14	0.27		
µmol/l	123	98.1	148	12.45	24.90	IDMS traceable	
mg/dl	1.39	1.11	1.67	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.28	0.23	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.14	1.71	2.57	0.22	0.43	Immunoturbidimetric
	ng/ml	1.67	1.34	2.00	0.17	0.33	
Folate	nmol/l	44.4	33.7	55.1	5.35	10.70	Roche Cobas 6000/8000
	ng/ml	19.6	14.9	24.3	2.35	4.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	17.0	12.8	21.2	2.10	4.20	Abbott Architect
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Abbott Architect
	pmol/l	19.4	14.5	24.3	2.45	4.90	Siemens Centaur XP/XPT/Classic
	ng/dl	1.51	1.13	1.89	0.19	0.38	
	pg/ml	15.1	11.3	18.9	1.90	3.80	Siemens Centaur XP/XPT/Classic
	pmol/l	18.8	14.1	23.5	2.35	4.70	Beckman Access
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Beckman Access
	pmol/l	17.8	13.4	22.2	2.20	4.40	Beckman Dxl800
	ng/dl	1.39	1.05	1.73	0.17	0.34	
	pg/ml	13.9	10.5	17.3	1.70	3.40	Beckman Dxl800
	pmol/l	22.6	16.9	28.3	2.85	5.70	Roche Elecsys
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Elecsys
	pmol/l	22.2	16.7	27.7	2.75	5.50	Roche Cobas E411
	ng/dl	1.73	1.30	2.16	0.22	0.43	
	pg/ml	17.3	13.0	21.6	2.15	4.30	Roche Cobas E411
	pmol/l	21.8	16.3	27.3	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.70	1.27	2.13	0.22	0.43	
	pg/ml	17.0	12.7	21.3	2.15	4.30	Roche Cobas 6000/8000
	pmol/l	20.4	15.3	25.5	2.55	5.10	Biomerieux Vidas FT4N Kit
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Biomerieux Vidas FT4N Kit

