

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. 1283UN	EXPIRY: 2022-01-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.

However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at -18°C to -24°C.

Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.

Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

NEFA is stable for 1 day at +2°C to +8°C.

Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at -18°C to -24°C.

Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.

Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

- 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. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	191	162	220	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	191	162	220	14.50	29.00	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	69	58	80	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	98	84	112	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	110	93	127	8.50	17.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
Bile Acids	µmol/l	25.2	20.1	30.3	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.3	14.4	22.2	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.24	1.90	0.17	0.33	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	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	
Cholinesterase	U/l	6481	5185	7777	648.00	1296.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	13.7	10.9	16.5	1.40	2.80	Colorimetric
	µg/dl	87.1	69.3	105	8.90	17.80	
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	97.0	145	12.00	24.00	Enzymatic UV method
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	120	96.1	144	11.95	23.90	Creatinine PAP method
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	52	45	59	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	55	47	63	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C	
Glucose	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	6.39	5.43	7.35	0.48	0.96	Glucose oxidase	
	mg/dl	115	97.8	132	8.60	17.20		
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL PPD	
	mg/dl	47.1	40.1	54.1	3.50	7.00		
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct Clearance Method	
	mg/dl	47.9	40.5	55.3	3.70	7.40		
	mmol/l	1.21	1.03	1.39	0.09	0.18	HDL - Ultra	
	mg/dl	46.7	39.8	53.6	3.45	6.90		
	Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
		µg/dl	107	87.8	126	9.60	19.20	
µmol/l		19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.	
µg/dl		110	90.6	129	9.70	19.40		
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase	
	mg/dl	14.6	12.0	17.2	1.30	2.60		
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P 37°C	
	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C	
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C	
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Spectrophotometric	
	mg/dl	0.722	0.635	0.809	0.04	0.09		
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III	
	mg/dl	2.15	1.89	2.41	0.13	0.26		

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Enzymatic
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Osmolality	mOsm/kg	302	242	362	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	
	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction kinetic
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.3	31.1	47.5	4.10	8.20	FE+UIBC(saturation with iron)
	μg/dl	220	174	266	23.00	46.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.9	105	7.20	14.40	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	76.2	104	7.05	14.10	
	mmol/l	1.04	0.88	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.4	107	7.30	14.60	
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	7.77	6.60	8.94	0.59	1.17	Urease end point
	mg/dl	46.7	39.7	53.7	3.50	7.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.97	6.77	9.17	0.60	1.20	Urease kinetic
	mg/dl	47.9	40.7	55.1	3.60	7.20	
	mmol/l	7.97	6.77	9.17	0.60	1.20	BUN
	mg/dl	22.4	19.0	25.8	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	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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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
ALT (GPT)	U/l	46	36	56	5.00	10.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Arsenazo III
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	209	171	247	19.00	38.00	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	
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
Phosphate Inorganic	mmol/l	1.70	1.44	1.96	0.13	0.26	Phosphomolybdate UV
	mg/dl	5.27	4.46	6.08	0.41	0.81	
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 - direct
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
Urea	mmol/l	7.39	6.29	8.49	0.55	1.10	Urease kinetic
	mg/dl	44.4	37.8	51.0	3.30	6.60	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	300	255	345	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	233	198	268	17.50	35.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	90	76	104	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	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	
Bilirubin Total	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	29.3	23.1	35.5	3.10	6.20	DPD (Beckman AU)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Arsenazo III
	mg/dl	8.98	8.10	9.86	0.44	0.88	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase	
	mg/dl	148	129	167	9.50	19.00		
Cholinesterase	U/l	5178	4142	6214	518.00	1036.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	230	188	272	21.00	42.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C	
Creatinine	µmol/l	122	97.9	146	12.05	24.10	Alkaline picrate no deproteinization	
	mg/dl	1.38	1.11	1.65	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	124	99.3	149	12.35	24.70	Creatinine PAP method	
	mg/dl	1.40	1.12	1.68	0.14	0.28		
	µmol/l	119	95.5	143	11.75	23.50	Jaffe rate blanked	
	mg/dl	1.34	1.08	1.60	0.13	0.26		
	µmol/l	115	92.4	138	11.30	22.60	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.30	1.04	1.56	0.13	0.26		
D-3-Hydroxybutyrate	µmol/l	118	94.5	142	11.75	23.50	IDMS traceable	
	mg/dl	1.33	1.07	1.59	0.13	0.26		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5	
	gamma-GT	U/l	56	47	65	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		55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
GLDH	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 37°C	
Glucose	mmol/l	6.43	5.46	7.40	0.49	0.97	Hexokinase	
	mg/dl	116	98.4	134	8.80	17.60		
	mmol/l	6.47	5.50	7.44	0.49	0.97	Glucose oxidase	
	mg/dl	117	99.1	135	8.95	17.90		



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PPD
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct Clearance Method
	mg/dl	47.5	40.5	54.5	3.50	7.00	
mmol/l	1.22	1.03	1.41	0.10	0.19	HDL - Ultra	
mg/dl	47.1	39.8	54.4	3.65	7.30		
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	85.5	125	9.75	19.50	
	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	
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	1.20	2.40	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P 37°C
	U/l	427	363	491	32.00	64.00	P->L Scandinavian & Dutch 37°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	38	31	45	3.50	7.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.07	0.13	Spectrophotometric
	mg/dl	0.729	0.639	0.819	0.05	0.09	
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	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	297	237	357	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	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	57.7	46.1	69.3	5.80	11.60	Biuret reaction kinetic
	g/dl	5.77	4.61	6.93	0.58	1.16	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.1	34.1	52.1	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
UIBC	µmol/l	24.4	20.0	28.8	2.20	4.40	Direct Colorimetric
	µg/dl	136	112	160	12.00	24.00	
Urea	mmol/l	8.25	7.01	9.49	0.62	1.24	Urease end point
	mg/dl	49.6	42.1	57.1	3.75	7.50	
	mmol/l	8.00	6.80	9.20	0.60	1.20	Urease kinetic
	mg/dl	48.1	40.9	55.3	3.60	7.20	
	mmol/l	8.00	6.80	9.20	0.60	1.20	BUN
	mg/dl	22.5	19.1	25.9	1.70	3.40	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	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	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Green
	g/dl	4.41	3.75	5.07	0.33	0.66	
	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Purple
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	202	172	232	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	205	174	236	15.50	31.00	AMP non-optimised 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	32	46	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.9	11.9	17.9	1.50	3.00	Differential rate pH change
	mmol/l	15.5	12.3	18.7	1.60	3.20	Ion selective electrode
Bilirubin Direct	µmol/l	12.4	9.81	15.0	1.30	2.59	Diazo with Sulphanilic Acid
	mg/dl	0.725	0.574	0.876	0.08	0.15	
Bilirubin Total	µmol/l	29.7	23.5	35.9	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	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	


