

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. 1550UN	EXPIRY: 2025-03-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

GLDH is stable for 2 days at 2-8°C.

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.

Due to the zinc content in some batches of rubber stoppers, the QC and calibrator material should be aliquoted into polypropylene tubes and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

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

Due to the variation caused by test equipment, test reagents and laboratory technique, the quoted ranges are provided for guidance. It is recommended that these ranges are used until each laboratory has established its own ranges, based on individual laboratory requirements.

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 $\pm 2S.D.$

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

® All trademarks recognised.

- (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.

EC	REP
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Abbott Alinity/ Architect c/ci Svstems®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	
	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Purple
	g/dl	4.10	3.48	4.72	0.31	0.62	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	193	164	222	14.50	29.00	AMP non-optimised 37°C
	U/l	191	163	219	14.00	28.00	Colorimetric 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Abbott Architect IFCC Cal. 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.7	21.3	32.1	2.70	5.40	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.4	16.9	25.9	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.8	17.3	26.3	2.25	4.50	Diazo with Dichloroaniline (DCA)
mg/dl	1.28	1.01	1.55	0.14	0.27		

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Arsenazo III
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Dehydrogenase
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	95.6	88.0	103	3.80	7.60	ISE indirect
Cholinesterase	U/l	6634	5307	7961	663.50	1327.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	216	177	255	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	210	172	248	19.00	38.00	Abbott CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	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	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	


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Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	µmol/l	131	105	157	13.00	26.00	IDMS traceable	
	mg/dl	1.48	1.19	1.77	0.15	0.29		
Free T4	pmol/l	17.7	13.3	22.1	2.20	4.40	Abbott Architect	
	ng/dl	1.38	1.04	1.72	0.17	0.34		
	pg/ml	13.8	10.4	17.2	1.70	3.40	Abbott Architect	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	50	43	57	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C	
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase	
	mg/dl	109	92.4	126	8.30	16.60		
	mmol/l	5.98	5.08	6.88	0.45	0.90	Glucose oxidase	
	mg/dl	108	91.5	125	8.25	16.50		
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD	
	mg/dl	55.6	47.1	64.1	4.25	8.50		
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	52.5	44.8	60.2	3.85	7.70		
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method	
	mg/dl	56.7	48.3	65.1	4.20	8.40		
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra	
	mg/dl	54.4	46.3	62.5	4.05	8.10		
	Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
		µg/dl	106	87.2	125	9.40	18.80	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.63	1.33	1.93	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.0	17.4	1.35	2.70	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.662	0.838	0.04	0.09	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	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	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.03	3.44	4.62	0.30	0.59	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.06	3.44	4.68	0.31	0.62	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.3	45.9	68.7	5.70	11.40	Biuret reaction end point
	g/dl	5.73	4.59	6.87	0.57	1.14	
	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction kinetic
	g/dl	5.82	4.66	6.98	0.58	1.16	
PSA Total	ng/ml =	9.54	7.15	11.9	1.20	2.39	Abbott Architect
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.00	0.80	1.20	0.10	0.20	Abbott Architect
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	
	µmol/l	41.8	33.0	50.6	4.40	8.80	Calculated from Transferrin
	µg/dl	234	184	284	25.00	50.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.02	0.85	1.19	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	75.6	105	7.35	14.70	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.9	108	7.50	15.00	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.6	106	7.30	14.60	
UIBC	µmol/l	19.9	16.3	23.5	1.80	3.60	Direct Colorimetric
	µg/dl	111	91.1	131	9.95	19.90	
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	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	

**Abbott Alinity/ Architect c/ci Svstems®**

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	192	164	220	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	23.0	18.2	27.8	2.40	4.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE direct
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	


ABX Pentra 400®
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Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL PPD
	mg/dl	53.3	45.5	61.1	3.90	7.80	
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
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	1.50	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	3.90	3.59	4.21	0.16	0.31	ISE method - direct
Protein Total	g/l	57.2	45.8	68.6	5.70	11.40	Biuret reaction end point
	g/dl	5.72	4.58	6.86	0.57	1.14	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	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	

**ABX Pentra 400®****ASSAYED HUMAN SERA LEVEL 2**

Lot. No. 1550UN Cat. No. HN1530 / HS2611

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.1	33.2	45.0	2.95	5.90	Bromocresol Green
	g/dl	3.91	3.32	4.50	0.30	0.59	
	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Purple
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	223	190	256	16.50	33.00	AMP optimised to IFCC 37°C
	U/l	212	180	244	16.00	32.00	AMP non-optimised 37°C
	U/l	217	184	250	16.50	33.00	Beckman (Extinction Coefficient) 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Beckman (Extinction Coefficient) 37°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	62	53	71	4.50	9.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	82	70	94	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	82	70	94	6.00	12.00	Other 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Beckman (Extinction Coefficient) 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	22.1	17.5	26.7	2.30	4.60	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.29	1.02	1.56	0.14	0.27	
	µmol/l	22.3	17.6	27.0	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.30	1.03	1.57	0.14	0.27	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Direct	µmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.28	1.01	1.55	0.14	0.27		
	µmol/l	22.0	17.4	26.6	2.30	4.60	Diazo with Sulphanilic Acid	
	mg/dl	1.29	1.02	1.56	0.14	0.27		
Bilirubin Total	µmol/l	31.2	24.6	37.8	3.30	6.60	DPD (Beckman AU)	
	mg/dl	1.83	1.44	2.22	0.20	0.39		
	µmol/l	31.2	24.6	37.8	3.30	6.60	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.83	1.44	2.22	0.20	0.39		
	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.84	1.45	2.23	0.20	0.39		
	µmol/l	31.3	24.7	37.9	3.30	6.60	Diazo with Sulphanilic Acid	
	mg/dl	1.83	1.44	2.22	0.20	0.39		
	Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
		mg/dl	8.70	7.82	9.58	0.44	0.88	
mmol/l		2.20	1.98	2.42	0.11	0.22	Ion selective electrode	
mg/dl		8.82	7.94	9.70	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		
Cholesterol		mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Dehydrogenase
		mg/dl	160	139	181	10.50	21.00	
	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall	
	mg/dl	158	138	178	10.00	20.00		
	mmol/l	4.21	3.66	4.76	0.28	0.55	Cholesterol Oxidase - IDMS	
	mg/dl	163	141	185	11.00	22.00		

Beckman Coulter AU Series®

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Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect	
Cholinesterase	U/l	5483	4386	6580	548.50	1097.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	211	173	249	19.00	38.00	Beckman (Extinction Coefficient) 37°C	
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C	
	U/l	222	182	262	20.00	40.00	Monothioglycerol 37°C	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization	
	mg/dl	1.46	1.16	1.76	0.15	0.30		
	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization	
	mg/dl	1.45	1.15	1.75	0.15	0.30		
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.40	1.12	1.68	0.14	0.28		
	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	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.48	1.19	1.77	0.15	0.29		
	µmol/l	132	106	158	13.00	26.00	Enzymatic UV method	
	mg/dl	1.49	1.20	1.78	0.15	0.29		
D-3-Hydroxybutyrate	µmol/l	124	99.2	149	12.40	24.80	IDMS traceable	
	mg/dl	1.40	1.12	1.68	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5	
	gamma-GT	U/l	51	43	59	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
		U/l	53	45	61	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
		U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
U/l		52	44	60	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	GOD/02-Beckman method
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase	
mg/dl	114	96.9	131	8.55	17.10		
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
mmol/l	1.37	1.16	1.58	0.11	0.21	HDL - Ultra	
mg/dl	52.9	44.8	61.0	4.05	8.10		
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric with ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	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	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	206	175	237	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P 37°C
	U/l	445	378	512	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	436	371	501	32.50	65.00	P->L German methods 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Calmagite
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.31	1.11	1.51	0.10	0.20	Beckman PHOSm (365nm)
	mg/dl	4.06	3.44	4.68	0.31	0.62	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.03	3.44	4.62	0.30	0.59	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	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	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	43.3	34.2	52.4	4.55	9.10	Direct Colorimetric
	µg/dl	242	191	293	25.50	51.00	
	µmol/l	40.4	31.9	48.9	4.25	8.50	Calculated from Transferrin
	µg/dl	226	178	274	24.00	48.00	
	µmol/l	42.7	33.7	51.7	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	239	188	290	25.50	51.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	81.8	113	7.80	15.60	
UIBC	µmol/l	24.1	19.8	28.4	2.15	4.30	Direct Colorimetric
	µg/dl	135	111	159	12.00	24.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	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	0.35	0.30	0.39	0.02	0.05	Uricase 293nm UV
	mg/dl	5.86	5.11	6.61	0.38	0.75	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Beckman-Conductivity
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease end point
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
Zinc	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	
	µmol/l	20.6	16.5	24.7	2.05	4.10	Colorimetric without deprot.
	µg/dl	135	108	162	13.50	27.00	