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Gentamicin	µmol/l	8.77	7.02	10.5	0.88	1.75	Immunoturbidimetric
	µg/ml	4.19	3.36	5.02	0.42	0.83	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	38	50	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	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	6.10	5.18	7.02	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.07	5.16	6.98	0.46	0.91	Oxygen electrode
	mg/dl	109	93.0	125	8.00	16.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Glucose oxidase
	mg/dl	114	96.4	132	8.80	17.60	
HDL - Cholesterol	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL PPD
	mg/dl	62.5	53.3	71.7	4.60	9.20	
	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	56.0	47.9	64.1	4.05	8.10	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros Magnetic HDL
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.66	1.41	1.91	0.13	0.25	Direct HDL PEGME
	mg/dl	64.1	54.4	73.8	4.85	9.70	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct Clearance Method
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Vitros 5.1 FS microtip assay
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.48	1.25	1.71	0.12	0.23	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	57.1	48.3	65.9	4.40	8.80	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
mmol/l	1.57	1.33	1.81	0.12	0.24	HDL - Ultra	
mg/dl	60.6	51.3	69.9	4.65	9.30		
mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL Roche 4th Generation	
mg/dl	63.7	54.0	73.4	4.85	9.70		
Immunoglobulin A	g/l	1.64	1.23	2.05	0.21	0.41	Immunoturbidimetric
	mg/dl	164	123	205	20.50	41.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Immunoglobulin G	g/l	8.07	6.62	9.52	0.73	1.45	Immunoturbidimetric	
	mg/dl	807	662	952	72.50	145.00		
Immunoglobulin M	g/l	0.91	0.73	1.09	0.09	0.18	Immunoturbidimetric	
	mg/dl	90.9	72.7	109	9.10	18.20		
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric with ppt.	
	µg/dl	108	88.9	127	9.55	19.10		
	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	µmol/l	19.1	15.6	22.6	1.75	3.50	Ortho Vitros Microslide Systems	
	µg/dl	107	87.2	127	9.90	19.80		
	mmol/l	1.37	1.12	1.62	0.13	0.25		Ion selective electrode
	mg/dl	12.3	10.1	14.5	1.10	2.20		
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.0	10.6	15.4	1.20	2.40		
	mmol/l	1.34	1.10	1.58	0.12	0.24	Ortho Vitros Microslide Systems	
	mg/dl	12.1	9.91	14.3	1.10	2.19		
	mmol/l	1.40	1.15	1.65	0.13	0.25	Enzymatic Electrode	
	mg/dl	12.6	10.4	14.8	1.10	2.20		
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	UV LDH	
	mg/dl	13.1	10.7	15.5	1.20	2.40		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C	
LD (LDH)	U/l	538	457	619	40.50	81.00	Ortho Vitros Microslide Systems 37°C	
	U/l	171	146	196	12.50	25.00		L->P 37°C
	U/l	123	105	141	9.00	18.00		L->P 30°C
	U/l	87	74	100	6.50	13.00		L->P 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	409	347	471	31.00	62.00	P->L Scandinavian & Dutch 37°C
	U/l	295	251	339	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	207	176	238	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l	371	315	427	28.00	56.00	P->L German methods 37°C
	U/l	268	227	309	20.50	41.00	P->L German methods 30°C
	U/l	188	160	216	14.00	28.00	P->L German methods 25°C
	U/l	378	321	435	28.50	57.00	P->L SFBC 37°C
	U/l	273	232	314	20.50	41.00	P->L SFBC 30°C
	U/l	192	163	221	14.50	29.00	P->L SFBC 25°C
	U/l	193	164	222	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	98	83	113	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	196	157	235	19.50	39.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.22	1.07	1.37	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.847	0.743	0.951	0.05	0.10	
	mmol/l	0.96	0.84	1.07	0.06	0.12	Ion selective electrode
	mg/dl	0.664	0.584	0.744	0.04	0.08	
	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.678	0.596	0.760	0.04	0.08	
mmol/l	0.99	0.87	1.11	0.06	0.12	Randox Colorimetric	