Beckman CX4/5/7/9/LX20®/DxC600/800®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.4	90.6	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.66	3.19	4.13	0.24	0.47	Cholesterol Oxidase
	mg/dl	141	123	159	9.00	18.00	
CK Total	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	220	181	259	19.50	39.00	Monothioglycerol 37°C
	U/l	211	173	249	19.00	38.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	121	96.5	146	12.25	24.50	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	120	96.1	144	11.95	23.90	IDMS traceable
	mg/dl	1.36	1.09	1.63	0.14	0.27	
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.21	5.28	7.14	0.47	0.93	Oxygen electrode
	mg/dl	112	95.1	129	8.45	16.90	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL PPD
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.25	1.07	1.43	0.09	0.18	HDL - Ultra
	mg/dl	48.3	41.3	55.3	3.50	7.00	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	164	140	188	12.00	24.00	L->P 37°C
	U/l	505	429	581	38.00	76.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	28	22	34	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Calmagite
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction CX4/5/7
	g/dl	5.90	4.72	7.08	0.59	1.18	
	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	55.7	44.5	66.9	5.60	11.20	Biuret reaction kinetic
	g/dl	5.57	4.45	6.69	0.56	1.12	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.2	31.0	47.4	4.10	8.20	Removal of excess free iron
	µg/dl	219	173	265	23.00	46.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.5	122	8.25	16.50	

**Beckman CX4/5/7/9/LX20®/DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	8.33	7.08	9.58	0.63	1.25	Urease end point
	mg/dl	50.1	42.6	57.6	3.75	7.50	
	mmol/l	8.22	6.99	9.45	0.62	1.23	Urease kinetic
	mg/dl	49.4	42.0	56.8	3.70	7.40	
	mmol/l	8.22	6.99	9.45	0.62	1.23	BUN
	mg/dl	23.1	19.6	26.6	1.75	3.50	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Cholesterol	mmol/l	3.89	3.39	4.39	0.25	0.50	Cholesterol Oxidase
	mg/dl	150	131	169	9.50	19.00	
Glucose	mmol/l	6.62	5.62	7.62	0.50	1.00	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
Triglycerides	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.1	111	7.75	15.50	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease kinetic
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.43	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	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.57	5.71	7.43	0.43	0.86	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.9	34.7	47.1	3.10	6.20	Bromocresol Green
	g/dl	4.09	3.47	4.71	0.31	0.62	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	22.4	17.7	27.1	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.31	1.04	1.58	0.14	0.27	
Bilirubin Total	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.45	2.23	0.20	0.39	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Arsenazo III
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	110	160	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC (IFCC) 25°C

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Protein Total	g/l	56.6	45.3	67.9	5.65	11.30	Biuret reaction end point
	g/dl	5.66	4.53	6.79	0.57	1.13	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.22	5.41	7.03	0.41	0.81	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	264	224	304	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	206	174	238	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	169	143	195	13.00	26.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	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	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	23.5	18.5	28.5	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.37	1.08	1.66	0.15	0.29	
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	3.80	3.31	4.29	0.25	0.49	Cholesterol Oxidase
	mg/dl	147	128	166	9.50	19.00	
Creatinine	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	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.50	5.52	7.48	0.49	0.98	Glucose oxidase
	mg/dl	117	99.5	135	8.75	17.50	
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
Urea	mmol/l	8.22	6.98	9.46	0.62	1.24	Urease kinetic
	mg/dl	49.4	41.9	56.9	3.75	7.50	
	mmol/l	8.22	6.99	9.45	0.62	1.23	BUN
	mg/dl	23.1	19.6	26.6	1.75	3.50	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.12	5.31	6.93	0.41	0.81	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
	g/l	40.5	34.4	46.6	3.05	6.10	Turbidimetric Assays
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	Roche Integra AMP buffer 37°C
	U/l	136	115	157	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	78	104	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	77	105	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	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	16.9	13.3	20.5	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.989	0.778	1.20	0.11	0.21	
	µmol/l	16.9	13.3	20.5	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.778	1.20	0.11	0.21	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	16.5	13.0	20.0	1.75	3.50	Roche JG factored
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	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	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.7	150	12.65	25.30	Alkaline picrate with deproteinization
	mg/dl	1.41	1.13	1.69	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	123	98.7	147	12.15	24.30	Roche Creatinine Plus
	mg/dl	1.39	1.12	1.66	0.14	0.27	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	124	99.0	149	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
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
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Hexokinase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	1.09	0.92	1.26	0.08	0.17	Direct HDL PEGME
	mg/dl	42.1	35.6	48.6	3.25	6.50	
	mmol/l	1.09	0.93	1.25	0.08	0.16	Direct HDL Roche 3rd generation
	mg/dl	42.1	35.8	48.4	3.15	6.30	
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	380	323	437	28.50	57.00	P->L German methods 37°C
	U/l	274	233	315	20.50	41.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1283UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.91	1.17	0.06	0.13	Ion selective electrode
	mg/dl	0.722	0.634	0.810	0.04	0.09	
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	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.3	44.3	66.3	5.50	11.00	Biuret reaction end point
	g/dl	5.53	4.43	6.63	0.55	1.10	
	g/l	55.6	44.5	66.7	5.55	11.10	Biuret reaction kinetic
	g/dl	5.56	4.45	6.67	0.56	1.11	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	39.0	30.8	47.2	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	218	172	264	23.00	46.00	
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	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.4	112	7.55	15.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
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	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm
	mg/dl	5.98	5.21	6.75	0.39	0.77	

Elitech/Vitalab Selectra Series

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	290	247	333	21.50	43.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
Calcium	mmol/l	2.34	2.11	2.57	0.12	0.23	Arsenazo III
	mg/dl	9.38	8.46	10.3	0.46	0.92	
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
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	
Glucose	mmol/l	6.55	5.57	7.53	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Protein Total	g/l	59.8	47.9	71.7	5.95	11.90	Biuret reaction end point
	g/dl	5.98	4.79	7.17	0.60	1.19	
Triglycerides	mmol/l	1.08	0.91	1.25	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.6	111	7.50	15.00	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.51	6.39	8.63	0.56	1.12	Urease kinetic
	mg/dl	45.1	38.4	51.8	3.35	6.70	
	mmol/l	7.51	6.38	8.64	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	