Beckman DxC600/800®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	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	207	176	238	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	198	168	228	15.00	30.00	AMP non-optimised 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Beckman Mod. IFCC Ref. without P5P 37°C
Bilirubin Direct	µmol/l	15.7	12.4	19.0	1.65	3.30	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
Cholinesterase	U/l	5519	4415	6623	552.00	1104.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.69	4.84	6.54	0.43	0.85	GOD/02-Beckman method
	mg/dl	103	87.2	119	7.90	15.80	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.37	1.17	1.57	0.10	0.20	HDL - Ultra
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	166	141	191	12.50	25.00	L->P 37°C
	U/l	504	429	579	37.50	75.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	253	215	291	19.00	38.00	L->P IFCC 37°C
Lipase	U/l	38	31	45	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	


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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	54.3	43.4	65.2	5.45	10.90	Biuret reaction kinetic
	g/dl	5.43	4.34	6.52	0.55	1.09	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.07	0.90	1.24	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Beckman-Conductivity
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	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	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.7	33.7	45.7	3.00	6.00	Bromocresol Green
	g/dl	3.97	3.37	4.57	0.30	0.60	
Alkaline Phosphatase	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Protein Total	g/l	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	
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	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease end point
	mg/dl	43.0	36.6	49.4	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	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	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	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	119	95.2	143	11.90	23.80	Jaffe rate blanked
	mg/dl	1.34	1.08	1.60	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct Clearance Method
	mg/dl	54.4	46.3	62.5	4.05	8.10	
LD (LDH)	U/l	431	366	496	32.50	65.00	P->L SFBC 37°C
	U/l	311	264	358	23.50	47.00	P->L SFBC 30°C
	U/l	219	186	252	16.50	33.00	P->L SFBC 25°C
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	76.9	107	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease end point
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.00	5.95	8.05	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	

**BIOSYSTEMS A25**

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.00	5.95	8.05	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	239	203	275	18.00	36.00	Diethanolamine buffer DEA 30°C
	U/l	196	167	225	14.50	29.00	Diethanolamine buffer DEA 25°C
	U/l	201	171	231	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	128	109	147	9.50	19.00	AMP optimised to IFCC 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
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	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	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	Colorimetric
	mmol/l	101	92.9	109	4.05	8.10	ISE direct
Cholinesterase	U/l	5354	4283	6425	535.50	1071.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose oxidase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
LD (LDH)	U/l	396	337	455	29.50	59.00	P->L Scandinavian & Dutch 37°C
	U/l	286	243	329	21.50	43.00	P->L Scandinavian & Dutch 30°C
	U/l	201	171	231	15.00	30.00	P->L Scandinavian & Dutch 25°C
	U/l	381	324	438	28.50	57.00	P->L German methods 37°C
	U/l	275	234	316	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
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.01	2.55	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
Protein Total	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	40.0	34.0	46.0	3.00	6.00	Turbidimetric Assays
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	Roche Integra AMP buffer 37°C
	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 30°C
	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	190	162	218	14.00	28.00	Colorimetric 37°C
	U/l	148	126	170	11.00	22.00	Colorimetric 30°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	66	56	76	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	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
	mmol/l	13.6	10.8	16.4	1.40	2.80	
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Roche DPD JG standardised
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	µmol/l	21.3	16.8	25.8	2.25	4.50	Roche DPD Dumas standardised
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	94.8	87.2	102	3.80	7.60	ISE indirect
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	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
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	118	94.6	141	11.70	23.40	Jaffe rate blanked
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	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	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	
	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	220	187	253	16.50	33.00	L->P 37°C
	U/l	159	135	183	12.00	24.00	L->P 30°C
	U/l	112	95	129	8.50	17.00	L->P 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	419	356	482	31.50	63.00	P->L German methods 37°C
	U/l	303	257	349	23.00	46.00	P->L German methods 30°C
	U/l	212	180	244	16.00	32.00	P->L German methods 25°C
	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
	U/l	156	132	180	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	37	29	45	4.00	8.00	Roche Colorimetric 37°C
	U/l	37	30	44	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Ion selective electrode
	mg/dl	0.743	0.652	0.834	0.05	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.4	44.3	66.5	5.55	11.10	Biuret reaction end point
	g/dl	5.54	4.43	6.65	0.56	1.11	
	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction kinetic
	g/dl	5.58	4.46	6.70	0.56	1.12	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	39.2	31.0	47.4	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	219	173	265	23.00	46.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.1	111	7.75	15.50	
	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	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.2	115	7.95	15.90	
	µmol/l	20.8	17.1	24.5	1.85	3.70	Direct Colorimetric
	µg/dl	116	95.6	136	10.20	20.40	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
Urea	mmol/l	7.03	5.98	8.08	0.53	1.05	Urease end point
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	14.9	11.8	18.0	1.55	3.10	Diazo with Sulphanilic Acid
	mg/dl	0.872	0.690	1.05	0.09	0.18	
Bilirubin Total	µmol/l	22.8	18.0	27.6	2.40	4.80	Diazo with Sulphanilic Acid
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	137	179	10.50	21.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.6	148	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.40	1.13	1.67	0.14	0.27	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
LD (LDH)	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Other Colorimetric 37°C
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Protein Total	g/l	56.4	45.1	67.7	5.65	11.30	Biuret reaction end point
	g/dl	5.64	4.51	6.77	0.57	1.13	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Uric Acid (Urate)	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	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	



HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	187	159	215	14.00	28.00	Diethanolamine buffer DEA 37°C
	U/l	146	124	168	11.00	22.00	Diethanolamine buffer DEA 30°C
	U/l	119	102	136	8.50	17.00	Diethanolamine buffer DEA 25°C
	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	96	132	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	212	180	244	16.00	32.00	Randox AMP 37°C
	U/l	165	140	190	12.50	25.00	Randox AMP 30°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Other 2-chloro-pNPG3 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.01	1.81	2.21	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.06	7.25	8.87	0.41	0.81	
	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
Cholinesterase	U/l	4946	3957	5935	494.50	989.00	Colorimetric Butyrylthiocholine 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
µmol/l	137	110	164	13.50	27.00	Enzymatic UV method	
mg/dl	1.55	1.24	1.86	0.16	0.31		
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
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	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction end point
	g/dl	5.63	4.50	6.76	0.57	1.13	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Uric Acid (Urate)	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	87.0	121	8.50	17.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	

