

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. 1502UN	EXPIRY: 2024-06-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

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.

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Abbott Alinity/ Architect c/ci Systems®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	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	23.9	18.8	29.0	2.55	5.10	Diazonium ion
	mg/dl	1.40	1.10	1.70	0.15	0.30	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
Cholinesterase	U/l	5217	4174	6260	521.50	1043.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	212	174	250	19.00	38.00	Abbott CK-NAC (IFCC) 37°C
Copper	μmol/l	12.2	9.74	14.7	1.23	2.46	Colorimetric
	μg/dl	77.6	61.9	93.3	7.85	15.70	
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	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.87	4.99	6.75	0.44	0.88	Hexokinase
	mg/dl	106	89.9	122	8.05	16.10	

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Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase	
	mg/dl	108	91.9	124	8.05	16.10		
HDL - Cholesterol	mmol/l	1.58	1.35	1.81	0.12	0.23	Direct HDL PPD	
	mg/dl	61.0	52.1	69.9	4.45	8.90		
	mmol/l	1.57	1.33	1.81	0.12	0.24	Direct Clearance Method	
	mg/dl	60.6	51.3	69.9	4.65	9.30		
Iron	mmol/l	1.54	1.31	1.77	0.12	0.23	HDL - Ultra	
	mg/dl	59.4	50.6	68.2	4.40	8.80		
	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		
Iron	µmol/l	18.8	15.5	22.1	1.65	3.30	Colorimetric without ppt.	
	µg/dl	105	86.6	123	9.20	18.40		
	Lactate	mmol/l	1.67	1.37	1.97	0.15	0.30	Colorimetric Lactate Oxidase
		mg/dl	15.0	12.3	17.7	1.35	2.70	
LD (LDH)	U/l	211	179	243	16.00	32.00	L->P 37°C	
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C	
Lipase	U/l	37	29	45	4.00	8.00	Other Colorimetric 37°C	
Lithium	mmol/l	1.02	0.90	1.15	0.06	0.13	Spectrophotometric	
	mg/dl	0.708	0.621	0.795	0.04	0.09		
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Arsenazo III	
	mg/dl	2.20	1.94	2.46	0.13	0.26		
	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic	
	mg/dl	2.19	1.93	2.45	0.13	0.26		
Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated	
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		


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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	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction kinetic
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	38.2	30.2	46.2	4.00	8.00	FE+UIBC(saturation with iron)
	μg/dl	214	169	259	22.50	45.00	
	μmol/l	44.5	35.1	53.9	4.70	9.40	Calculated from Transferrin
	μg/dl	249	196	302	26.50	53.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.9	105	7.20	14.40	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.5	106	7.35	14.70	
UIBC	μmol/l	19.6	16.0	23.2	1.80	3.60	Direct Colorimetric
	μg/dl	110	89.4	131	10.30	20.60	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	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	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	

ABX Pentra 400®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
ALT (GPT)	U/l	44	35	53	4.50	9.00	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	20.9	16.5	25.3	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.20	3.65	4.75	0.28	0.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	141	183	10.50	21.00	
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	
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	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.91	2.41	0.13	0.25	
Potassium	mmol/l	4.01	3.69	4.33	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	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	142	134	150	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
Urea	mmol/l	6.77	5.75	7.79	0.51	1.02	Urease kinetic
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	6.77	5.75	7.79	0.51	1.02	BUN
Uric Acid (Urate)	mg/dl	19.0	16.2	21.8	1.40	2.80	
	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	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
	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	248	211	285	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	31	47	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	80	68	92	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.913	1.39	0.12	0.24	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	30.3	23.9	36.7	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Cresolphthalein complexone
	mg/dl	8.90	7.98	9.82	0.46	0.92	
	mmol/l	2.23	2.00	2.46	0.12	0.23	Arsenazo III
	mg/dl	8.94	8.02	9.86	0.46	0.92	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	95.3	87.7	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.19	3.65	4.73	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	141	183	10.50	21.00	
	mmol/l	4.34	3.78	4.90	0.28	0.56	Cholesterol Oxidase - IDMS
	mg/dl	168	146	190	11.00	22.00	
Cholinesterase	U/l	4306	3444	5168	431.00	862.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	231	189	273	21.00	42.00	CK-NAC substrate start (DGKC) 37°C
	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	206	169	243	18.50	37.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	121	96.7	145	12.15	24.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
µmol/l	125	99.7	150	12.65	25.30	IDMS traceable	
mg/dl	1.41	1.13	1.69	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C