HITACHI SERIES®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	11.0	7.37	14.6	1.82	3.63	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	127	108	146	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	206	175	237	15.50	31.00	Radox AMP 37°C
	U/l	160	136	184	12.00	24.00	Radox AMP 30°C
	U/l	132	112	152	10.00	20.00	Radox AMP 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
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.4	11.4	17.4	1.50	3.00	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.24	2.02	2.46	0.11	0.22	NM-BAPTA
	mg/dl	8.98	8.10	9.86	0.44	0.88	
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.75	3.26	4.24	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	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	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	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	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. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Hexokinase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.07	0.91	1.23	0.08	0.16	Direct HDL Roche 3rd generation
	mg/dl	41.3	35.1	47.5	3.10	6.20	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.2	30.9	47.5	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	219	173	265	23.00	46.00	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	8.22	6.98	9.46	0.62	1.24	Urease kinetic
	mg/dl	49.4	41.9	56.9	3.75	7.50	
	mmol/l	8.22	6.99	9.45	0.62	1.23	BUN
	mg/dl	23.1	19.6	26.6	1.75	3.50	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	214	182	246	16.00	32.00	AMP optimised to IFCC 37°C
	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 30°C
	U/l	137	116	158	10.50	21.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	Enzymatic Colorimetric
Bilirubin Total	µmol/l	29.2	23.0	35.4	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Chloride	mmol/l	94.7	87.1	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.73	3.24	4.22	0.25	0.49	Cholesterol Oxidase
	mg/dl	144	125	163	9.50	19.00	
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	

**ILab 600®/650®/Aries/Taurus****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	0.98	0.83	1.13	0.07	0.15	Direct Clearance Method
	mg/dl	37.8	32.2	43.4	2.80	5.60	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction end point
	g/dl	5.69	4.55	6.83	0.57	1.14	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	8.13	6.91	9.35	0.61	1.22	Urease end point
	mg/dl	48.9	41.5	56.3	3.70	7.40	
	mmol/l	8.13	6.91	9.35	0.61	1.22	BUN
	mg/dl	22.8	19.4	26.2	1.70	3.40	
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	

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

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.1	46.3	3.05	6.10	Bromocresol Green
	g/dl	4.02	3.41	4.63	0.31	0.61	
Alkaline Phosphatase	U/l	304	259	349	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	237	202	272	17.50	35.00	Diethanolamine buffer DEA 30°C
	U/l	194	166	222	14.00	28.00	Diethanolamine buffer DEA 25°C
	U/l	192	163	221	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	127	173	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	123	104	142	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	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	26.1	20.8	31.4	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.5	13.0	20.0	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Bilirubin Total	µmol/l	23.7	18.7	28.7	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.39	1.09	1.69	0.15	0.30	
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	


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

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE direct
Cholesterol	mmol/l	3.76	3.27	4.25	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.61	5.61	7.61	0.50	1.00	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	6.50	5.52	7.48	0.49	0.98	Glucose oxidase
	mg/dl	117	99.5	135	8.75	17.50	
HDL - Cholesterol	mmol/l	1.15	0.98	1.33	0.09	0.18	Direct HDL PEGME
	mg/dl	44.4	37.6	51.2	3.40	6.80	
Iron	µmol/l	20.9	17.2	24.6	1.85	3.70	Colorimetric without ppt.
	µg/dl	117	96.1	138	10.45	20.90	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.57	1.33	1.81	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.87	4.12	5.62	0.38	0.75	
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - direct
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	

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

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.8	112	7.85	15.70	
Urea	mmol/l	7.91	6.72	9.10	0.60	1.19	Urease kinetic
	mg/dl	47.5	40.4	54.6	3.55	7.10	
	mmol/l	7.91	6.72	9.10	0.60	1.19	BUN
	mg/dl	22.2	18.9	25.5	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.24	6.82	0.40	0.79	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	209	165	253	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	158	125	191	16.50	33.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	118	93	143	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	11.0	7.37	14.6	1.82	3.63	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Purple
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	40.5	34.4	46.6	3.05	6.10	Turbidimetric Assays
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	299	254	344	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	233	198	268	17.50	35.00	Diethanolamine buffer DEA 30°C
	U/l	191	162	220	14.50	29.00	Diethanolamine buffer DEA 25°C
	U/l	207	176	238	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 25°C
	U/l	197	167	227	15.00	30.00	AMP non-optimised 37°C
	U/l	153	130	176	11.50	23.00	AMP non-optimised 30°C
U/l	126	107	145	9.50	19.00	AMP non-optimised 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
	U/l	39	32	46	3.50	7.00	Tris buffer SCE 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer SCE 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	89	76	102	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	71	60	82	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	99	85	113	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	88	74	102	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	98	84	112	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	110	93	127	8.50	17.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.07	0.88	1.26	0.10	0.19	Immunoturbidimetric
	mg/dl	107	87.7	126	9.65	19.30	
Apolipoprotein B	g/l	0.56	0.46	0.66	0.05	0.10	Immunoturbidimetric
	mg/dl	55.7	45.7	65.7	5.00	10.00	
AST (GOT)	U/l	63	50	76	6.50	13.00	Ortho Vitros Microslide visible slide 37°C
	U/l	65	52	78	6.50	13.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 30°C
	U/l	31	25	37	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	39	31	47	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C	
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Colorimetric
	mmol/l	16.5	13.1	19.9	1.70	3.40	Ortho Vitros Microslide Systems
	mmol/l	15.0	11.9	18.1	1.55	3.10	Differential rate pH change
	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ion selective electrode
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	4th Generation Colorimetric
	µmol/l	24.6	19.7	29.5	2.45	4.90	5th Generation Colorimetric