**HITACHI SERIES®****ASSAYED HUMAN SERA LEVEL 2**

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease end point
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	211	180	242	15.50	31.00	Diethanolamine buffer DEA 37°C
	U/l	164	140	188	12.00	24.00	Diethanolamine buffer DEA 30°C
	U/l	135	115	155	10.00	20.00	Diethanolamine buffer DEA 25°C
	U/l	203	172	234	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	158	134	182	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	130	110	150	10.00	20.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	92.8	85.4	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5597	4477	6717	560.00	1120.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
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	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	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	1.25	1.06	1.44	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
Iron	mmol/l	1.24	1.06	1.42	0.09	0.18	HDL - Ultra
	mg/dl	47.9	40.9	54.9	3.50	7.00	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
Lipase	U/l	41	33	49	4.00	8.00	Other 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	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.00	3.41	4.59	0.30	0.59	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.8	45.4	68.2	5.70	11.40	Biuret reaction end point
	g/dl	5.68	4.54	6.82	0.57	1.14	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.56	6.43	8.69	0.57	1.13	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	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	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	26.0	20.5	31.5	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	



Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	Colorimetric
	mmol/l	97.6	89.8	105	3.90	7.80	ISE direct
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	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	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	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Hexokinase
	mg/dl	116	98.2	134	8.90	17.80	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	

Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.84	3.53	4.15	0.16	0.31	ISE method - direct
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	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	

**Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2**

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Purple
	g/dl	4.16	3.53	4.79	0.32	0.63	
	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
	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	181	154	208	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	261	222	300	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	203	173	233	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	158	135	181	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 25°C
	U/l	200	170	230	15.00	30.00	AMP non-optimised 37°C
	U/l	156	132	180	12.00	24.00	AMP non-optimised 30°C
	U/l	128	109	147	9.50	19.00	AMP non-optimised 25°C
	U/l	191	163	219	14.00	28.00	Colorimetric 37°C
	U/l	149	127	171	11.00	22.00	Colorimetric 30°C
	U/l	122	104	140	9.00	18.00	Colorimetric 25°C



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	42	33	51	4.50	9.00	Colorimetric 37°C
	U/l	31	24	38	3.50	7.00	Colorimetric 30°C
	U/l	24	19	29	2.50	5.00	Colorimetric 25°C
	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
	U/l	42	33	51	4.50	9.00	Tris buffer with P5P NVKC 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer with P5P NVKC 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer SCE 30°C
U/l	23	18	28	2.50	5.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	89	75	103	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	88	75	101	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
	U/l	97	82	112	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	84	72	96	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.19	0.98	1.40	0.11	0.21	Immunoturbidimetric
	mg/dl	119	97.6	140	10.70	21.40	
Apolipoprotein B	g/l	0.59	0.48	0.70	0.05	0.11	Immunoturbidimetric
	mg/dl	59.0	48.4	69.6	5.30	10.60	
Acid Phosphatase (Total)	U/l	17.1	11.5	22.7	2.80	5.60	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Colorimetric 37°C
	U/l	24	19	29	2.50	5.00	Colorimetric 30°C
	U/l	17	13	21	2.00	4.00	Colorimetric 25°C
	U/l	58	46	70	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
	U/l	53	43	63	5.00	10.00	Tris buffer with P5P 37°C
	U/l	36	29	43	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

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	20	28	2.00	4.00	Phosphate buffer DGKC 30°C
	U/l	17	14	20	1.50	3.00	Phosphate buffer DGKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P NVKC 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C	
U/l	17	13	21	2.00	4.00	Tris buffer SCE 25°C	
Bile Acids	µmol/l	27.2	21.8	32.6	2.70	5.40	4th Generation Colorimetric
	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
	mmol/l	14.7	11.7	17.7	1.50	3.00	Ion selective electrode
	mmol/l	14.8	11.7	17.9	1.55	3.10	Manometric
Bilirubin Direct	µmol/l	21.7	17.2	26.2	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	14.6	11.5	17.7	1.55	3.10	Modified Jendrassik
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	27.4	21.6	33.2	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
µmol/l	32.3	25.5	39.1	3.40	6.80	Modified Jendrassik	
mg/dl	1.89	1.49	2.29	0.20	0.40		
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	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Ion selective electrode
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Methylthymol blue
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.18	1.97	2.39	0.11	0.21	Arsenazo III
	mg/dl	8.74	7.90	9.58	0.42	0.84	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Phosphonazo
	mg/dl	8.62	7.78	9.46	0.42	0.84	
mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA	
mg/dl	8.70	7.82	9.58	0.44	0.88		
Cholesterol	mmol/l	1.02	0.92	1.12	0.05	0.10	Ionised calcium
	mg/dl	4.09	3.68	4.50	0.21	0.41	
	mmol/l	4.12	3.58	4.66	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	138	180	10.50	21.00	
	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Dehydrogenase	
mg/dl	157	137	177	10.00	20.00		
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	Colorimetric
	mmol/l	95.1	87.5	103	3.80	7.60	Ortho Vitros Microslide Systems
	mmol/l	93.8	86.3	101	3.75	7.50	ISE indirect
	mmol/l	96.0	88.3	104	3.85	7.70	ISE direct