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gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	43	57	3.50	7.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	17	13	21	1.90	3.80	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.13	5.21	7.05	0.46	0.92	Hexokinase
	mg/dl	110	93.9	126	8.05	16.10	
	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	1.53	1.30	1.76	0.12	0.23	Direct HDL PPD
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL Immunoseparation
	mg/dl	59.4	50.6	68.2	4.40	8.80	
	mmol/l	1.63	1.38	1.88	0.13	0.25	Direct Clearance Method
	mg/dl	62.9	53.3	72.5	4.80	9.60	
Iron	mmol/l	1.60	1.36	1.84	0.12	0.24	HDL - Ultra
	mg/dl	61.8	52.5	71.1	4.65	9.30	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P 37°C
	U/l	462	393	531	34.50	69.00	P->L Scandinavian & Dutch 37°C
	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	198	168	228	15.00	30.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	45	36	54	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.617	0.785	0.04	0.08	
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	
Osmolality	mOsm/kg	297	238	356	29.50	59.00	Calculated
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	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	μmol/l	42.7	33.8	51.6	4.45	8.90	FE+UIBC(saturation with iron)
	μg/dl	239	189	289	25.00	50.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.4	109	7.70	15.40	
UIBC	μmol/l	23.9	19.6	28.2	2.15	4.30	Direct Colorimetric
	μg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	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	0.31	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	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Zinc	µmol/l	19.4	15.5	23.3	1.95	3.90	Colorimetric with deproteinisation
	µg/dl	127	101	153	13.00	26.00	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	45.0	38.3	51.7	3.35	6.70	Bromocresol Purple
	g/dl	4.50	3.83	5.17	0.34	0.67	
Alkaline Phosphatase	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	15.5	12.2	18.8	1.65	3.30	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.907	0.714	1.10	0.10	0.19	
Bilirubin Total	µmol/l	32.2	25.5	38.9	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.49	2.27	0.20	0.39	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.34	3.78	4.90	0.28	0.56	Cholesterol Oxidase - Abell Kendall
	mg/dl	168	146	190	11.00	22.00	
CK Total	U/l	224	184	264	20.00	40.00	Monothioglycerol 37°C
Glucose	mmol/l	5.85	4.97	6.73	0.44	0.88	Hexokinase
	mg/dl	105	89.6	120	7.70	15.40	
HDL - Cholesterol	mmol/l	1.59	1.35	1.83	0.12	0.24	HDL - Ultra
	mg/dl	61.4	52.1	70.7	4.65	9.30	
LD (LDH)	U/l	180	153	207	13.50	27.00	L->P 37°C

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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Calmagite
	mg/dl	2.29	2.02	2.56	0.14	0.27	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.92	6.73	9.11	0.60	1.19	Urease kinetic
	mg/dl	47.6	40.4	54.8	3.60	7.20	
	mmol/l	7.92	6.73	9.11	0.60	1.19	BUN
	mg/dl	22.2	18.9	25.5	1.65	3.30	
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	



BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
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	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.41	3.84	4.98	0.29	0.57	Cholesterol Oxidase - Abell Kendall
	mg/dl	170	148	192	11.00	22.00	
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Glucose	mmol/l	5.82	4.95	6.69	0.44	0.87	Glucose oxidase
	mg/dl	105	89.2	121	7.90	15.80	
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.3	106	7.45	14.90	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	37.8	32.1	43.5	2.85	5.70	Bromocresol Green
	g/dl	3.78	3.21	4.35	0.29	0.57	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Calcium	mmol/l	2.21	1.98	2.44	0.12	0.23	Arsenazo III
	mg/dl	8.86	7.94	9.78	0.46	0.92	
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	
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	
Glucose	mmol/l	5.81	4.94	6.68	0.44	0.87	Glucose oxidase
	mg/dl	105	89.0	121	8.00	16.00	
LD (LDH)	U/l	409	347	471	31.00	62.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Triglycerides	mmol/l	0.99	0.84	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.0	73.9	102	7.05	14.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Green
	g/dl	4.37	3.72	5.02	0.33	0.65	
	g/l	39.1	33.2	45.0	2.95	5.90	Turbidimetric Assays
	g/dl	3.91	3.32	4.50	0.30	0.59	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	107	143	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	103	88	118	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	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	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.4	9.86	14.9	1.27	2.54	Enzymatic
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	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	
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	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
CK Total	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	125	99.6	150	12.70	25.40	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.45	1.15	1.75	0.15	0.30	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.6	147	12.20	24.40	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.06	5.15	6.97	0.46	0.91	Hexokinase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.78	1.51	2.05	0.14	0.27	Direct HDL Roche 4th Generation
	mg/dl	68.7	58.3	79.1	5.20	10.40	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	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	1.64	1.34	1.94	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.8	12.1	17.5	1.35	2.70	
LD (LDH)	U/l	398	338	458	30.00	60.00	P->L German methods 37°C
	U/l	287	244	330	21.50	43.00	P->L German methods 30°C
	U/l	202	171	233	15.50	31.00	P->L German methods 25°C
	U/l	222	189	255	16.50	33.00	L->P IFCC 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 30°C
	U/l	113	96	130	8.50	17.00	L->P IFCC 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	33	27	39	3.10	6.20	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.617	0.785	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	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	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction end point
	g/dl	5.58	4.46	6.70	0.56	1.12	
	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction kinetic
	g/dl	5.67	4.54	6.80	0.57	1.13	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.4	31.1	47.7	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	220	174	266	23.00	46.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.5	109	7.65	15.30	
	mmol/l	1.05	0.88	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.1	108	7.40	14.80	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
UIBC	µmol/l	20.2	16.5	23.9	1.85	3.70	Direct Colorimetric
	µg/dl	113	92.2	134	10.40	20.80	
Urea	mmol/l	6.77	5.75	7.79	0.51	1.02	Urease kinetic
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	6.77	5.75	7.79	0.51	1.02	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Green
	g/dl	4.34	3.69	4.99	0.33	0.65	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
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	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.9	150	12.55	25.10	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
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	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Urease kinetic
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.48	4.75	6.21	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.49	4.79	6.19	0.35	0.70	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.8	33.9	45.7	2.95	5.90	Bromocresol Green
	g/dl	3.98	3.39	4.57	0.30	0.59	
Alkaline Phosphatase	U/l	277	235	319	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	216	183	249	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	177	150	204	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	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	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	18.3	14.5	22.1	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	26.6	21.1	32.1	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Arsenazo III
	mg/dl	8.58	7.70	9.46	0.44	0.88	


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	101	92.5	110	4.25	8.50	ISE direct
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	140	182	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	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	132	105	159	13.50	27.00	Enzymatic UV method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
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	6.27	5.33	7.21	0.47	0.94	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	
	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	1.60	1.36	1.84	0.12	0.24	Direct HDL PEGME
	mg/dl	61.8	52.5	71.1	4.65	9.30	
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	470	400	540	35.00	70.00	P->L Scandinavian & Dutch 37°C
	U/l	339	289	389	25.00	50.00	P->L Scandinavian & Dutch 30°C
	U/l	238	203	273	17.50	35.00	P->L Scandinavian & Dutch 25°C