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	18.0	14.3	21.7	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.837	1.26	0.11	0.21	
	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	18.3	14.4	22.2	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	14.0	11.1	16.9	1.45	2.90	Oxidation to Biliverdin/Vanadate
	mg/dl	0.819	0.649	0.989	0.09	0.17	
	µmol/l	16.2	12.8	19.6	1.70	3.40	Modified Jendrassik
	mg/dl	0.948	0.749	1.15	0.10	0.20	
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	33.8	26.7	40.9	3.55	7.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.98	1.56	2.40	0.21	0.42	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	23.7	18.7	28.7	2.50	5.00	Nitrobenzenediazonium salt
	mg/dl	1.39	1.09	1.69	0.15	0.30	
	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	29.3	23.1	35.5	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.35	2.07	0.18	0.36	
µmol/l	35.4	28.0	42.8	3.70	7.40	Modified Jendrassik	
mg/dl	2.07	1.64	2.50	0.22	0.43		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Methylthymol blue
	mg/dl	8.82	7.94	9.70	0.44	0.88	
mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III	
mg/dl	8.94	8.06	9.82	0.44	0.88		
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
	mmol/l	98.4	90.5	106	3.95	7.90	ISE direct
	mmol/l	101	92.9	109	4.05	8.10	Colorimetric
Cholesterol	mmol/l	3.72	3.23	4.21	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	144	125	163	9.50	19.00	
	mmol/l	3.79	3.30	4.28	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	5499	4399	6599	550.00	1100.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	196	161	231	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	212	174	250	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC serum start (DGKC) 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	220	181	259	19.50	39.00	Monothioglycerol 37°C
	U/l	138	113	163	12.50	25.00	Monothioglycerol 30°C
Copper	U/l	94	77	111	8.50	17.00	Monothioglycerol 25°C
	µmol/l	17.5	14.0	21.0	1.75	3.50	Atomic absorption
	µg/dl	111	89.0	133	11.00	22.00	
	µmol/l	17.5	14.0	21.0	1.75	3.50	Colorimetric
Cortisol	µg/dl	111	89.0	133	11.00	22.00	
	nmol/l	497	373	621	62.00	124.00	Roche Cobas E411
Creatinine	µg/dl	17.9	13.4	22.4	2.25	4.50	
	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.6	147	12.20	24.40	Creatinine PAP method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	124	99.0	149	12.50	25.00	Jaffe rate blanked
mg/dl	1.40	1.12	1.68	0.14	0.28		
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	122	97.8	146	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	121	96.6	145	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	120	95.9	144	12.05	24.10	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.98	1.58	2.38	0.20	0.40	Immunoturbidimetric
	ng/ml	1.55	1.23	1.87	0.16	0.32	
Folate	nmol/l	30.4	23.1	37.7	3.65	7.30	Roche Cobas E411
	ng/ml	13.4	10.2	16.6	1.60	3.20	
Free T4	pmol/l	14.0	10.5	17.5	1.75	3.50	Abbott Architect
	ng/dl	1.09	0.819	1.36	0.14	0.27	
	pg/ml	10.9	8.19	13.6	1.36	2.71	Abbott Architect
	pmol/l	17.8	13.4	22.2	2.20	4.40	Siemens Centaur XP/XPT/Classic
	ng/dl	1.39	1.05	1.73	0.17	0.34	
	pg/ml	13.9	10.5	17.3	1.70	3.40	Siemens Centaur XP/XPT/Classic
	pmol/l	15.5	11.6	19.4	1.95	3.90	Beckman Access
	ng/dl	1.21	0.905	1.52	0.15	0.31	
	pg/ml	12.1	9.05	15.2	1.53	3.05	Beckman Access
	pmol/l	15.7	11.8	19.6	1.95	3.90	Beckman Dxl800
	ng/dl	1.22	0.920	1.52	0.15	0.30	
	pg/ml	12.2	9.20	15.2	1.50	3.00	Beckman Dxl800
	pmol/l	19.0	14.3	23.7	2.35	4.70	Vitros ECi
ng/dl	1.48	1.12	1.84	0.18	0.36		
pg/ml	14.8	11.2	18.4	1.80	3.60	Vitros ECi	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	19.0	14.2	23.8	2.40	4.80	Roche Elecsys
	ng/dl	1.48	1.11	1.85	0.19	0.37	
	pg/ml	14.8	11.1	18.5	1.85	3.70	Roche Elecsys
	pmol/l	18.6	13.9	23.3	2.35	4.70	Roche Modular E170
	ng/dl	1.45	1.08	1.82	0.19	0.37	
	pg/ml	14.5	10.8	18.2	1.85	3.70	Roche Modular E170
	pmol/l	19.0	14.3	23.7	2.35	4.70	Roche Cobas E411
	ng/dl	1.48	1.12	1.84	0.18	0.36	
	pg/ml	14.8	11.2	18.4	1.80	3.60	Roche Cobas E411
	pmol/l	18.9	14.2	23.6	2.35	4.70	Roche Cobas 6000/8000
	ng/dl	1.47	1.11	1.83	0.18	0.36	
	pg/ml	14.7	11.1	18.3	1.80	3.60	Roche Cobas 6000/8000
Gentamicin	pmol/l	17.6	13.2	22.0	2.20	4.40	Biomerieux Vidas FT4N Kit
	ng/dl	1.37	1.03	1.71	0.17	0.34	
	pg/ml	13.7	10.3	17.1	1.70	3.40	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.64	6.11	9.17	0.77	1.53	Immunoturbidimetric
	µg/ml	3.65	2.92	4.38	0.37	0.73	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	38	52	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
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	
	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Ortho Vitros Microslide Systems	
	mg/dl	111	94.8	127	8.10	16.20		
	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose dehydrogenase	
	mg/dl	114	96.6	131	8.70	17.40		
	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase	
	mg/dl	114	97.3	131	8.35	16.70		
	mmol/l	6.21	5.27	7.15	0.47	0.94	Oxygen electrode	
	mg/dl	112	95.0	129	8.50	17.00		
	mmol/l	6.44	5.47	7.41	0.49	0.97	Glucose oxidase	
	mg/dl	116	98.6	133	8.70	17.40		
	HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL PPD
		mg/dl	47.1	40.1	54.1	3.50	7.00	
mmol/l		1.21	1.03	1.39	0.09	0.18	Direct HDL Immunoseparation	
mg/dl		46.7	39.8	53.6	3.45	6.90		
mmol/l		1.13	0.96	1.30	0.08	0.17	Direct HDL PEGME	
mg/dl		43.6	37.2	50.0	3.20	6.40		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct Clearance Method
	mg/dl	44.4	37.8	51.0	3.30	6.60	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.10	0.94	1.27	0.08	0.17	Direct HDL Roche 3rd generation
	mg/dl	42.5	36.1	48.9	3.20	6.40	
mmol/l	1.22	1.03	1.41	0.10	0.19	HDL - Ultra	
mg/dl	47.1	39.8	54.4	3.65	7.30		
Immunoglobulin A	g/l	1.76	1.32	2.20	0.22	0.44	Immunoturbidimetric
	mg/dl	176	132	220	22.00	44.00	
Immunoglobulin G	g/l	7.37	6.04	8.70	0.67	1.33	Immunoturbidimetric
	mg/dl	737	604	870	66.50	133.00	
Immunoglobulin M	g/l	0.75	0.60	0.90	0.07	0.15	Immunoturbidimetric
	mg/dl	74.7	59.8	89.6	7.45	14.90	
Iron	μmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	μg/dl	105	86.1	124	9.45	18.90	
	μmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric without ppt.
	μg/dl	105	86.1	124	9.45	18.90	
	μmol/l	18.9	15.5	22.3	1.70	3.40	Ortho Vitros Microslide Systems
	μg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	Ion selective electrode
	mg/dl	13.0	10.6	15.4	1.20	2.40	
	mmol/l	1.57	1.28	1.86	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems	
	mg/dl	13.4	11.0	15.8	1.20	2.40		
	mmol/l	1.62	1.33	1.91	0.15	0.29	Enzymatic Electrode	
	mg/dl	14.6	12.0	17.2	1.30	2.60		
	mmol/l	1.47	1.21	1.73	0.13	0.26	UV LDH	
	mg/dl	13.2	10.9	15.5	1.15	2.30		
	LAP	U/l	16	14	18	1.00	2.00	NAGEL 37°C
	LD (LDH)	U/l	532	453	611	39.50	79.00	Ortho Vitros Microslide Systems 37°C
U/l		178	151	205	13.50	27.00	L->P 37°C	
U/l		129	109	149	10.00	20.00	L->P 30°C	
U/l		90	77	103	6.50	13.00	L->P 25°C	
U/l		427	363	491	32.00	64.00	P->L Scandinavian & Dutch 37°C	
U/l		308	262	354	23.00	46.00	P->L Scandinavian & Dutch 30°C	
U/l		216	184	248	16.00	32.00	P->L Scandinavian & Dutch 25°C	
U/l		392	333	451	29.50	59.00	P->L German methods 37°C	
U/l		283	240	326	21.50	43.00	P->L German methods 30°C	
U/l		199	169	229	15.00	30.00	P->L German methods 25°C	
U/l		396	336	456	30.00	60.00	P->L SFBC 37°C	
U/l		286	243	329	21.50	43.00	P->L SFBC 30°C	
U/l		201	170	232	15.50	31.00	P->L SFBC 25°C	
U/l		201	171	231	15.00	30.00	L->P IFCC 37°C	
U/l		145	123	167	11.00	22.00	L->P IFCC 30°C	
U/l		102	87	117	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C	
	U/l	178	142	214	18.00	36.00	Ortho Vitros Microslide Systems 37°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	38	31	45	3.50	7.00	Randox Colorimetric 37°C
	U/l	105	84	126	10.50	21.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.22	1.07	1.37	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.847	0.743	0.951	0.05	0.10	
	mmol/l	1.06	0.93	1.19	0.07	0.13	Ion selective electrode
	mg/dl	0.736	0.646	0.826	0.05	0.09	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	
Magnesium	mmol/l	1.08	0.95	1.21	0.07	0.13	Randox Colorimetric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Calmagite
	mg/dl	2.19	1.93	2.45	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	0.89	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III	
mg/dl	2.26	1.99	2.53	0.14	0.27		
mmol/l	0.88	0.78	0.99	0.05	0.11	Enzymatic	
mg/dl	2.15	1.89	2.41	0.13	0.26		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
NEFA	mmol/l	0.42	0.36	0.49	0.03	0.06	Colorimetric
Osmolality	mOsm/kg	297	238	356	29.50	59.00	Calculated
	mOsm/kg	311	249	373	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.07	0.10	0.01	0.02	Colorimetric
	mg/l	12.6	9.99	15.2	1.31	2.61	
Phosphate Inorganic	mmol/l	1.56	1.32	1.80	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	4.84	4.09	5.59	0.38	0.75	
	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	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.09	3.76	4.42	0.17	0.33	Enzymatic
	mmol/l	4.03	3.70	4.36	0.17	0.33	ISE method - direct
	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	56.5	45.2	67.8	5.65	11.30	Biuret reaction kinetic
	g/dl	5.65	4.52	6.78	0.57	1.13	
PSA Total	ng/ml =	12.9	9.65	16.2	1.63	3.25	Roche Elecsys Modular E170
	ng/ml =	11.6	8.69	14.5	1.46	2.91	Beckman Access standardised to Hybritech
	ng/ml =	12.6	9.45	15.8	1.58	3.15	bioMerieux VIDAS TPSA
	ng/ml =	9.70	7.27	12.1	1.22	2.43	Siemens Centaur XP/XPT/Classic