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5384	4308	6460	538.00	1076.00	Colorimetric Benzoylcholine 37°C
	U/l	5651	4520	6782	565.50	1131.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5271	4217	6325	527.00	1054.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	205	168	242	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	205	168	242	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	218	179	257	19.50	39.00	Monothioglycerol 37°C
	U/l	136	112	160	12.00	24.00	Monothioglycerol 30°C
	U/l	93	76	110	8.50	17.00	Monothioglycerol 25°C
	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	125	103	147	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
U/l	85	70	100	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	16.9	13.5	20.3	1.70	3.40	Atomic absorption
	µg/dl	107	85.9	128	10.55	21.10	
	µmol/l	15.7	12.6	18.8	1.55	3.10	Colorimetric
	µg/dl	99.9	80.1	120	9.90	19.80	
Cortisol	nmol/l	450	338	562	56.00	112.00	Roche Cobas e801
	µg/dl	16.2	12.2	20.2	2.00	4.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	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	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.18	1.74	2.62	0.22	0.44	Immunoturbidimetric
	ng/ml	1.70	1.36	2.04	0.17	0.34	
Folate	nmol/l	40.4	30.7	50.1	4.85	9.70	Roche Folate 07027290 e801
	ng/ml	17.8	13.5	22.1	2.15	4.30	
Free T4	pmol/l	18.2	13.6	22.8	2.30	4.60	Abbott Architect
	ng/dl	1.42	1.06	1.78	0.18	0.36	
	pg/ml	14.2	10.6	17.8	1.80	3.60	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Centaur XP/XPT/Classic
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Centaur XP/XPT/Classic
	pmol/l	23.2	17.4	29.0	2.90	5.80	Siemens Immulite 2000/2500
	ng/dl	1.81	1.36	2.26	0.23	0.45	
	pg/ml	18.1	13.6	22.6	2.25	4.50	Siemens Immulite 2000/2500
	pmol/l	20.6	15.5	25.7	2.55	5.10	Beckman Dxl800
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Beckman Dxl800
	pmol/l	23.8	17.8	29.8	3.00	6.00	Roche Elecsys
	ng/dl	1.86	1.39	2.33	0.24	0.47	
	pg/ml	18.6	13.9	23.3	2.35	4.70	Roche Elecsys
	pmol/l	20.5	15.4	25.6	2.55	5.10	Beckman Access
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Beckman Access
	pmol/l	26.1	19.6	32.6	3.25	6.50	Tosoh Series
	ng/dl	2.04	1.53	2.55	0.26	0.51	
	pg/ml	20.4	15.3	25.5	2.55	5.10	Tosoh Series
	pmol/l	39.8	29.9	49.7	4.95	9.90	Vitros ECi
	ng/dl	3.10	2.33	3.87	0.39	0.77	
pg/ml	31.0	23.3	38.7	3.85	7.70	Vitros ECi	
pmol/l	23.3	17.4	29.2	2.95	5.90	Roche Cobas 4000/E411	
ng/dl	1.82	1.36	2.28	0.23	0.46		
pg/ml	18.2	13.6	22.8	2.30	4.60	Roche Cobas 4000/E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	23.5	17.6	29.4	2.95	5.90	Roche Cobas e601/602
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas e601/602
	pmol/l	18.2	13.7	22.7	2.25	4.50	Monobind Inc. ELISA / CLIA
	ng/dl	1.42	1.07	1.77	0.18	0.35	
	pg/ml	14.2	10.7	17.7	1.75	3.50	Monobind Inc. ELISA / CLIA
	pmol/l	22.4	16.8	28.0	2.80	5.60	Biomerieux Vidas FT4N Kit
	ng/dl	1.75	1.31	2.19	0.22	0.44	
	pg/ml	17.5	13.1	21.9	2.20	4.40	Biomerieux Vidas FT4N Kit
	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Dimension Exl LOCI
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Dimension Exl LOCI
	pmol/l	22.9	17.2	28.6	2.85	5.70	Roche Cobas e801
	ng/dl	1.79	1.34	2.24	0.23	0.45	
	pg/ml	17.9	13.4	22.4	2.25	4.50	Roche Cobas e801
Gentamicin	pmol/l	21.3	16.0	26.6	2.65	5.30	Siemens Atellica IM
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Siemens Atellica IM
Gentamicin	µmol/l	8.24	6.59	9.89	0.83	1.65	Immunoturbidimetric
	µg/ml	3.94	3.15	4.73	0.40	0.79	
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
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	47	40	54	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	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	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	6.12	5.20	7.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose dehydrogenase
	mg/dl	111	94.4	128	8.30	16.60	
	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	6.19	5.26	7.12	0.47	0.93	Oxygen electrode
	mg/dl	112	94.8	129	8.60	17.20	
mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase	
mg/dl	111	94.4	128	8.30	16.60		
alpha-HBDH	U/l	223	176	270	23.50	47.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	168	133	203	17.50	35.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	126	100	152	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Vitros Magnetic HDL
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PEGME
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
HDL - Ultra	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Direct HDL Roche 4th Generation	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
Immunoglobulin A	g/l	1.68	1.26	2.10	0.21	0.42	Immunoturbidimetric
	mg/dl	168	126	210	21.00	42.00	
Immunoglobulin G	g/l	5.88	4.82	6.94	0.53	1.06	Immunoturbidimetric
	mg/dl	588	482	694	53.00	106.00	
Immunoglobulin M	g/l	0.67	0.54	0.81	0.07	0.14	Immunoturbidimetric
	mg/dl	67.4	53.9	80.9	6.75	13.50	
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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
	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	1.60	1.31	1.89	0.15	0.29	Ion selective electrode
	mg/dl	14.4	11.8	17.0	1.30	2.60	
mmol/l	1.57	1.28	1.86	0.15	0.29	UV LDH	
mg/dl	14.1	11.5	16.7	1.30	2.60		
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P 37°C
	U/l	147	124	170	11.50	23.00	L->P 30°C
	U/l	103	87	119	8.00	16.00	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	414	352	476	31.00	62.00	P->L German methods 37°C
	U/l	299	254	344	22.50	45.00	P->L German methods 30°C
	U/l	210	178	242	16.00	32.00	P->L German methods 25°C
	U/l	412	350	474	31.00	62.00	P->L SFBC 37°C
	U/l	297	253	341	22.00	44.00	P->L SFBC 30°C
	U/l	209	177	241	16.00	32.00	P->L SFBC 25°C
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
	U/l	285	229	341	28.00	56.00	Ortho Vitros Microslide Systems 37°C
	U/l	37	30	44	3.50	7.00	Roche Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.25	1.10	1.40	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.868	0.764	0.972	0.05	0.10	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Flame photometry
	mg/dl	0.729	0.640	0.818	0.04	0.09	
	mmol/l	1.07	0.95	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.656	0.830	0.04	0.09	
Magnesium	mmol/l	1.09	0.96	1.22	0.07	0.13	Spectrophotometric
	mg/dl	0.757	0.665	0.849	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	1.94	2.48	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Atomic absorption
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Enzymatic
	mg/dl	2.17	1.91	2.43	0.13	0.26	
NEFA	mmol/l	1.50	1.20	1.80	0.15	0.30	Colorimetric
Osmolality	mOsm/kg	288	231	345	28.50	57.00	Calculated
	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Gravimetric
	mg/l	13.0	10.4	15.6	1.30	2.60	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic
	mmol/l	3.91	3.60	4.22	0.16	0.31	Flame photometry
	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - direct
	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
	mmol/l	3.80	3.50	4.10	0.15	0.30	Colorimetric
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Ortho Vitros Microslide Systems
	g/dl	5.78	4.63	6.93	0.58	1.15	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
PSA Total	ng/ml =	8.13	6.10	10.2	1.02	2.03	Tosoh Series
	ng/ml =	10.1	7.60	12.6	1.25	2.50	Siemens Immulite 1000
	ng/ml =	10.8	8.09	13.5	1.36	2.71	Roche Elecsys Modular E170
	ng/ml =	11.0	8.24	13.8	1.38	2.76	Beckman Access standardised to Hybritech
	ng/ml =	11.0	8.25	13.8	1.38	2.75	bioMerieux VIDAS TPSA
	ng/ml =	9.53	7.15	11.9	1.19	2.38	Siemens Centaur XP/XPT/Classic
	ng/ml =	10.5	7.90	13.1	1.30	2.60	Siemens Immulite 2000 1st Generation
	ng/ml =	9.42	7.06	11.8	1.18	2.36	Abbott Architect
	ng/ml =	10.8	8.07	13.5	1.37	2.73	Ortho Vitros ECi
	ng/ml =	11.0	8.25	13.8	1.38	2.75	Siemens Dimension
	ng/ml =	11.3	8.46	14.1	1.42	2.84	Cobas E411
	ng/ml =	11.2	8.39	14.0	1.41	2.81	Roche Cobas 6000/8000
	ng/ml =	11.1	8.36	13.8	1.37	2.74	Ortho Vitros 3600/5600/ECi PSA II
ng/ml =	10.8	8.14	13.5	1.33	2.66	Beckman DXI standardised to Hybritech	
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.80	7.18	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	Flame photometry
	mmol/l	138	131	145	3.50	7.00	ISE method - direct
	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	Colorimetric
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 =	1.02	0.81	1.23	0.10	0.21	Abbott Architect
	µU/ml =	1.31	1.05	1.57	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.31	1.05	1.57	0.13	0.26	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Siemens Immulite 2000/2500
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Elecsys
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Beckman Access Fast TSH
	µU/ml =	1.16	0.93	1.39	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Tosoh Series
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Vitros ECi
	µU/ml =	1.44	1.16	1.72	0.14	0.28	Roche Cobas 4000/E411
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Cobas e601/602
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Beckman Dxl800 Hyper TSH
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Monobind Inc. ELISA / CLIA
	µU/ml =	1.14	0.91	1.37	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Siemens Centaur CP
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Siemens Centaur CP TSH3-Ultra
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)
µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Cobas e801	
µU/ml =	1.15	0.92	1.38	0.12	0.23	Siemens Atellica IM	
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	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	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	175	269	23.50	47.00	
	µmol/l	41.4	32.7	50.1	4.35	8.70	Direct Colorimetric
	µg/dl	231	183	279	24.00	48.00	
	µmol/l	40.7	32.2	49.2	4.25	8.50	Calculated from Transferrin
	µg/dl	228	180	276	24.00	48.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.87	1.40	2.34	0.24	0.47	Abbott Architect
	ng/ml	1.22	0.911	1.53	0.15	0.31	
	ng/dl	122	91.1	153	15.45	30.90	Abbott Architect
	nmol/l	2.05	1.54	2.56	0.26	0.51	BioMerieux Vidas
	ng/ml	1.33	1.00	1.66	0.17	0.33	
	ng/dl	133	100	166	16.50	33.00	BioMerieux Vidas
	nmol/l	2.18	1.63	2.73	0.28	0.55	Siemens Centaur XP/XPT/Classic
	ng/ml	1.42	1.06	1.78	0.18	0.36	
	ng/dl	142	106	178	18.00	36.00	Siemens Centaur XP/XPT/Classic
	nmol/l	1.76	1.32	2.20	0.22	0.44	Siemens Immulite 2000/2500
	ng/ml	1.15	0.859	1.44	0.15	0.29	
	ng/dl	115	85.9	144	14.55	29.10	Siemens Immulite 2000/2500
	nmol/l	2.09	1.57	2.61	0.26	0.52	Beckman Dxl800
	ng/ml	1.36	1.02	1.70	0.17	0.34	
ng/dl	136	102	170	17.00	34.00	Beckman Dxl800	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.36	1.77	2.95	0.30	0.59	Roche Elecsys
	ng/ml	1.54	1.15	1.93	0.20	0.39	
	ng/dl	154	115	193	19.50	39.00	Roche Elecsys
	nmol/l	2.24	1.68	2.80	0.28	0.56	Beckman Access
	ng/ml	1.46	1.09	1.83	0.19	0.37	
	ng/dl	146	109	183	18.50	37.00	Beckman Access
	nmol/l	2.03	1.52	2.54	0.26	0.51	Tosoh Series
	ng/ml	1.32	0.990	1.65	0.17	0.33	
	ng/dl	132	99.0	165	16.50	33.00	Tosoh Series
	nmol/l	2.62	1.97	3.27	0.33	0.65	Vitros ECi
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	Vitros ECi
	nmol/l	2.20	1.65	2.75	0.28	0.55	Roche Cobas 4000/E411
	ng/ml	1.43	1.07	1.79	0.18	0.36	
	ng/dl	143	107	179	18.00	36.00	Roche Cobas 4000/E411
	nmol/l	2.21	1.66	2.76	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	Roche Cobas e601/602
	nmol/l	2.22	1.66	2.78	0.28	0.56	Siemens Centaur CP
	ng/ml	1.45	1.08	1.82	0.19	0.37	
ng/dl	145	108	182	18.50	37.00	Siemens Centaur CP	
nmol/l	2.31	1.73	2.89	0.29	0.58	Roche Cobas e801	
ng/ml	1.50	1.13	1.87	0.19	0.37		
ng/dl	150	113	187	18.50	37.00	Roche Cobas e801	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	97.1	72.8	121	12.15	24.30	Abbott Architect
	µg/dl	7.57	5.68	9.46	0.95	1.89	
	ng/ml	75.7	56.8	94.6	9.45	18.90	Abbott Architect
	nmol/l	92.9	69.7	116	11.60	23.20	BioMerieux Vidas
	µg/dl	7.25	5.44	9.06	0.91	1.81	
	ng/ml	72.5	54.4	90.6	9.05	18.10	BioMerieux Vidas
	nmol/l	95.8	71.8	120	12.00	24.00	Siemens Centaur XP/XPT/Classic
	µg/dl	7.47	5.60	9.34	0.94	1.87	
	ng/ml	74.7	56.0	93.4	9.35	18.70	Siemens Centaur XP/XPT/Classic
	nmol/l	102	76.1	128	12.95	25.90	Siemens Immulite 2000/2500
	µg/dl	7.96	5.94	9.98	1.01	2.02	
	ng/ml	79.6	59.4	99.8	10.10	20.20	Siemens Immulite 2000/2500
	nmol/l	85.9	64.4	107	10.75	21.50	Beckman Dxl800
	µg/dl	6.70	5.02	8.38	0.84	1.68	
	ng/ml	67.0	50.2	83.8	8.40	16.80	Beckman Dxl800
	nmol/l	98.0	73.5	123	12.25	24.50	Roche Elecsys
	µg/dl	7.64	5.73	9.55	0.96	1.91	
	ng/ml	76.4	57.3	95.5	9.55	19.10	Roche Elecsys
	nmol/l	106	79.3	133	13.35	26.70	Beckman Access
	µg/dl	8.27	6.19	10.4	1.04	2.08	
	ng/ml	82.7	61.9	104	10.40	20.80	Beckman Access
	nmol/l	91.3	68.5	114	11.40	22.80	Tosoh Series
	µg/dl	7.12	5.34	8.90	0.89	1.78	
	ng/ml	71.2	53.4	89.0	8.90	17.80	Tosoh Series