	mg/dl	0.689	0.606	0.772	0.04		0.08
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Calmagite
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III	
mg/dl	2.24	1.97	2.51	0.14	0.27		
mmol/l	0.86	0.76	0.97	0.05	0.10	Enzymatic	
mg/dl	2.10	1.84	2.36	0.13	0.26		
NEFA	mmol/l	1.17	1.00	1.35	0.09	0.18	Colorimetric
Osmolality	mOsm/kg	298	238	358	30.00	60.00	Calculated
	mOsm/kg	306	245	367	30.50	61.00	Freezing point depression
	mOsm/kg	312	250	374	31.00	62.00	Vapour pressure
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Colorimetric
	mg/l	13.1	10.4	15.8	1.35	2.70	
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	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.43	3.75	5.11	0.34	0.68	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.14	3.81	4.47	0.17	0.33	Enzymatic
	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - direct
	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
	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	57.2	45.8	68.6	5.70	11.40	Biuret reaction kinetic
	g/dl	5.72	4.58	6.86	0.57	1.14	
PSA Total	ng/ml =	11.3	8.47	14.1	1.42	2.83	Roche Elecsys Modular E170
	ng/ml =	10.6	7.98	13.2	1.31	2.62	Beckman Access standardised to Hybritech
	ng/ml =	10.9	8.20	13.6	1.35	2.70	bioMerieux VIDAS TPSA
	ng/ml =	8.69	6.52	10.9	1.09	2.17	Siemens Centaur XP/XPT/Classic
	ng/ml =	8.96	6.72	11.2	1.12	2.24	Abbott Architect
	ng/ml =	11.5	8.61	14.4	1.45	2.89	Cobas E411
	ng/ml =	11.3	8.50	14.1	1.40	2.80	Roche Cobas 6000/8000
	ng/ml =	8.51	6.38	10.6	1.07	2.13	Beckman Dxl800 standardised to WHO IRP96/670
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Thyroid Stimulating Hormone	µU/ml =	1.19	0.95	1.43	0.12	0.24	Abbott Architect
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.51	1.21	1.81	0.15	0.30	bioMerieux VIDAS TSH
	µU/ml =	1.37	1.10	1.64	0.14	0.27	Vitros ECi
	µU/ml =	1.63	1.30	1.96	0.17	0.33	Roche Elecsys
	µU/ml =	1.59	1.27	1.91	0.16	0.32	Roche Cobas E411
	µU/ml =	1.59	1.27	1.91	0.16	0.32	Roche Cobas 6000/8000
	µU/ml =	1.28	1.02	1.54	0.13	0.26	Beckman Dxl800 Hyper TSH
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	46.9	37.0	56.8	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	262	207	317	27.50	55.00	
	µmol/l	40.1	31.7	48.5	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	224	177	271	23.50	47.00	
	µmol/l	43.6	34.5	52.7	4.55	9.10	Direct Colorimetric
	µg/dl	244	193	295	25.50	51.00	
	µmol/l	45.6	36.0	55.2	4.80	9.60	Calculated from Transferrin
	µg/dl	255	201	309	27.00	54.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	2.34	1.75	2.93	0.30	0.59	Abbott Architect
	ng/ml	1.52	1.14	1.90	0.19	0.38	
	ng/dl	152	114	190	19.00	38.00	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.57	1.93	3.21	0.32	0.64	Beckman Access
	ng/ml	1.67	1.26	2.08	0.21	0.41	
	ng/dl	167	126	208	20.50	41.00	Beckman Access
	nmol/l	2.91	2.18	3.64	0.37	0.73	Siemens Centaur XP/XPT/Classic
	ng/ml	1.89	1.42	2.36	0.24	0.47	
	ng/dl	189	142	236	23.50	47.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.76	2.07	3.45	0.35	0.69	Roche Cobas E411
	ng/ml	1.80	1.35	2.25	0.23	0.45	
	ng/dl	180	135	225	22.50	45.00	Roche Cobas E411
	nmol/l	2.75	2.07	3.43	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.79	1.35	2.23	0.22	0.44	
	ng/dl	179	135	223	22.00	44.00	Roche Cobas 6000/8000
Total T4	nmol/l	96.2	72.1	120	12.05	24.10	Abbott Architect
	µg/dl	7.50	5.62	9.38	0.94	1.88	
	ng/ml	75.0	56.2	93.8	9.40	18.80	Abbott Architect
	nmol/l	94.0	70.5	118	11.75	23.50	Siemens Centaur XP/XPT/Classic
	µg/dl	7.33	5.50	9.16	0.92	1.83	
	ng/ml	73.3	55.0	91.6	9.15	18.30	Siemens Centaur XP/XPT/Classic
	nmol/l	89.1	66.8	111	11.15	22.30	Roche Cobas E411
	µg/dl	6.95	5.21	8.69	0.87	1.74	
	ng/ml	69.5	52.1	86.9	8.70	17.40	Roche Cobas E411
	nmol/l	89.9	67.4	112	11.25	22.50	Roche Cobas 6000/8000
	µg/dl	7.01	5.26	8.76	0.88	1.75	
	ng/ml	70.1	52.6	87.6	8.75	17.50	Roche Cobas 6000/8000