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
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	3.89	3.58	4.20	0.16	0.31	ISE method - direct
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	136	130	142	3.00	6.00	ISE method - direct
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
Urea	mmol/l	7.14	6.06	8.22	0.54	1.08	Urease end point
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	231	182	280	24.50	49.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	174	137	211	18.50	37.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	131	103	159	14.00	28.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	16.4	11.0	21.8	2.70	5.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Green
	g/dl	4.23	3.59	4.87	0.32	0.64	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
	g/l	41.2	35.0	47.4	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	40.1	34.1	46.1	3.00	6.00	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.01	3.41	4.61	0.30	0.60	
	U/l	158	135	181	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	207	176	238	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	170	144	196	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	185	157	213	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	144	122	166	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	175	149	201	13.00	26.00	AMP non-optimised 37°C
U/l	136	116	156	10.00	20.00	AMP non-optimised 30°C	
U/l	112	95	129	8.50	17.00	AMP non-optimised 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	Colorimetric 37°C
	U/l	130	111	149	9.50	19.00	Colorimetric 30°C
	U/l	107	91	123	8.00	16.00	Colorimetric 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	34	50	4.00	8.00	Tris buffer with P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
	U/l	39	32	46	3.50	7.00	Tris buffer SCE 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer SCE 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 25°C
	U/l	43	34	52	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	73	62	83	5.25	10.50	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	70	59	81	5.50	11.00	Ortho Vitros Microslide Systems 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	90	77	103	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Beckman Synchron AMY7 37°C
	U/l	92	78	106	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	80	68	92	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.16	0.95	1.37	0.10	0.21	Immunoturbidimetric
	mg/dl	116	95.1	137	10.45	20.90	
Apolipoprotein B	g/l	0.49	0.41	0.58	0.04	0.09	Immunoturbidimetric
	mg/dl	49.4	40.5	58.3	4.45	8.90	
AST (GOT)	U/l	53	42	64	5.50	11.00	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
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.0	9.49	14.5	1.26	2.51	Colorimetric
	mmol/l	12.5	9.93	15.1	1.29	2.57	Ortho Vitros Microslide Systems
	mmol/l	12.3	9.76	14.8	1.27	2.54	Enzymatic
Bile Acids	µmol/l	27.7	22.1	33.2	2.78	5.56	4th Generation Colorimetric
	µmol/l	23.8	19.0	28.5	2.38	4.76	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Diazo with Sulphanilic Acid	
	mg/dl	1.16	0.913	1.41	0.12	0.25		
	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.18	0.930	1.43	0.13	0.25		
	µmol/l	18.2	14.4	22.0	1.90	3.80	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.06	0.842	1.28	0.11	0.22		
	µmol/l	13.7	10.8	16.5	1.43	2.85	Modified Jendrassik	
	mg/dl	0.799	0.632	0.966	0.08	0.17		
	Bilirubin Total	µmol/l	24.9	19.7	30.1	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
		mg/dl	1.46	1.15	1.77	0.16	0.31	
µmol/l		29.3	23.1	35.5	3.10	6.20	Diazo with Dichloroaniline (DCA)	
mg/dl		1.71	1.35	2.07	0.18	0.36		
µmol/l		27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid	
mg/dl		1.60	1.26	1.94	0.17	0.34		
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		26.6	21.1	32.1	2.75	5.50	Nitrobenzenediazonium salt	
mg/dl		1.56	1.23	1.89	0.17	0.33		
µmol/l		25.3	20.0	30.6	2.65	5.30	Diazonium ion	
mg/dl		1.48	1.17	1.79	0.16	0.31		
µmol/l		30.4	24.0	36.8	3.20	6.40	Oxidation to Biliverdin/Vanadate	
mg/dl		1.78	1.40	2.16	0.19	0.38		
µmol/l	31.7	25.0	38.4	3.35	6.70	Modified Jendrassik		
mg/dl	1.85	1.46	2.24	0.20	0.39			
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone	
	mg/dl	8.74	7.86	9.62	0.44	0.88		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
	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	2.18	1.96	2.40	0.11	0.22	Methylthymol blue
	mg/dl	8.74	7.86	9.62	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	2.19	1.97	2.41	0.11	0.22	NM-BAPTA	
mg/dl	8.78	7.90	9.66	0.44	0.88		
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	Colorimetric
	mmol/l	97.1	89.3	105	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	95.3	87.7	103	3.80	7.60	ISE indirect
	mmol/l	96.4	88.6	104	3.90	7.80	ISE direct
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - IDMS	
mg/dl	158	138	178	10.00	20.00		
Cholinesterase	U/l	4539	3632	5446	453.50	907.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	Ortho Vitros Microslide Systems 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	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	214	176	252	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	134	110	158	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	224	184	264	20.00	40.00	Monothioglycerol 37°C
	U/l	140	115	165	12.50	25.00	Monothioglycerol 30°C
	U/l	95	78	112	8.50	17.00	Monothioglycerol 25°C
Copper	µmol/l	16.5	13.2	19.8	1.65	3.30	Atomic absorption
	µg/dl	105	84.0	126	10.50	21.00	
	µmol/l	15.3	12.2	18.4	1.55	3.10	Colorimetric
	µg/dl	97.3	77.6	117	9.85	19.70	
Cortisol	nmol/l	476	357	595	59.50	119.00	Roche Cobas E411
	µg/dl	17.1	12.9	21.3	2.10	4.20	
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	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	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	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	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	128	103	153	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	124	98.9	149	12.55	25.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Vitros IDMS Traceable
	mg/dl	1.39	1.12	1.66	0.14	0.27	
D-3-Hydroxybutyrate	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	ng/ml	1.46	1.17	1.75	0.15	0.29	
Folate	nmol/l	36.2	27.5	44.9	4.35	8.70	Roche Cobas 6000/8000
	ng/ml	16.0	12.1	19.9	1.95	3.90	
Free T4	pmol/l	17.4	13.1	21.7	2.15	4.30	Abbott Architect
	ng/dl	1.36	1.02	1.70	0.17	0.34	
	pg/ml	13.6	10.2	17.0	1.70	3.40	Abbott Architect
	pmol/l	18.9	14.2	23.6	2.35	4.70	Siemens Centaur XP/XPT/Classic
	ng/dl	1.47	1.11	1.83	0.18	0.36	
	pg/ml	14.7	11.1	18.3	1.80	3.60	Siemens Centaur XP/XPT/Classic
	pmol/l	18.8	14.1	23.5	2.35	4.70	Beckman Access
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Beckman Access