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	11.2	8.38	14.0	1.41	2.82	Abbott Architect
	ng/ml =	13.2	9.88	16.5	1.66	3.32	Cobas E411
	ng/ml =	12.7	9.54	15.9	1.58	3.16	Roche Cobas 6000/8000
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	146	139	153	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	148	141	155	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
	mmol/l	145	138	152	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	
Thyroid Stimulating Hormone	µU/ml =	1.06	0.85	1.27	0.11	0.21	Abbott Architect
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Immulite 2000/2500
	µU/ml =	1.19	0.96	1.43	0.12	0.24	Vitros ECi
	µU/ml =	1.53	1.22	1.84	0.16	0.31	Roche Elecsys
	µU/ml =	1.38	1.10	1.66	0.14	0.28	Roche Cobas E411
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.11	0.89	1.34	0.11	0.23	Beckman Dxl800 Hyper TSH
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	45.7	36.1	55.3	4.80	9.60	Ortho Vitros Microslide Systems
	µg/dl	255	202	308	26.50	53.00	
	µmol/l	38.6	30.5	46.7	4.05	8.10	Removal of excess free iron
	µg/dl	216	170	262	23.00	46.00	
	µmol/l	39.9	31.5	48.3	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	223	176	270	23.50	47.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	43.4	34.3	52.5	4.55	9.10	Direct Colorimetric
	µg/dl	243	192	294	25.50	51.00	
	µmol/l	44.8	35.4	54.2	4.70	9.40	Calculated from Transferrin
	µg/dl	250	198	302	26.00	52.00	
Tobramycin	µmol/l	45.0	35.6	54.4	4.70	9.40	Radox Direct
	µg/dl	252	199	305	26.50	53.00	
Total T3	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	1.95	1.46	2.44	0.25	0.49	Abbott Architect
	ng/ml	1.27	0.950	1.59	0.16	0.32	
	ng/dl	127	95.0	159	16.00	32.00	Abbott Architect
	nmol/l	2.15	1.61	2.69	0.27	0.54	Siemens Centaur XP/XPT/Classic
	ng/ml	1.40	1.05	1.75	0.18	0.35	
	ng/dl	140	105	175	17.50	35.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.07	1.55	2.59	0.26	0.52	Roche Cobas 6000/8000
	ng/ml	1.35	1.01	1.69	0.17	0.34	
Total T4	ng/dl	135	101	169	17.00	34.00	Roche Cobas 6000/8000
	nmol/l	78.9	59.1	98.7	9.90	19.80	Abbott Architect
Total T4	µg/dl	6.15	4.61	7.69	0.77	1.54	
	ng/ml	61.5	46.1	76.9	7.70	15.40	Abbott Architect
	nmol/l	74.2	55.7	92.7	9.25	18.50	Siemens Centaur XP/XPT/Classic
	µg/dl	5.79	4.34	7.24	0.73	1.45	
	ng/ml	57.9	43.4	72.4	7.25	14.50	Siemens Centaur XP/XPT/Classic
	nmol/l	75.3	56.5	94.1	9.40	18.80	Siemens Immulite 1000
	µg/dl	5.87	4.41	7.33	0.73	1.46	
ng/ml	58.7	44.1	73.3	7.30	14.60	Siemens Immulite 1000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	69.5	52.1	86.9	8.70	17.40	Siemens Immulite 2000/2500
	µg/dl	5.42	4.06	6.78	0.68	1.36	
	ng/ml	54.2	40.6	67.8	6.80	13.60	Siemens Immulite 2000/2500
	nmol/l	85.2	63.9	107	10.65	21.30	Roche Cobas E411
	µg/dl	6.65	4.98	8.32	0.84	1.67	
	ng/ml	66.5	49.8	83.2	8.35	16.70	Roche Cobas E411
	nmol/l	79.1	59.3	98.9	9.90	19.80	Roche Cobas 6000/8000
	µg/dl	6.17	4.63	7.71	0.77	1.54	
Transferrin	g/l	1.93	1.54	2.32	0.20	0.39	Immunoturbidimetric
	mg/dl	193	154	232	19.50	39.00	
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.3	112	7.60	15.20	
	mmol/l	1.12	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	1.04	0.87	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.3	107	7.35	14.70	
	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	20.3	16.6	24.0	1.85	3.70	Direct Colorimetric
	µg/dl	113	92.8	133	10.10	20.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Urea	mmol/l	7.62	6.47	8.77	0.58	1.15	Ortho Vitros Microslide Systems	
	mg/dl	45.8	38.9	52.7	3.45	6.90		
	mmol/l	8.07	6.86	9.28	0.61	1.21	Urease end point	
	mg/dl	48.5	41.2	55.8	3.65	7.30		
	mmol/l	7.89	6.71	9.07	0.59	1.18	Urease kinetic	
	mg/dl	47.4	40.3	54.5	3.55	7.10		
	mmol/l	7.89	6.71	9.07	0.59	1.18	BUN	
	mg/dl	22.1	18.8	25.4	1.65	3.30		
	Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Ortho Vitros Microslide Systems
		mg/dl	5.70	4.96	6.44	0.37	0.74	
mmol/l		0.35	0.30	0.40	0.02	0.05	Uricase catalase 340nm	
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 with ascorbate oxidase	
mg/dl		5.93	5.16	6.70	0.39	0.77		
mmol/l		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		5.86	5.11	6.61	0.38	0.75		
mmol/l		0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290	
mg/dl		5.95	5.17	6.73	0.39	0.78		
Vitamin B12	pmol/l	390	312	468	39.05	78.10	Roche Cobas E411	
	pg/ml	529	423	635	53.00	106.00		
Zinc	µmol/l	23.4	18.7	28.1	2.35	4.70	Colorimetric with deproteinisation	
	µg/dl	153	122	184	15.50	31.00		