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	92.2	69.2	115	11.50	23.00	Vitros ECi
	µg/dl	7.19	5.40	8.98	0.90	1.79	
	ng/ml	71.9	54.0	89.8	8.95	17.90	Vitros ECi
	nmol/l	96.5	72.4	121	12.05	24.10	Roche Cobas 4000/E411
	µg/dl	7.53	5.65	9.41	0.94	1.88	
	ng/ml	75.3	56.5	94.1	9.40	18.80	Roche Cobas 4000/E411
	nmol/l	95.4	71.6	119	11.90	23.80	Roche Cobas e601/602
	µg/dl	7.44	5.58	9.30	0.93	1.86	
	ng/ml	74.4	55.8	93.0	9.30	18.60	Roche Cobas e601/602
	nmol/l	97.7	73.3	122	12.20	24.40	Monobind Inc. ELISA / CLIA
	µg/dl	7.62	5.72	9.52	0.95	1.90	
	ng/ml	76.2	57.2	95.2	9.50	19.00	Monobind Inc. ELISA / CLIA
	nmol/l	97.1	72.8	121	12.15	24.30	Siemens Centaur CP
	µg/dl	7.57	5.68	9.46	0.95	1.89	
	ng/ml	75.7	56.8	94.6	9.45	18.90	Siemens Centaur CP
Transferrin	nmol/l	91.6	68.7	115	11.45	22.90	Roche Cobas e801
	µg/dl	7.14	5.36	8.92	0.89	1.78	
	ng/ml	71.4	53.6	89.2	8.90	17.80	Roche Cobas e801
Triglycerides	g/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	mg/dl	187	150	224	18.50	37.00	
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	
	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	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.7	112	7.90	15.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	97.4	82.0	113	7.70	15.40		
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	97.4	81.4	113	8.00	16.00		
	mmol/l	1.27	1.07	1.47	0.10	0.20	Ortho Vitros Microslide Systems	
	mg/dl	112	94.7	129	8.65	17.30		
	Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
		mg/dl	5.61	4.89	6.33	0.36	0.72	
mmol/l		0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm	
mg/dl		5.88	5.12	6.64	0.38	0.76		
mmol/l		0.34	0.30	0.39	0.02	0.04	Reduction methods	
mg/dl		5.73	4.99	6.47	0.37	0.74		
mmol/l		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
mg/dl		5.83	5.07	6.59	0.38	0.76		
mmol/l		0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		5.76	5.01	6.51	0.38	0.75		
mmol/l		0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290	
mg/dl		5.85	5.09	6.61	0.38	0.76		
mmol/l		0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		5.75	5.01	6.49	0.37	0.74		
Urea	mmol/l	6.94	5.90	7.98	0.52	1.04	Ortho Vitros Microslide Systems	
	mg/dl	41.7	35.5	47.9	3.10	6.20		
	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease end point	
	mg/dl	43.9	37.3	50.5	3.30	6.60		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	7.39	6.28	8.50	0.56	1.11	Urease hypochlorite
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	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	
Vitamin B12	pmol/l	422	338	506	42.00	84.00	Roche Cobas e801
	pg/ml	572	458	686	57.00	114.00	
Zinc	µmol/l	22.5	18.0	27.0	2.25	4.50	Colorimetric with deproteinisation
	µg/dl	147	118	176	14.50	29.00	