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	22.0	16.5	27.5	2.75	5.50	Roche Elecsys
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Elecsys
	pmol/l	21.7	16.3	27.1	2.70	5.40	Roche Cobas 4000/E411
	ng/dl	1.69	1.27	2.11	0.21	0.42	
	pg/ml	16.9	12.7	21.1	2.10	4.20	Roche Cobas 4000/E411
	pmol/l	22.0	16.5	27.5	2.75	5.50	Roche Cobas e601/602
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Cobas e601/602
	pmol/l	21.3	16.0	26.6	2.65	5.30	Biomerieux Vidas FT4N Kit
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Biomerieux Vidas FT4N Kit
	pmol/l	22.5	16.9	28.1	2.80	5.60	Roche Cobas e801
	ng/dl	1.76	1.32	2.20	0.22	0.44	
pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Cobas e801	
Gentamicin	µmol/l	7.64	6.11	9.17	0.77	1.53	Immunoturbidimetric
	µg/ml	3.65	2.92	4.38	0.37	0.73	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl-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



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	53	45	61	4.00	8.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Radox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose dehydrogenase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	6.47	5.50	7.44	0.49	0.97	Oxygen electrode
	mg/dl	117	99.1	135	8.95	17.90	
HDL - Cholesterol	mmol/l	1.56	1.33	1.79	0.12	0.23	Direct HDL PPD
	mg/dl	60.2	51.3	69.1	4.45	8.90	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL Immunoseparation
	mg/dl	59.4	50.6	68.2	4.40	8.80	
	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL PEGME
	mg/dl	62.9	53.7	72.1	4.60	9.20	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct Clearance Method
	mg/dl	56.0	47.5	64.5	4.25	8.50	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.62	1.38	1.86	0.12	0.24	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
	mmol/l	1.55	1.32	1.78	0.12	0.23	HDL - Ultra
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL Roche 4th Generation
	mg/dl	67.2	57.1	77.3	5.05	10.10	
Immunoglobulin A	g/l	1.61	1.21	2.01	0.20	0.40	Immunoturbidimetric
	mg/dl	161	121	201	20.00	40.00	
Immunoglobulin G	g/l	7.31	5.99	8.63	0.66	1.32	Immunoturbidimetric
	mg/dl	731	599	863	66.00	132.00	
Immunoglobulin M	g/l	0.71	0.57	0.85	0.07	0.14	Immunoturbidimetric
	mg/dl	71.0	56.8	85.2	7.10	14.20	
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	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
	mmol/l	1.55	1.27	1.83	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	14.0	11.4	16.6	1.30	2.60	
	mmol/l	1.68	1.37	1.99	0.16	0.31	Enzymatic Electrode
	mg/dl	15.1	12.3	17.9	1.40	2.80	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LAP	U/l	19	16	23	1.65	3.30	NAGEL 37°C
LD (LDH)	U/l	210	179	241	15.50	31.00	L->P 37°C
	U/l	152	129	175	11.50	23.00	L->P 30°C
	U/l	106	91	121	7.50	15.00	L->P 25°C
	U/l	462	393	531	34.50	69.00	P->L Scandinavian & Dutch 37°C
	U/l	334	284	384	25.00	50.00	P->L Scandinavian & Dutch 30°C
	U/l	234	199	269	17.50	35.00	P->L Scandinavian & Dutch 25°C
	U/l	418	356	480	31.00	62.00	P->L German methods 37°C
	U/l	302	257	347	22.50	45.00	P->L German methods 30°C
	U/l	212	180	244	16.00	32.00	P->L German methods 25°C
	U/l	411	349	473	31.00	62.00	P->L SFBC 37°C
	U/l	297	252	342	22.50	45.00	P->L SFBC 30°C
	U/l	208	177	239	15.50	31.00	P->L SFBC 25°C
	U/l	217	185	249	16.00	32.00	L->P IFCC 37°C
	U/l	157	134	180	11.50	23.00	L->P IFCC 30°C
	U/l	110	94	126	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	266	226	306	20.00	40.00	Ortho Vitros IFCC Traceable 37°C
	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
	U/l	268	215	321	26.50	53.00	Ortho Vitros Microslide Systems 37°C
	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	34	27	41	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	U/l	45	36	54	4.50	9.00	Radox Colorimetric 37°C
	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.620	0.782	0.04	0.08	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.626	0.790	0.04	0.08	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Radox Colorimetric