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.2	61.4	75.0	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
beta-globulin		9.1	6.9	11.3	1.09	2.18	% of total Protein (Beckman Capillary)
gamma-globulin		10.4	7.9	12.9	1.25	2.50	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

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	
Alkaline Phosphatase	U/l	301	256	346	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	234	199	269	17.50	35.00	Diethanolamine buffer DEA 30°C
	U/l	192	164	220	14.00	28.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	107	91	123	8.00	16.00	Siemens 2-chloro-pNPG3 37°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	19.5	15.4	23.6	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.14	0.901	1.38	0.12	0.24	
Bilirubin Total	µmol/l	29.9	23.7	36.1	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.39	2.11	0.18	0.36	
	µmol/l	23.9	18.9	28.9	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	28.2	22.3	34.1	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Calcium	mmol/l	2.28	2.06	2.50	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.14	8.26	10.0	0.44	0.88	


MINDRAY BS-200/300/400
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.33	2.09	2.57	0.12	0.24	Arsenazo III
	mg/dl	9.34	8.38	10.3	0.48	0.96	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.89	3.38	4.40	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
Cholinesterase	U/l	5299	4239	6359	530.00	1060.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	121	96.4	146	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	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	6.37	5.41	7.33	0.48	0.96	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
	mmol/l	6.76	5.74	7.78	0.51	1.02	Glucose oxidase
	mg/dl	122	103	141	9.50	19.00	
HDL - Cholesterol	mmol/l	1.19	1.01	1.37	0.09	0.18	Direct Clearance Method
	mg/dl	45.9	39.0	52.8	3.45	6.90	
Iron	μmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	μg/dl	102	83.3	121	9.35	18.70	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	410	349	471	30.50	61.00	P->L German methods 37°C
	U/l	296	252	340	22.00	44.00	P->L German methods 30°C
	U/l	208	177	239	15.50	31.00	P->L German methods 25°C
	U/l	406	345	467	30.50	61.00	P->L SFBC 37°C
	U/l	293	249	337	22.00	44.00	P->L SFBC 30°C
	U/l	206	175	237	15.50	31.00	P->L SFBC 25°C
	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
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.58	1.35	1.81	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.90	4.19	5.61	0.36	0.71	
Potassium	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
Urea	mmol/l	8.28	7.03	9.53	0.63	1.25	Urease kinetic
	mg/dl	49.8	42.3	57.3	3.75	7.50	
	mmol/l	8.28	7.04	9.52	0.62	1.24	BUN
	mg/dl	23.2	19.7	26.7	1.75	3.50	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	

**MINDRAY BS-200/300/400**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.15	5.34	6.96	0.41	0.81	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	54	43	65	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	63	50	76	6.50	13.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.5	13.1	19.9	1.70	3.40	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	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	12.2	9.64	14.8	1.28	2.56	BuBc Vitros Slide
	mg/dl	0.714	0.564	0.864	0.08	0.15	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	mmol/l	2.29	2.06	2.52	0.12	0.23	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	99.2	91.3	107	3.95	7.90	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	3.72	3.23	4.21	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	144	125	163	9.50	19.00	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5561	4449	6673	556.00	1112.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	196	161	231	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	121	96.6	145	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Free T4	pmol/l	19.0	14.3	23.7	2.35	4.70	Vitros ECi
	ng/dl	1.48	1.12	1.84	0.18	0.36	
	pg/ml	14.8	11.2	18.4	1.80	3.60	Vitros ECi
gamma-GT	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	111	94.8	127	8.10	16.20	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Vitros DT60/DT60 II
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.23	1.04	1.42	0.10	0.19	Vitros Magnetic HDL
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.17	1.00	1.34	0.09	0.17	Vitros 5.1 FS microtip assay
	mg/dl	45.2	38.5	51.9	3.35	6.70	
	mmol/l	1.27	1.08	1.46	0.10	0.19	
mg/dl	49.0	41.7	56.3	3.65	7.30		
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	532	453	611	39.50	79.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	178	142	214	18.00	36.00	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. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Vitros DT60/DT60 II
	mg/dl	2.15	1.90	2.40	0.13	0.25	
Phosphate Inorganic	mmol/l	1.56	1.32	1.80	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	4.84	4.09	5.59	0.38	0.75	
	mmol/l	1.57	1.33	1.81	0.12	0.24	Vitros DT60/DT60 II
	mg/dl	4.87	4.12	5.62	0.38	0.75	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.09	3.76	4.42	0.17	0.33	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	147	140	154	3.50	7.00	Vitros DT60/DT60 II/DTE II
TIBC	µmol/l	45.7	36.1	55.3	4.80	9.60	Ortho Vitros Microslide Systems
	µg/dl	255	202	308	26.50	53.00	
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	7.62	6.47	8.77	0.58	1.15	Ortho Vitros Microslide Systems
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.62	6.48	8.76	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.70	4.96	6.44	0.37	0.74	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	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	40.6	34.5	46.7	3.05	6.10	Turbidimetric Assays
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	107	91	123	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	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	15.2	12.0	18.4	1.60	3.20	Colorimetric
	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	24.2	19.3	29.1	2.45	4.90	Enzymatic Colorimetric