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	116	86.7	145	14.65	29.30	Microgenics DRI assay
	µg/dl	9.05	6.76	11.3	1.15	2.29	
	ng/ml	90.5	67.6	113	11.45	22.90	Microgenics DRI assay
Transferrin	g/l	1.85	1.48	2.22	0.19	0.37	Immunoturbidimetric
	mg/dl	185	148	222	18.50	37.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
UIBC	µmol/l	19.7	16.1	23.3	1.80	3.60	Direct Colorimetric
	µg/dl	110	90.0	130	10.00	20.00	
Urea	mmol/l	7.09	6.02	8.16	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease end point
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	5.83	5.07	6.59	0.38	0.76		
Vitamin B12	pmol/l	481	385	577	48.00	96.00	Roche Cobas E411
	pg/ml	652	522	782	65.00	130.00	
Zinc	µmol/l	29.7	23.7	35.7	3.00	6.00	Atomic absorption
	µg/dl	194	155	233	19.50	39.00	
	µmol/l	29.5	23.6	35.4	2.95	5.90	Colorimetric with deproteinisation
	µg/dl	193	154	232	19.50	39.00	

**MEAN OF ALL INSTRUMENTS (Elec.)**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		66.0	59.5	72.5	3.25	6.50	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.2	5.5	8.9	0.87	1.73	% of total Protein (Beckman Capillary)
beta-globulin		10.0	7.6	12.4	1.20	2.40	% of total Protein (Beckman Capillary)
gamma-globulin		10.8	8.2	13.4	1.30	2.59	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	233	198	268	17.50	35.00	Diethanolamine buffer DEA 37°C
	U/l	182	154	210	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	149	127	171	11.00	22.00	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
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.4	22.5	34.3	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.66	1.32	2.00	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.32	3.76	4.88	0.28	0.56	Cholesterol Oxidase
	mg/dl	167	145	189	11.00	22.00	
Cholinesterase	U/l	5491	4393	6589	549.00	1098.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	95	135	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	122	97.2	147	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	118	94.3	142	11.85	23.70	Jaffe rate blanked
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.54	5.56	7.52	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PPD
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct Clearance Method
	mg/dl	57.5	48.6	66.4	4.45	8.90	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	284	242	326	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	384	326	442	29.00	58.00	P->L SFBC 37°C
	U/l	277	235	319	21.00	42.00	P->L SFBC 30°C
	U/l	195	165	225	15.00	30.00	P->L SFBC 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	190	162	218	14.00	28.00	L->P IFCC 37°C
	U/l	137	117	157	10.00	20.00	L->P IFCC 30°C
	U/l	96	82	110	7.00	14.00	L->P IFCC 25°C
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.09	3.47	4.71	0.31	0.62	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
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	
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	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	137	117	157	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	49	40	58	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	73	62	84	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	58	47	69	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	10.8	8.53	13.1	1.14	2.27	BuBc Vitros Slide
	mg/dl	0.632	0.499	0.765	0.07	0.13	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Bilirubin, Unconjugated Vitros BU	µmol/l	12.6	9.95	15.3	1.33	2.65	BuBc Vitros Slide
	mg/dl	0.737	0.582	0.892	0.08	0.16	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	95.8	88.1	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	158	137	179	10.50	21.00	
Cholinesterase	U/l	5537	4429	6645	554.00	1108.00	Ortho Vitros Microslide Systems 37°C