	mg/dl	0.714	0.628	0.800	0.04	0.09	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Arsenazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Calmagite
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	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	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic	
mg/dl	2.19	1.93	2.45	0.13	0.26		
NEFA	mmol/l	1.43	1.22	1.64	0.11	0.21	Colorimetric
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.10	0.01	0.02	Colorimetric
	mg/l	12.0	9.53	14.5	1.24	2.47	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.40	3.72	5.08	0.34	0.68	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.04	3.72	4.36	0.16	0.32	Enzymatic
	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - direct
	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.97	4.77	7.17	0.60	1.20	
	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	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
PSA Total	ng/ml =	13.8	10.3	17.3	1.75	3.50	bioMerieux VIDAS TPSA
	ng/ml =	11.5	8.66	14.3	1.42	2.84	Siemens Centaur XP/XPT/Classic
	ng/ml =	11.8	8.83	14.8	1.49	2.97	Abbott Architect
	ng/ml =	14.6	10.9	18.3	1.85	3.70	Cobas E411
	ng/ml =	14.0	10.5	17.5	1.75	3.50	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	140	133	147	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	138	131	145	3.50	7.00	ISE method - direct
	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Thyroid Stimulating Hormone	µU/ml =	0.99	0.79	1.19	0.10	0.20	Abbott Architect
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.22	0.97	1.47	0.12	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.19	0.95	1.43	0.12	0.24	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.04	0.83	1.25	0.11	0.21	Vitros ECi
	µU/ml =	1.33	1.07	1.59	0.13	0.26	Roche Elecsys
	µU/ml =	1.37	1.10	1.64	0.14	0.27	Roche Cobas 4000/E411
	µU/ml =	1.34	1.07	1.61	0.14	0.27	Roche Cobas e601/602
	µU/ml =	1.06	0.85	1.27	0.10	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)
µU/ml =	1.28	1.02	1.54	0.13	0.26	Roche Cobas e801	
TIBC	µmol/l	46.4	36.7	56.1	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	
	µmol/l	37.9	29.9	45.9	4.00	8.00	Removal of excess free iron
	µg/dl	212	167	257	22.50	45.00	
	µmol/l	39.9	31.5	48.3	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	223	176	270	23.50	47.00	
	µmol/l	47.0	37.1	56.9	4.95	9.90	Direct Colorimetric
	µg/dl	263	207	319	28.00	56.00	
	µmol/l	45.4	35.9	54.9	4.75	9.50	Calculated from Transferrin
	µg/dl	254	201	307	26.50	53.00	
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	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	1.94	1.45	2.43	0.25	0.49	Abbott Architect
	ng/ml	1.26	0.944	1.58	0.16	0.32	
	ng/dl	126	94.4	158	15.80	31.60	Abbott Architect
	nmol/l	2.28	1.71	2.85	0.29	0.57	Siemens Centaur XP/XPT/Classic
	ng/ml	1.48	1.11	1.85	0.19	0.37	
	ng/dl	148	111	185	18.50	37.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.22	1.66	2.78	0.28	0.56	Roche Cobas 4000/E411
	ng/ml	1.45	1.08	1.82	0.19	0.37	
	ng/dl	145	108	182	18.50	37.00	Roche Cobas 4000/E411
	nmol/l	2.22	1.67	2.77	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.45	1.09	1.81	0.18	0.36	
	ng/dl	145	109	181	18.00	36.00	Roche Cobas e601/602
Total T4	nmol/l	93.8	70.3	117	11.75	23.50	Abbott Architect
	µg/dl	7.32	5.48	9.16	0.92	1.84	
	ng/ml	73.2	54.8	91.6	9.20	18.40	Abbott Architect
	nmol/l	84.0	63.0	105	10.50	21.00	Siemens Centaur XP/XPT/Classic
	µg/dl	6.55	4.91	8.19	0.82	1.64	
	ng/ml	65.5	49.1	81.9	8.20	16.40	Siemens Centaur XP/XPT/Classic
	nmol/l	89.8	67.3	112	11.25	22.50	Siemens Immulite 2000/2500
	µg/dl	7.00	5.25	8.75	0.88	1.75	
	ng/ml	70.0	52.5	87.5	8.75	17.50	Siemens Immulite 2000/2500
	nmol/l	90.7	68.0	113	11.35	22.70	Roche Cobas 4000/E411
	µg/dl	7.07	5.30	8.84	0.89	1.77	
	ng/ml	70.7	53.0	88.4	8.85	17.70	Roche Cobas 4000/E411