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	µmol/l	17.5	13.8	21.2	1.85	3.70	Roche JG factored
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	25.9	20.4	31.4	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.21	1.83	0.16	0.31	
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.94	8.02	9.86	0.46	0.92	
	mmol/l	2.23	2.00	2.46	0.12	0.23	NM-BAPTA
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Chloride	mmol/l	92.7	85.2	100	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	5207	4165	6249	521.00	1042.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	201	164	238	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	189	155	223	17.00	34.00	Creatinine phosphate substrate Start 37°C
	U/l	118	97	139	10.50	21.00	Creatinine phosphate substrate Start 30°C
	U/l	80	66	94	7.00	14.00	Creatinine phosphate substrate Start 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	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	128	103	153	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	137	109	165	14.00	28.00	Jaffe rate blanked
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	18.9	14.2	23.6	2.35	4.70	Roche Cobas 6000/8000
	ng/dl	1.47	1.11	1.83	0.18	0.36	
	pg/ml	14.7	11.1	18.3	1.80	3.60	Roche Cobas 6000/8000
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	32	46	3.50	7.00	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

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	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
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.36	5.40	7.32	0.48	0.96	Glucose dehydrogenase
	mg/dl	115	97.3	133	8.85	17.70	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose oxidase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.12	0.95	1.29	0.08	0.17	Direct HDL Roche 3rd generation
	mg/dl	43.2	36.7	49.7	3.25	6.50	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	84.4	122	9.30	18.60	
	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	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
	U/l	146	123	169	11.50	23.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.641	0.817	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.97	2.49	0.13	0.26	
Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.68	3.97	5.39	0.36	0.71	
	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction kinetic
	g/dl	5.81	4.65	6.97	0.58	1.16	
PSA Total	ng/ml =	12.7	9.54	15.9	1.58	3.16	Roche Cobas 6000/8000
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Cobas 6000/8000
TIBC	µmol/l	38.4	30.3	46.5	4.05	8.10	FE+UIBC(saturation with iron)
	µg/dl	215	169	261	23.00	46.00	
	µmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	µg/dl	255	202	308	26.50	53.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T3	nmol/l	2.07	1.55	2.59	0.26	0.52	Roche Cobas 6000/8000
	ng/ml	1.35	1.01	1.69	0.17	0.34	
	ng/dl	135	101	169	17.00	34.00	Roche Cobas 6000/8000
Total T4	nmol/l	79.1	59.3	98.9	9.90	19.80	Roche Cobas 6000/8000
	µg/dl	6.17	4.63	7.71	0.77	1.54	
	ng/ml	61.7	46.3	77.1	7.70	15.40	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
UIBC	µmol/l	19.3	15.9	22.7	1.70	3.40	Direct Colorimetric
	µg/dl	108	88.9	127	9.55	19.10	
Urea	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease end point
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.81	6.63	8.99	0.59	1.18	Urease kinetic
	mg/dl	46.9	39.8	54.0	3.55	7.10	
	mmol/l	7.81	6.64	8.98	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	107	91	123	8.00	16.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	77	105	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	14.7	11.6	17.8	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	16.0	12.6	19.4	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.936	0.737	1.14	0.10	0.20	
	µmol/l	16.9	13.4	20.4	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.784	1.19	0.10	0.21	
	µmol/l	16.1	12.7	19.5	1.70	3.40	
mg/dl	0.942	0.743	1.14	0.10	0.20	Roche JG factored	
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	25.5	20.1	30.9	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	99.4	91.4	107	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.79	3.30	4.28	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	120	95.8	144	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	123	98.4	148	12.30	24.60	Roche Creatinine Plus
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	121	96.6	145	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.14	0.97	1.31	0.08	0.17	Direct HDL Roche 3rd generation
	mg/dl	44.0	37.5	50.5	3.25	6.50	
LD (LDH)	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.28	2.00	2.56	0.14	0.28	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	142	135	149	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	
Urea	mmol/l	7.70	6.54	8.86	0.58	1.16	Urease kinetic
	mg/dl	46.3	39.3	53.3	3.50	7.00	
	mmol/l	7.70	6.55	8.85	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.95	5.17	6.73	0.39	0.78		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	42.8	36.3	49.3	3.25	6.50	Bromocresol Purple
	g/dl	4.28	3.63	4.93	0.33	0.65	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	129	110	148	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 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
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°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
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
		mg/dl	8.82	7.94	9.70	0.44	
mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA	
	mg/dl	8.94	8.06	9.82	0.44		0.88
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
Cholesterol	mmol/l	3.80	3.30	4.30	0.25	0.50	Cholesterol Oxidase
	mg/dl	147	127	167	10.00	20.00	
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	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	131	104	158	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.18	1.78	0.15	0.30	
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

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	39	51	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
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.10	0.93	1.27	0.08	0.17	Direct HDL Roche 3rd generation
	mg/dl	42.5	36.0	49.0	3.25	6.50	
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	
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	1.20	2.40	
LD (LDH)	U/l	391	333	449	29.00	58.00	P->L German methods 37°C
	U/l	282	240	324	21.00	42.00	P->L German methods 30°C
	U/l	198	169	227	14.50	29.00	P->L German methods 25°C
	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	28	22	34	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.90	0.80	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.93	2.47	0.14	0.27	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.68	4.00	5.36	0.34	0.68	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.3	31.0	47.6	4.15	8.30	FE+UIBC(saturation with iron)
	μg/dl	220	173	267	23.50	47.00	
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	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.5	119	8.25	16.50	
UIBC	μmol/l	20.7	17.0	24.4	1.85	3.70	Direct Colorimetric
	μg/dl	116	95.0	137	10.50	21.00	
Urea	mmol/l	7.96	6.77	9.15	0.60	1.19	Urease kinetic
	mg/dl	47.8	40.7	54.9	3.55	7.10	
	mmol/l	7.96	6.77	9.15	0.60	1.19	BUN
	mg/dl	22.3	19.0	25.6	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase 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	5.90	5.12	6.68	0.39	0.78	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

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	
Alkaline Phosphatase	U/l	163	138	188	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	127	108	146	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 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
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	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	15.6	12.3	18.9	1.65	3.30	Enzymatic
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Roche JG factored
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	13.0	10.2	15.8	1.40	2.80	
mg/dl	0.761	0.597	0.925	0.08	0.16		

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	93.5	86.0	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.73	3.24	4.22	0.25	0.49	Cholesterol Oxidase
	mg/dl	144	125	163	9.50	19.00	
Cholinesterase	U/l	5193	4154	6232	519.50	1039.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	104	154	12.50	25.00	Enzymatic UV method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	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	132	106	158	13.00	26.00	
	mg/dl	1.49	1.20	1.78	0.15	0.29	
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