Ortho VITROS®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	175	144	206	15.50	31.00	Ortho Vitros Microslide Systems 37°C
Creatinine	μmol/l	120	95.8	144	12.10	24.20	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	μmol/l	119	94.9	143	12.05	24.10	Vitros IDMS Traceable
	mg/dl	1.34	1.07	1.61	0.14	0.27	
Free T4	pmol/l	34.3	25.8	42.8	4.25	8.50	Vitros ECi
	ng/dl	2.68	2.01	3.35	0.34	0.67	
	pg/ml	26.8	20.1	33.5	3.35	6.70	Vitros ECi
gamma-GT	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.10	5.18	7.02	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros Magnetic HDL
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Vitros 5.1 FS microtip assay
	mg/dl	58.7	49.8	67.6	4.45	8.90	
Iron	μmol/l	19.1	15.6	22.6	1.75	3.50	Ortho Vitros Microslide Systems
	μg/dl	107	87.2	127	9.90	19.80	
Lactate	mmol/l	1.34	1.10	1.58	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	12.1	9.91	14.3	1.10	2.19	
LD (LDH)	U/l	538	457	619	40.50	81.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	196	157	235	19.50	39.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.22	1.07	1.37	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.847	0.743	0.951	0.05	0.10	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.48	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	4.15	3.82	4.48	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.37	1.10	1.64	0.14	0.27	Vitros ECi
TIBC	µmol/l	46.9	37.0	56.8	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	262	207	317	27.50	55.00	
Total T3	nmol/l	3.08	2.31	3.85	0.39	0.77	Vitros ECi
	ng/ml	2.01	1.50	2.52	0.26	0.51	
	ng/dl	201	150	252	25.50	51.00	Vitros ECi
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
Urea	mmol/l	7.09	6.02	8.16	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.09	6.03	8.15	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.87	6.35	0.37	0.74	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.5	36.2	48.8	3.15	6.30	Bromocresol Green
	g/dl	4.25	3.62	4.88	0.32	0.63	
	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Purple
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	40.3	34.3	46.3	3.00	6.00	Turbidimetric Assays
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	138	118	158	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	88	75	101	6.50	13.00	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	72	61	83	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	95	80	110	7.50	15.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Colorimetric
	mmol/l	15.1	11.9	18.3	1.60	3.20	Enzymatic

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Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.3	15.2	23.4	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	19.2	15.1	23.3	2.05	4.10	Roche JG factored
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	90.9	83.6	98.2	3.65	7.30	ISE indirect
Cholesterol	mmol/l	4.24	3.69	4.79	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	142	186	11.00	22.00	
Cholinesterase	U/l	5366	4293	6439	536.50	1073.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	115	94	136	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	179	147	211	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	112	92	132	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T3	pmol/l	9.60	7.20	12.0	1.20	2.40	Roche Cobas 6000/8000
	ng/dl	0.624	0.468	0.780	0.08	0.16	
	pg/ml	6.25	4.69	7.81	0.78	1.56	Roche Cobas 6000/8000
Free T4	pmol/l	21.8	16.3	27.3	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.70	1.27	2.13	0.22	0.43	
	pg/ml	17.0	12.7	21.3	2.15	4.30	Roche Cobas 6000/8000
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	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	6.21	5.28	7.14	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.1	129	8.45	16.90	
	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	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME
	mg/dl	62.1	52.9	71.3	4.60	9.20	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
Iron	µmol/l	19.0	15.5	22.5	1.75	3.50	Colorimetric with ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.0	10.6	15.4	1.20	2.40	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	368	313	423	27.50	55.00	P->L German methods 37°C
	U/l	266	226	306	20.00	40.00	P->L German methods 30°C
	U/l	187	159	215	14.00	28.00	P->L German methods 25°C
	U/l	376	320	432	28.00	56.00	P->L SFBC 37°C
	U/l	271	231	311	20.00	40.00	P->L SFBC 30°C
	U/l	191	162	220	14.50	29.00	P->L SFBC 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
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.688	0.606	0.770	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.42	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	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
	g/l	57.3	45.9	68.7	5.70	11.40	Biuret reaction kinetic
	g/dl	5.73	4.59	6.87	0.57	1.14	

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Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	11.4	8.52	14.3	1.44	2.88	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.59	1.27	1.91	0.16	0.32	Roche Cobas 6000/8000
TIBC	µmol/l	38.3	30.3	46.3	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	214	169	259	22.50	45.00	
	µmol/l	47.5	37.6	57.4	4.95	9.90	Calculated from Transferrin
Total T3	µg/dl	266	210	322	28.00	56.00	
	nmol/l	2.75	2.07	3.43	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.79	1.35	2.23	0.22	0.44	
Total T4	ng/dl	179	135	223	22.00	44.00	Roche Cobas 6000/8000
	nmol/l	89.9	67.4	112	11.25	22.50	Roche Cobas 6000/8000
	µg/dl	7.01	5.26	8.76	0.88	1.75	
Triglycerides	ng/ml	70.1	52.6	87.6	8.75	17.50	Roche Cobas 6000/8000
	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	
UIBC	mmol/l	1.14	0.95	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.4	118	8.30	16.60	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Direct Colorimetric
Urea	µg/dl	107	87.8	126	9.60	19.20	
	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease end point
	mg/dl	43.4	36.9	49.9	3.25	6.50	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
mg/dl	20.1	17.1	23.1	1.50	3.00		