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	91.8	68.9	115	11.45	22.90	Roche Cobas e601/602
	µg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Roche Cobas e601/602
	nmol/l	101	75.5	127	12.75	25.50	Microgenics DRI assay
	µg/dl	7.88	5.89	9.87	1.00	1.99	
	ng/ml	78.8	58.9	98.7	9.95	19.90	Microgenics DRI assay
Transferrin	g/l	1.78	1.42	2.14	0.18	0.36	Immunoturbidimetric
	mg/dl	178	142	214	18.00	36.00	
Triglycerides	mmol/l	1.05	0.89	1.21	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.4	107	7.25	14.50	
	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.05	0.88	1.22	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	78.2	108	7.35	14.70	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	89.4	75.0	104	7.20	14.40	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
UIBC	µmol/l	20.4	16.7	24.1	1.85	3.70	Direct Colorimetric
	µg/dl	114	93.4	135	10.30	20.60	
Urea	mmol/l	6.77	5.76	7.78	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Urea	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	Urease - hypochlorite	
	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		
	Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
		mg/dl	5.56	4.84	6.28	0.36	0.72	
mmol/l		0.34	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		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
mg/dl		5.80	5.04	6.56	0.38	0.76		
mmol/l		0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		5.81	5.06	6.56	0.38	0.75		
mmol/l		0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290	
mg/dl		5.81	5.06	6.56	0.38	0.75		
mmol/l		0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		5.75	4.99	6.51	0.38	0.76		
Vitamin B12	pmol/l	408	326	490	41.00	82.00	Roche Cobas E411	
	pg/ml	553	442	664	55.50	111.00		
Zinc	µmol/l	21.0	16.8	25.2	2.10	4.19	Colorimetric with deproteinisation	
	µg/dl	137	110	164	13.50	27.00		



MEAN OF ALL INSTRUMENTS (Elec.)		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1502UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2024-06-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		67.5	60.8	74.2	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.5	4.2	6.8	0.66	1.32	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.9	6.0	9.8	0.95	1.90	% of total Protein (Beckman Capillary)
beta-globulin		9.3	7.1	11.5	1.12	2.23	% of total Protein (Beckman Capillary)
gamma-globulin		9.8	7.5	12.2	1.18	2.35	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