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

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-1-globulin		6.2	4.7	7.7	0.75	1.49	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.2	5.5	8.9	0.87	1.73	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		66.8	60.2	73.4	3.30	6.60	% of total Protein (Beckman Capillary)
beta-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)
gamma-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)


Ortho VITROS®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	58	46	70	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	12.4	9.80	15.0	1.30	2.60	BuBc Vitros Slide
	mg/dl	0.725	0.573	0.877	0.08	0.15	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	138	180	10.50	21.00	
Chloride	mmol/l	95.1	87.5	103	3.80	7.60	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5271	4217	6325	527.00	1054.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.46	1.16	1.76	0.15	0.30	


Ortho VITROS®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	103	153	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.45	1.16	1.74	0.15	0.29	
Free T4	pmol/l	39.8	29.9	49.7	4.95	9.90	Vitros ECi
	ng/dl	3.10	2.33	3.87	0.39	0.77	
	pg/ml	31.0	23.3	38.7	3.85	7.70	Vitros ECi
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
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	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	285	229	341	28.00	56.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.25	1.10	1.40	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.868	0.764	0.972	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Ortho Vitros Microslide Systems


Ortho VITROS®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Ortho Vitros Microslide Systems
	g/dl	5.78	4.63	6.93	0.58	1.15	
PSA Total	ng/ml =	10.8	8.07	13.5	1.37	2.73	Ortho Vitros ECi
	ng/ml =	11.1	8.36	13.8	1.37	2.74	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.17	0.94	1.40	0.12	0.23	Vitros ECi
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	
Total T3	nmol/l	2.62	1.97	3.27	0.33	0.65	Vitros ECi
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	Vitros ECi
Total T4	nmol/l	92.2	69.2	115	11.50	23.00	Vitros ECi
	µg/dl	7.19	5.40	8.98	0.90	1.79	
	ng/ml	71.9	54.0	89.8	8.95	17.90	Vitros ECi
Triglycerides	mmol/l	1.27	1.07	1.47	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	94.7	129	8.65	17.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	6.94	5.90	7.98	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.7	35.5	47.9	3.10	6.20	
	mmol/l	6.94	5.90	7.98	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	303	257	349	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	236	200	272	18.00	36.00	Diethanolamine buffer DEA 30°C
	U/l	194	164	224	15.00	30.00	Diethanolamine buffer DEA 25°C
	U/l	218	185	251	16.50	33.00	AMP optimised to IFCC 37°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 30°C
	U/l	139	118	160	10.50	21.00	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
Amylase Pancreatic	U/l	77	65	89	6.00	12.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.7	16.3	25.1	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	33.2	26.3	40.1	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.94	1.54	2.34	0.20	0.40	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	142	184	10.50	21.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
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	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct Clearance Method
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	428	364	492	32.00	64.00	P->L German methods 37°C
	U/l	309	263	355	23.00	46.00	P->L German methods 30°C
	U/l	217	185	249	16.00	32.00	P->L German methods 25°C

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Protein Total	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction end point
	g/dl	5.73	4.58	6.88	0.58	1.15	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.1	119	8.45	16.90	
Uric Acid (Urate)	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	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	
mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.75	5.01	6.49	0.37		0.74
mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.70	4.96	6.44	0.37		0.74
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Purple
	g/dl	4.14	3.52	4.76	0.31	0.62	
	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	185	158	212	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	118	101	135	8.50	17.00	Roche Integra AMP buffer 25°C
	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
	U/l	184	157	211	13.50	27.00	Colorimetric 37°C
	U/l	143	122	164	10.50	21.00	Colorimetric 30°C
	U/l	118	100	136	9.00	18.00	Colorimetric 25°C
ALT (GPT)	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
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.9	20.7	31.1	2.60	5.20	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Colorimetric
	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.9	25.7	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Roche DPD JG standardised
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Roche DPD Dumas standardised
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.58	1.25	1.91	0.17	0.33	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.3	20.7	31.9	2.80	5.60	Diazonium ion
	mg/dl	1.54	1.21	1.87	0.17	0.33	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	ISE indirect
Cholinesterase	U/l	5317	4254	6380	531.50	1063.00	Colorimetric Benzoylcholine 37°C
	U/l	5308	4246	6370	531.00	1062.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Copper	µmol/l	15.0	12.0	18.0	1.50	3.00	Colorimetric
	µg/dl	95.4	76.3	115	9.55	19.10	
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	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Creatinine PAP method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	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	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	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
µmol/l	133	106	160	13.50	27.00	IDMS traceable	
mg/dl	1.50	1.20	1.80	0.15	0.30		
Free T4	pmol/l	23.5	17.6	29.4	2.95	5.90	Roche Cobas e601/602
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas e601/602
gamma-GT	U/l	45	39	51	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	31	39	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	44	58	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose dehydrogenase
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	1.51	1.29	1.73	0.11	0.22	Direct HDL Immunoseparation
		mg/dl	58.3	49.8	66.8	4.25	
mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL PEGME	
	mg/dl	57.5	49.0	66.0	4.25		8.50
mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra	
	mg/dl	54.4	46.3	62.5	4.05		8.10
mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL Roche 4th Generation	
	mg/dl	57.9	49.0	66.8	4.45		8.90
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	
	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	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	209	177	241	16.00	32.00	L->P 37°C
	U/l	151	128	174	11.50	23.00	L->P 30°C
	U/l	106	90	122	8.00	16.00	L->P 25°C
	U/l	425	361	489	32.00	64.00	P->L German methods 37°C
	U/l	307	261	353	23.00	46.00	P->L German methods 30°C
	U/l	215	183	247	16.00	32.00	P->L German methods 25°C
	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
	U/l	152	130	174	11.00	22.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
	U/l	38	30	46	4.00	8.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.656	0.830	0.04	0.09	
	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.662	0.838	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Arsenazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Atomic absorption
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
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	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction kinetic
	g/dl	5.73	4.58	6.88	0.58	1.15	
PSA Total	ng/ml =	11.2	8.40	14.0	1.40	2.80	Roche Cobas 6000/8000
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Cobas e601/602
TIBC	μmol/l	39.1	30.9	47.3	4.10	8.20	FE+UIBC(saturation with iron)
	μg/dl	219	173	265	23.00	46.00	
	μmol/l	43.9	34.6	53.2	4.65	9.30	Calculated from Transferrin
	μg/dl	245	193	297	26.00	52.00	
Total T3	nmol/l	2.21	1.66	2.76	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	
Total T4	nmol/l	95.7	71.8	120	11.95	23.90	Roche Cobas e601/602
	μg/dl	7.46	5.60	9.32	0.93	1.86	
	ng/ml	74.6	56.0	93.2	9.30	18.60	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.4	114	7.90	15.80	
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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease end point
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	180	153	207	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	140	119	161	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 25°C
	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	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	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	20.7	16.3	25.1	2.20	4.40	Roche DPD JG standardised
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	20.4	16.2	24.6	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.948	1.43	0.12	0.24	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	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	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
µmol/l	28.7	22.7	34.7	3.00	6.00	Diazonium ion	
mg/dl	1.68	1.33	2.03	0.18	0.35		
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.16	1.95	2.37	0.11	0.21	NM-BAPTA
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	150	130	170	10.00	20.00	
Chloride	mmol/l	95.2	87.6	103	3.80	7.60	ISE indirect
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	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	123	98.1	148	12.45	24.90	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	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	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
mg/dl	112	95.5	129	8.25	16.50		
	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PEGME
	mg/dl	57.9	49.0	66.8	4.45	8.90	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric with ppt.
Iron	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	
	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
	U/l	152	130	174	11.00	22.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.22	3.60	4.84	0.31	0.62	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.7	45.3	68.1	5.70	11.40	Biuret reaction end point
	g/dl	5.67	4.53	6.81	0.57	1.14	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
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	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	79.0	109	7.40	14.80	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