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	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	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	

Roche Cobas C111®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	40.0	34.0	46.0	3.00	6.00	Bromocresol Purple
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	138	118	158	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	88	75	101	6.50	13.00	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	99	84	114	7.50	15.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.7	22.7	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	19.2	15.1	23.3	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.8	15.6	24.0	2.10	4.20	Roche JG factored
mg/dl	1.16	0.913	1.41	0.12	0.25		

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.13	1.92	2.34	0.11	0.21	NM-BAPTA
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.29	3.74	4.84	0.28	0.55	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
CK Total	U/l	179	146	212	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	116	93.0	139	11.50	23.00	Alkaline picrate no deproteinization
	mg/dl	1.31	1.05	1.57	0.13	0.26	
	µmol/l	124	99.2	149	12.40	24.80	Roche Creatinine Plus
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	116	92.8	139	11.60	23.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.31	1.05	1.57	0.13	0.26	
	µmol/l	121	96.8	145	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.59	1.35	1.83	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	61.4	52.1	70.7	4.65	9.30	
	mmol/l	1.71	1.45	1.97	0.13	0.26	Direct HDL Roche 4th Generation
	mg/dl	66.0	56.0	76.0	5.00	10.00	
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P IFCC 37°C
	U/l	147	124	170	11.50	23.00	L->P IFCC 30°C
	U/l	103	87	119	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	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	4.03	3.71	4.35	0.16	0.32	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	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	82.1	113	7.65	15.30	

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Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.02	5.97	8.07	0.53	1.05	Urease kinetic
	mg/dl	42.2	35.9	48.5	3.15	6.30	
	mmol/l	7.02	5.97	8.07	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

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Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Purple
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	87	74	100	6.50	13.00	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	96	82	110	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.913	1.41	0.12	0.25	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
mg/dl	1.09	0.860	1.32	0.12	0.23		