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.03	0.87	1.19	0.08	0.16	Direct HDL Roche 3rd generation
	mg/dl	39.8	33.7	45.9	3.05	6.10	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.91	1.17	0.06	0.13	Spectrophotometric
	mg/dl	0.722	0.633	0.811	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	38.0	30.0	46.0	4.00	8.00	FE+UIBC(saturation with iron)
	μg/dl	212	168	256	22.00	44.00	
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	
UIBC	μmol/l	21.0	17.2	24.8	1.90	3.80	Direct Colorimetric
	μg/dl	117	96.1	138	10.45	20.90	
Urea	mmol/l	7.65	6.50	8.80	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
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	0.35	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	0.34	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. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	327	278	376	24.50	49.00	Diethanolamine buffer DEA 37°C
	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	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	
	µmol/l	15.5	12.2	18.8	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.907	0.714	1.10	0.10	0.19	
Bilirubin Total	µmol/l	31.6	25.0	38.2	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Arsenazo III
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Chloride	mmol/l	94.9	87.3	103	3.80	7.60	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	214	175	253	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	230	189	271	20.50	41.00	CK-NAC (IFCC) 37°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	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.49	5.52	7.46	0.49	0.97	Hexokinase
	mg/dl	117	99.5	135	8.75	17.50	
	mmol/l	6.68	5.68	7.68	0.50	1.00	Glucose oxidase
	mg/dl	120	102	138	9.00	18.00	
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	1.48	1.21	1.75	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	395	336	454	29.50	59.00	P->L German methods 37°C
	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Colorimetric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
Magnesium	mmol/l	0.92	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1282UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Enzymatic
	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - direct
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	148	141	155	3.50	7.00	Enzymatic
	mmol/l	144	137	151	3.50	7.00	ISE method - direct
TIBC	µmol/l	45.0	35.6	54.4	4.70	9.40	Direct Colorimetric
	µg/dl	252	199	305	26.50	53.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Urea	mmol/l	8.02	6.82	9.22	0.60	1.20	Urease kinetic
	mg/dl	48.2	41.0	55.4	3.60	7.20	
	mmol/l	8.02	6.82	9.22	0.60	1.20	BUN
	mg/dl	22.5	19.1	25.9	1.70	3.40	
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	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	6.08	5.29	6.87	0.40	0.79		

SIEMENS ATELLICA / ADVIA 1200/1650/1800/240 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Purple
	g/dl	4.22	3.58	4.86	0.32	0.64	
Alkaline Phosphatase	U/l	274	233	315	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	170	144	196	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	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	16.9	13.4	20.4	1.75	3.50	Enzymatic
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	14.2	11.2	17.2	1.50	3.00	Oxidation to Biliverdin/Vanadate
	mg/dl	0.831	0.655	1.01	0.09	0.18	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	



SIEMENS ATELLICA / ADVIA 1200/1650/1800/240 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.3	90.4	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	129	169	10.00	20.00	
CK Total	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	119	95.0	143	12.00	24.00	Enzymatic UV method
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	55	46	64	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.29	5.34	7.24	0.48	0.95	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.03	0.88	1.18	0.08	0.15	Direct Clearance Method
	mg/dl	39.8	33.9	45.7	2.95	5.90	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.48	1.21	1.75	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P 37°C
	U/l	397	337	457	30.00	60.00	P->L German methods 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.95	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.656	0.830	0.04	0.09	



SIEMENS ATELLICA / ADVIA 1200/1650/1800/240 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.9	35.4	54.4	4.75	9.50	Direct Colorimetric
	µg/dl	251	198	304	26.50	53.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.8	116	8.10	16.20	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
Urea	mmol/l	8.09	6.88	9.30	0.61	1.21	Urease kinetic
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	8.09	6.88	9.30	0.61	1.21	BUN
	mg/dl	22.7	19.3	26.1	1.70	3.40	
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	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	183	155	211	14.00	28.00	Siemens Dimension AMP buffer 37°C
	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	48	38	58	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	102	86	118	8.00	16.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	62	50	74	6.00	12.00	Tris buffer with P5P 37°C
	U/l	65	52	78	6.50	13.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.2	12.8	19.6	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	11.7	9.26	14.1	1.22	2.44	Diazo with Sulphanilic Acid
	mg/dl	0.684	0.542	0.826	0.07	0.14	
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	97.9	90.1	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.35	2.91	3.79	0.22	0.44	Dimension-Siemens reagents
	mg/dl	129	112	146	8.50	17.00	
CK Total	U/l	198	163	233	17.50	35.00	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	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	73	62	84	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.58	5.59	7.57	0.50	0.99	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
HDL - Cholesterol	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct HDL PEGME
	mg/dl	44.4	37.8	51.0	3.30	6.60	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric without ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	UV LDH
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	189	161	217	14.00	28.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	190	162	218	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	123	99	147	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.58	1.34	1.82	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.90	4.15	5.65	0.38	0.75	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.3	104	7.05	14.10	
	mmol/l	1.02	0.85	1.19	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	90.3	75.6	105	7.35	14.70	

**SIEMENS DIMENSION EXL®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	90.3	75.8	105	7.25	14.50	
Urea	mmol/l	8.13	6.91	9.35	0.61	1.22	Urease kinetic
	mg/dl	48.9	41.5	56.3	3.70	7.40	
	mmol/l	8.13	6.91	9.35	0.61	1.22	BUN
	mg/dl	22.8	19.4	26.2	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.91	5.14	6.68	0.39	0.77	


SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	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	180	153	207	13.50	27.00	Siemens Dimension AMP buffer 37°C
	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	47	38	56	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	63	51	75	6.00	12.00	Tris buffer with P5P 37°C
	U/l	62	50	74	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	12.5	9.88	15.1	1.31	2.62	Diazo with Sulphanilic Acid
	mg/dl	0.731	0.578	0.884	0.08	0.15	
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	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	99.3	91.3	107	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.31	2.88	3.74	0.22	0.43	Dimension-Siemens reagents
	mg/dl	128	111	145	8.50	17.00	
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	


SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	62	52	72	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	70	59	81	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.61	5.62	7.60	0.50	0.99	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
HDL - Cholesterol	mmol/l	1.11	0.94	1.28	0.08	0.17	Direct HDL PPD
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	1.17	1.00	1.34	0.09	0.17	Direct HDL PEGME
	mg/dl	45.2	38.5	51.9	3.35	6.70	
Iron	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	
LD (LDH)	U/l	194	165	223	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate enzymatic
	mg/dl	4.93	4.19	5.67	0.37	0.74	
	mmol/l	1.57	1.34	1.80	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.87	4.15	5.59	0.36	0.72	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Sodium	mmol/l	146	138	154	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.2	104	7.10	14.20	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1282UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.9	108	7.50	15.00	
Urea	mmol/l	7.91	6.72	9.10	0.60	1.19	Urease end point
	mg/dl	47.5	40.4	54.6	3.55	7.10	
	mmol/l	8.13	6.91	9.35	0.61	1.22	Urease kinetic
	mg/dl	48.9	41.5	56.3	3.70	7.40	
	mmol/l	8.13	6.91	9.35	0.61	1.22	BUN
	mg/dl	22.8	19.4	26.2	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.93	5.16	6.70	0.39	0.77	