**Roche Cobas C111®****ASSAYED HUMAN SERA LEVEL 2**

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	Roche Integra AMP buffer 37°C
	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	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
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	12.7	10.0	15.4	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Roche DPD JG standardised
	mg/dl	1.25	0.989	1.51	0.13	0.26	
Bilirubin Total	µmol/l	20.2	16.0	24.4	2.10	4.20	Roche DPD Doumas standardised
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	µmol/l	26.6	21.0	32.2	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	



Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	ISE indirect
Cholinesterase	U/l	5240	4192	6288	524.00	1048.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	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	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
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	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	129	104	154	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.18	1.74	0.14	0.28	
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	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase	
	mg/dl	110	93.5	127	8.25	16.50		
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose oxidase	
	mg/dl	110	93.3	127	8.35	16.70		
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct HDL PPD	
	mg/dl	61.0	51.7	70.3	4.65	9.30		
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PEGME	
	mg/dl	56.7	48.3	65.1	4.20	8.40		
Iron	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct HDL Roche 4th Generation	
	mg/dl	57.5	48.6	66.4	4.45	8.90		
	Iron	µmol/l	18.8	15.5	22.1	1.65	3.30	Colorimetric with ppt.
		µg/dl	105	86.6	123	9.20	18.40	
µmol/l		18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.	
µg/dl		105	86.1	124	9.45	18.90		
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase	
	mg/dl	14.2	11.7	16.7	1.25	2.50		
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P 37°C	
	U/l	155	131	179	12.00	24.00	L->P 30°C	
	U/l	108	92	124	8.00	16.00	L->P 25°C	
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C	
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C	
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C	
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C	
	U/l	36	29	43	3.50	7.00	Roche Turbidimetric with colipase 37°C	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Atomic absorption	
	mg/dl	2.17	1.91	2.43	0.13	0.26		
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue	
	mg/dl	2.20	1.94	2.46	0.13	0.26		
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III	
	mg/dl	2.22	1.95	2.49	0.14	0.27		
	Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
	Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate enzymatic
mg/dl		4.19	3.57	4.81	0.31	0.62		
mmol/l		1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV	
mg/dl		4.15	3.53	4.77	0.31	0.62		
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect	
Protein Total	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction end point	
	g/dl	5.71	4.57	6.85	0.57	1.14		
	g/l	56.6	45.2	68.0	5.70	11.40	Biuret reaction kinetic	
	g/dl	5.66	4.52	6.80	0.57	1.14		
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect	
TIBC	µmol/l	40.3	31.8	48.8	4.25	8.50	FE+UIBC(saturation with iron)	
	µg/dl	225	178	272	23.50	47.00		
	µmol/l	40.3	31.8	48.8	4.25	8.50	Direct Colorimetric	
	µg/dl	225	178	272	23.50	47.00		
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	98.2	82.5	114	7.85	15.70		
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	99.1	83.1	115	8.00	16.00		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
UIBC	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.3	114	7.95	15.90	
Uric Acid (Urate)	µmol/l	21.5	17.6	25.4	1.95	3.90	Direct Colorimetric
	µg/dl	120	98.4	142	10.80	21.60	
Urea	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.01	6.51	0.38	0.75	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease end point
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Purple
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	182	155	209	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	142	121	163	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	116	99	133	8.50	17.00	Roche Integra AMP buffer 25°C
	U/l	184	157	211	13.50	27.00	Colorimetric 37°C
	U/l	143	122	164	10.50	21.00	Colorimetric 30°C
	U/l	118	100	136	9.00	18.00	Colorimetric 25°C
ALT (GPT)	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
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	65	55	75	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Direct	μmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	μmol/l	21.7	17.1	26.3	2.30	4.60	Roche DPD JG standardised
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	μmol/l	18.5	14.7	22.3	1.90	3.80	Roche DPD Doumas standardised
	mg/dl	1.08	0.860	1.30	0.11	0.22	
Bilirubin Total	μmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	μmol/l	25.9	20.4	31.4	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	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	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
Cholinesterase	U/l	5397	4318	6476	539.50	1079.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
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	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.12	0.99	1.26	0.07	0.14	Spectrophotometric
	mg/dl	0.778	0.684	0.872	0.05	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	292	233	351	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
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	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	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	
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	81.3	112	7.60	15.20	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.1	112	7.70	15.40	
UIBC	μmol/l	22.3	18.3	26.3	2.00	4.00	Direct Colorimetric
	μg/dl	125	102	148	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	


RX SERIES®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	308	262	354	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	212	180	244	16.00	32.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	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	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.30	3.74	4.86	0.28	0.56	Cholesterol Oxidase - Abell Kendall
	mg/dl	166	144	188	11.00	22.00	


RX SERIES®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	91.2	83.9	98.5	3.65	7.30	ISE direct
CK Total	U/l	248	203	293	22.50	45.00	CK-NAC substrate start (DGKC) 37°C
	U/l	246	202	290	22.00	44.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.82	4.95	6.69	0.44	0.87	Hexokinase
	mg/dl	105	89.2	121	7.90	15.80	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	440	374	506	33.00	66.00	P->L German methods 37°C
	U/l	201	170	232	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic


RX SERIES®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - direct
Protein Total	g/l	58.6	46.8	70.4	5.90	11.80	Biuret reaction end point
	g/dl	5.86	4.68	7.04	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	μmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	μg/dl	273	216	330	28.50	57.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.37	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	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	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	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.5	20.4	30.6	2.55	5.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	19.2	15.1	23.3	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	30.6	24.1	37.1	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.41	2.17	0.19	0.38	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	
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	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	95.1	87.5	103	3.80	7.60	ISE indirect
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C


SIEMENS ADVIA 1200/1650/1800/2400®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	μmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	μmol/l	127	101	153	13.00	26.00	Creatinine PAP method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.18	1.01	1.35	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	45.5	39.0	52.0	3.25	6.50	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct Clearance Method
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	μmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	μg/dl	103	84.4	122	9.30	18.60	


SIEMENS ADVIA 1200/1650/1800/2400®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P 37°C
	U/l	427	363	491	32.00	64.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C
Lithium	mmol/l	1.13	0.99	1.27	0.07	0.14	Spectrophotometric
	mg/dl	0.785	0.689	0.881	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction end point
	g/dl	5.63	4.50	6.76	0.57	1.13	
	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction kinetic
	g/dl	5.77	4.62	6.92	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.8	36.9	56.7	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	262	206	318	28.00	56.00	
	µmol/l	47.9	37.8	58.0	5.05	10.10	Direct Colorimetric
	µg/dl	268	211	325	28.50	57.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.7	118	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
Urea	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	7.89	6.71	9.07	0.59	1.18	Urease end point
	mg/dl	47.4	40.3	54.5	3.55	7.10	
Urea	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	



Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	
	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Purple
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	190	161	219	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.3	15.2	23.4	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.889	1.37	0.12	0.24	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	30.8	24.3	37.3	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	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	