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid	
	mg/dl	1.53	1.21	1.85	0.16	0.32		
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.50	1.18	1.82	0.16	0.32		
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion	
	mg/dl	1.50	1.19	1.81	0.16	0.31		
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.70	7.86	9.54	0.42	0.84		
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA	
	mg/dl	8.70	7.82	9.58	0.44	0.88		
	mmol/l	91.0	83.7	98.3	3.65	7.30		ISE indirect
	mg/dl	4.25	3.70	4.80	0.28	0.55		Cholesterol Oxidase
Cholesterol	mg/dl	164	143	185	10.50	21.00		
	mmol/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C	
CK Total	U/l	115	94	136	10.50	21.00	CK-NAC (IFCC) 30°C	
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C	
	U/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization	
Creatinine	µmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus	
	mg/dl	1.49	1.20	1.78	0.15	0.29		
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.46	1.16	1.76	0.15	0.30		
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.44	1.15	1.73	0.15	0.29		
	gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	58	50	66	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.0	10.6	15.4	1.20	2.40	
LD (LDH)	U/l	369	314	424	27.50	55.00	P->L German methods 37°C
	U/l	266	227	305	19.50	39.00	P->L German methods 30°C
	U/l	187	159	215	14.00	28.00	P->L German methods 25°C
	U/l	193	164	222	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	98	83	113	7.50	15.00	L->P IFCC 25°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	31	25	37	3.00	6.00	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.92	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	1.43	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	4.19	3.86	4.52	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.3	46.7	69.9	5.80	11.60	Biuret reaction end point
	g/dl	5.83	4.67	6.99	0.58	1.16	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	38.8	30.7	46.9	4.05	8.10	FE+UIBC(saturation with iron)
	µg/dl	217	172	262	22.50	45.00	
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.4	118	8.30	16.60	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.7	117	8.15	16.30	
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	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	130	110	150	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	70	96	6.50	13.00	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	73	62	84	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	18.9	14.9	22.9	2.00	4.00	Roche JG factored
	mg/dl	1.11	0.872	1.35	0.12	0.24	
Bilirubin Total	µmol/l	24.8	19.6	30.0	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.45	1.15	1.75	0.15	0.30	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.13	1.75	0.16	0.31	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Chloride	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Cholesterol	mmol/l	92.1	84.7	99.5	3.70	7.40	ISE indirect
	mg/dl	4.21	3.66	4.76	0.28	0.55	
Cholesterol	mmol/l	163	141	185	11.00	22.00	Cholesterol Oxidase
	mg/dl	5387	4310	6464	538.50	1077.00	
Cholinesterase	U/l	179	147	211	16.00	32.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	112	92	132	10.00	20.00	CK-NAC (IFCC) 37°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
Copper	µmol/l	17.3	13.8	20.8	1.75	3.50	Colorimetric
	µg/dl	110	87.8	132	11.10	22.20	
Creatinine	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.56	1.33	1.79	0.12	0.23	Direct HDL Roche 3rd generation
	mg/dl	60.2	51.3	69.1	4.45	8.90	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	193	164	222	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	98	83	113	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.689	0.606	0.772	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
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	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.7	31.4	48.0	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	222	176	268	23.00	46.00	
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Urea	mmol/l	6.96	5.92	8.00	0.52	1.04	Urease kinetic
	mg/dl	41.8	35.6	48.0	3.10	6.20	
	mmol/l	6.96	5.92	8.00	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	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	
	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	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	321	273	369	24.00	48.00	Diethanolamine buffer DEA 37°C
	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	87	74	100	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	105	90	120	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	20.6	16.3	24.9	2.15	4.30	Enzymatic
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	22.2	17.5	26.9	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.30	1.02	1.58	0.14	0.28	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	30.6	24.2	37.0	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.42	2.16	0.19	0.37	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	93.7	86.2	101	3.75	7.50	ISE direct

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.48	3.90	5.06	0.29	0.58	Cholesterol Oxidase
	mg/dl	173	151	195	11.00	22.00	
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	119	95.5	143	11.75	23.50	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
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	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.43	5.47	7.39	0.48	0.96	Hexokinase
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	6.61	5.62	7.60	0.50	0.99	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
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	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	379	322	436	28.50	57.00	P->L German methods 37°C
	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	42	33	51	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Colorimetric
	mg/dl	0.689	0.606	0.772	0.04	0.08	
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	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	4.14	3.81	4.47	0.17	0.33	Enzymatic
	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - direct
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	146	139	153	3.50	7.00	ISE method - direct
TIBC	µmol/l	47.2	37.3	57.1	4.95	9.90	Direct Colorimetric
	µg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
Urea	mmol/l	7.29	6.19	8.39	0.55	1.10	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.98	5.21	6.75	0.39	0.77	

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Purple
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	151	129	173	11.00	22.00	AMP non-optimised 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.7	13.2	20.2	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	17.0	13.4	20.6	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	6165	4932	7398	616.50	1233.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	121	96.5	146	12.25	24.50	Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.8	146	12.10	24.20	Jaffe rate blanked
	mg/dl	1.38	1.11	1.65	0.14	0.27	
µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	1.39	1.11	1.67	0.14	0.28		
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.20	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 Immunoseparation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	19.3	15.9	22.7	1.70	3.40	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.32	1.08	1.56	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	11.9	9.73	14.1	1.09	2.17	
LD (LDH)	U/l	374	318	430	28.00	56.00	P->L German methods 37°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.676	0.595	0.757	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
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	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
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	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.5	35.2	53.8	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	249	197	301	26.00	52.00	
	μmol/l	43.2	34.1	52.3	4.55	9.10	Direct Colorimetric
	μg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.8	117	8.10	16.20	
Urea	mmol/l	7.50	6.38	8.62	0.56	1.12	Urease kinetic
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.50	6.38	8.62	0.56	1.12	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	

SIEMENS DIMENSION EXL®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Purple
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	36	52	4.00	8.00	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	109	93	125	8.00	16.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.5	13.1	19.9	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.1	10.3	15.9	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.603	0.929	0.08	0.16	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.06	1.85	2.27	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.26	7.41	9.11	0.43	0.85	
Chloride	mmol/l	96.1	88.5	104	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
	mmol/l	3.85	3.35	4.35	0.25	0.50	Dimension-Siemens reagents
	mg/dl	149	129	169	10.00	20.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	62	52	72	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	72	61	83	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.28	5.33	7.23	0.48	0.95	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.66	1.41	1.91	0.13	0.25	Direct HDL PEGME
	mg/dl	64.1	54.4	73.8	4.85	9.70	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.43	1.17	1.69	0.13	0.26	UV LDH
	mg/dl	12.9	10.5	15.3	1.20	2.40	
LD (LDH)	U/l	185	158	212	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	182	154	210	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	143	114	172	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
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	0.88	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	36.0	28.4	43.6	3.80	7.60	FE+UIBC(saturation with iron)
	µg/dl	201	159	243	21.00	42.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	76.0	105	7.15	14.30	
	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.80	5.04	6.56	0.38	0.76	

SIEMENS DIMENSION RxL/Max/Xpand®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	144	122	166	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer with P5P 37°C
	U/l	43	35	51	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	110	93	127	8.50	17.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	56	44	68	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.1	12.7	19.5	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.1	10.4	15.8	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.608	0.924	0.08	0.16	
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	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.81	3.32	4.30	0.25	0.49	Dimension-Siemens reagents
	mg/dl	147	128	166	9.50	19.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	182	149	215	16.50	33.00	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	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	μmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	69	59	79	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.65	1.41	1.89	0.12	0.24	Direct HDL PPD
	mg/dl	63.7	54.4	73.0	4.65	9.30	
	mmol/l	1.70	1.45	1.95	0.13	0.25	Direct HDL PEGME
	mg/dl	65.6	56.0	75.2	4.80	9.60	
Iron	μmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	μg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P IFCC 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	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.62	3.94	5.30	0.34	0.68	
	mmol/l	1.49	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	4.01	3.69	4.33	0.16	0.32	ISE method - indirect



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)						
Lot. No. 1302UN Cat. No. HN1530/HS2611								
Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28		Range						
Analyte	unit	Target	low	high	1SD	2SD	methods	
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point	
	g/dl	5.91	4.73	7.09	0.59	1.18		
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect	
TIBC	µmol/l	41.3	32.7	49.9	4.30	8.60	FE+UIBC(saturation with iron)	
	µg/dl	231	183	279	24.00	48.00		
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction	
	mg/dl	92.9	77.8	108	7.55	15.10		
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase	
	mg/dl	92.9	77.7	108	7.60	15.20		
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease end point	
	mg/dl	45.6	38.8	52.4	3.40	6.80		
	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease kinetic	
	mg/dl	44.2	37.6	50.8	3.30	6.60		
	mmol/l	7.36	6.26	8.46	0.55	1.10		BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10		
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.96	5.19	6.73	0.39	0.77		
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290	
	mg/dl	5.75	5.01	6.49	0.37	0.74		

URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	160	136	184	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
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.38	3.81	4.95	0.29	0.57	Cholesterol Oxidase
	mg/dl	169	147	191	11.00	22.00	
CK Total	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	75	61	89	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	

URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1302UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Triglycerides	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
Urea	mmol/l	7.64	6.50	8.78	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.1	52.7	3.40	6.80	
	mmol/l	7.64	6.49	8.79	0.58	1.15	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.10	5.31	6.89	0.40	0.79	