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.20	3.65	4.75	0.28	0.55	Dimension-Siemens reagents
	mg/dl	162	141	183	10.50	21.00	
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	6753	5402	8104	675.50	1351.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	169	245	19.00	38.00	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	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
Free T4	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	
	pmol/l	21.3	16.0	26.6	2.65	5.30	Siemens Atellica IM
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Siemens Atellica IM
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Hexokinase	
	mg/dl	109	92.6	125	8.20	16.40		
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase	
	mg/dl	112	95.5	129	8.25	16.50		
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PPD	
	mg/dl	49.4	42.1	56.7	3.65	7.30		
	mmol/l	1.18	1.01	1.35	0.09	0.17	Direct HDL Immunoseparation	
	mg/dl	45.5	39.0	52.0	3.25	6.50		
Iron	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct Clearance Method	
	mg/dl	48.3	40.9	55.7	3.70	7.40		
	Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric with ppt.
		µg/dl	105	86.1	124	9.45	18.90	
µmol/l		18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.	
µg/dl		102	83.9	120	9.05	18.10		
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.6	11.2	16.0	1.20	2.40		
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P 37°C	
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C	
Lipase	U/l	42	34	50	4.00	8.00	Other Colorimetric 37°C	
Lithium	mmol/l	1.11	0.98	1.24	0.07	0.13	Spectrophotometric	
	mg/dl	0.771	0.678	0.864	0.05	0.09		
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue	
	mg/dl	2.14	1.89	2.39	0.13	0.25		
	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		

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Osmolality	mOsm/kg	289	232	346	28.50	57.00	Calculated	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV	
	mg/dl	4.28	3.63	4.93	0.33	0.65		
Potassium	mmol/l	3.82	3.51	4.13	0.16	0.31	ISE method - indirect	
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		
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect	
Thyroid Stimulating Hormone	µU/ml =	1.15	0.92	1.38	0.12	0.23	Siemens Atellica IM	
TIBC	µmol/l	47.5	37.5	57.5	5.00	10.00	Direct Colorimetric	
	µg/dl	266	210	322	28.00	56.00		
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction	
	mg/dl	104	86.7	121	8.65	17.30		
	mmol/l	1.17	0.98	1.36	0.10	0.19	L/G Kinase EP. no correction	
	mg/dl	104	86.7	121	8.65	17.30		
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	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.90	5.12	6.68	0.39	0.78		
	Urea	mmol/l	7.79	6.62	8.96	0.59	1.17	Urease end point
		mg/dl	46.8	39.8	53.8	3.50	7.00	
mmol/l		7.68	6.53	8.83	0.58	1.15	Urease kinetic	
mg/dl		46.2	39.2	53.2	3.50	7.00		
mmol/l		7.68	6.53	8.83	0.58	1.15	BUN	
mg/dl		21.6	18.4	24.8	1.60	3.20		

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	Siemens Dimension AMP buffer 37°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	59	47	71	6.00	12.00	Tris buffer with P5P 37°C
	U/l	60	48	72	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	15.4	12.1	18.7	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.708	1.09	0.10	0.19	
	µmol/l	14.9	11.7	18.1	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.872	0.684	1.06	0.09	0.19	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	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	


SIEMENS DIMENSION EXL®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	3.81	3.31	4.31	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	147	128	166	9.50	19.00	
	mmol/l	3.85	3.35	4.35	0.25	0.50	Dimension-Siemens reagents
	mg/dl	149	129	169	10.00	20.00	
Cholesterol	mmol/l	3.82	3.32	4.32	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	147	128	166	9.50	19.00	
Chloride	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
Cholinesterase	U/l	9564	7651	11477	956.50	1913.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	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	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked	
mg/dl	1.49	1.20	1.78	0.15	0.29		
Creatinine	µmol/l	135	108	162	13.50	27.00	IDMS traceable
	mg/dl	1.53	1.22	1.84	0.16	0.31	
Free T4	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Dimension Exl LOCI
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Dimension Exl LOCI


SIEMENS DIMENSION EXL®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

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	63	53	73	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Oxygen electrode
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	Direct HDL PEGME
	mmol/l	1.43	1.21	1.65	0.11	0.22	
	mg/dl	55.2	46.7	63.7	4.25	8.50	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric with ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	
Lactate	mmol/l	1.54	1.27	1.81	0.14	0.27	UV LDH
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	200	170	230	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C
	U/l	145	116	174	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.00	2.56	0.14	0.28	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	284	227	341	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction end point
	g/dl	5.92	4.73	7.11	0.60	1.19	
PSA Total	ng/ml =	11.0	8.25	13.8	1.38	2.75	Siemens Dimension
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.10	0.88	1.32	0.11	0.22	
TIBC	µmol/l	38.4	30.3	46.5	4.05	8.10	Removal of excess free iron
	µg/dl	215	169	261	23.00	46.00	
	µmol/l	35.7	28.2	43.2	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	200	158	242	21.00	42.00	
	µmol/l	36.3	28.7	43.9	3.80	7.60	Direct Colorimetric
	µg/dl	203	160	246	21.50	43.00	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.6	106	7.20	14.40	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.4	110	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	



SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

SIEMENS DIMENSION RxL/Max/Xband®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Green
	g/dl	4.17	3.55	4.79	0.31	0.62	
	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Purple
	g/dl	4.17	3.55	4.79	0.31	0.62	
Alkaline Phosphatase	U/l	183	156	210	13.50	27.00	Siemens Dimension AMP buffer 37°C
	U/l	185	157	213	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	60	48	72	6.00	12.00	Tris buffer with P5P 37°C
	U/l	59	47	71	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	16.1	12.7	19.5	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.942	0.743	1.14	0.10	0.20	
	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	


SIEMENS DIMENSION RxL/Max/Xband®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.00	20.00	
	mmol/l	3.84	3.34	4.34	0.25	0.50	Dimension-Siemens reagents
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
Cholinesterase	U/l	9541	7633	11449	954.00	1908.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	201	165	237	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	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	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	53	71	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	


SIEMENS DIMENSION RxL/Max/Xband®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	Glucose oxidase
	mg/dl	108	92.3	124	7.85	15.70	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric with ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	UV LDH
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	201	171	231	15.00	30.00	L->P 37°C
	U/l	203	172	234	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	146	117	175	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Spectrophotometric
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	140	133	147	3.50	7.00	ISE method - indirect
TIBC	µmol/l	37.9	30.0	45.8	3.95	7.90	Removal of excess free iron
	µg/dl	212	168	256	22.00	44.00	
	µmol/l	37.4	29.6	45.2	3.90	7.80	FE+UIBC(saturation with iron)
	µg/dl	209	165	253	22.00	44.00	
	µmol/l	37.6	29.7	45.5	3.95	7.90	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	75.8	105	7.25	14.50	
	mmol/l	1.05	0.88	1.22	0.09	0.17	
Uric Acid (Urate)	mg/dl	92.9	77.8	108	7.55	15.10	Uricase catalase 340nm
	mmol/l	0.35	0.31	0.40	0.02	0.05	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
mg/dl	5.86	5.11	6.61	0.38	0.75		
Urea	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.49	6.37	8.61	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Purple
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	60	48	72	6.00	12.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.00	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PEGME
	mg/dl	52.5	44.8	60.2	3.85	7.70	


SIEMENS DIMENSION Vista®
ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Magnesium	mmol/l	0.99	0.87	1.11	0.06	0.12	Methylthymol blue
	mg/dl	2.40	2.11	2.69	0.15	0.29	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - indirect
Protein Total	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.9	120	8.55	17.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
ALT (GPT)	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
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct Clearance Method
	mg/dl	58.3	49.4	67.2	4.45	8.90	
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	



URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1550UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.1	116	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	6.90	5.87	7.93	0.52	1.03	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.90	5.87	7.93	0.52	1.03	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	