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	244	208	280	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	190	162	218	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	156	133	179	11.50	23.00	Diethanolamine buffer DEA 25°C
	U/l	179	152	206	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	97	131	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
Bilirubin Direct	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	
Bilirubin Total	µmol/l	29.2	23.0	35.4	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.4	22.5	34.3	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.32	2.00	0.17	0.34	
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	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
	mmol/l	4.06	3.54	4.58	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	98.9	149	12.55	25.10	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
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	5.95	5.06	6.84	0.45	0.89	Hexokinase
	mg/dl	107	91.2	123	7.90	15.80	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME
	mg/dl	62.1	52.9	71.3	4.60	9.20	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method
	mg/dl	56.7	48.3	65.1	4.20	8.40	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
LD (LDH)	U/l	436	371	501	32.50	65.00	P->L German methods 37°C
	U/l	315	268	362	23.50	47.00	P->L German methods 30°C
	U/l	221	188	254	16.50	33.00	P->L German methods 25°C
	U/l	395	335	455	30.00	60.00	P->L SFBC 37°C
	U/l	285	242	328	21.50	43.00	P->L SFBC 30°C
	U/l	200	170	230	15.00	30.00	P->L SFBC 25°C
	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
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	158	135	181	11.50	23.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	34	52	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	70	59	81	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	12.5	9.93	15.1	1.29	2.57	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	24.9	19.7	30.1	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.6	10.7	16.5	1.45	2.90	BuBc Vitros Slide
	mg/dl	0.796	0.626	0.966	0.09	0.17	
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	Vitros DT60/DT60 II/DTSC II
	mmol/l	2.26	2.04	2.48	0.11	0.22	
Chloride	mg/dl	9.06	8.18	9.94	0.44	0.88	Ortho Vitros Microslide Systems
	mmol/l	97.1	89.3	105	3.90	7.80	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	139	179	10.00	20.00	
Cholinesterase	U/l	4336	3469	5203	433.50	867.00	Ortho Vitros Microslide Systems 37°C


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	204	167	241	18.50	37.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Vitros IDMS Traceable
	mg/dl	1.39	1.12	1.66	0.14	0.27	
gamma-GT	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.8	123	8.10	16.20	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Vitros Magnetic HDL
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Vitros dHDL PTA/MgCl ₂ direct precipitation
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	266	226	306	20.00	40.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	268	215	321	26.50	53.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.97	4.77	7.17	0.60	1.20	
Sodium	mmol/l	140	133	147	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.04	0.83	1.25	0.11	0.21	Vitros ECi

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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	46.4	36.7	56.1	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	109	91.2	127	8.90	17.80	
Urea	mmol/l	6.77	5.76	7.78	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	40.7	34.6	46.8	3.05	6.10	
	mmol/l	6.77	5.75	7.79	0.51	1.02	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.56	4.84	6.28	0.36	0.72	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Purple
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	40.2	34.1	46.3	3.05	6.10	Turbidimetric Assays
	g/dl	4.02	3.41	4.63	0.31	0.61	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	106	144	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	73	97	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	11.9	9.44	14.4	1.23	2.46	Colorimetric
	mmol/l	12.2	9.69	14.7	1.26	2.51	Enzymatic
Bile Acids	µmol/l	24.0	19.2	28.8	2.40	4.80	Enzymatic Colorimetric

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	19.2	15.1	23.3	2.05	4.10	Roche JG factored
	mg/dl	0.907	0.720	1.09	0.09	0.19	
Bilirubin Total	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
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	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Cholinesterase	U/l	4235	3388	5082	423.50	847.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	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
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	22.0	16.5	27.5	2.75	5.50	Roche Cobas e601/602
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Cobas e601/602
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	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 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL Roche 4th Generation
	mg/dl	67.2	57.1	77.3	5.05	10.10	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	85.0	121	9.00	18.00	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.63	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	416	353	479	31.50	63.00	P->L German methods 37°C
	U/l	300	255	345	22.50	45.00	P->L German methods 30°C
	U/l	211	179	243	16.00	32.00	P->L German methods 25°C
	U/l	424	361	487	31.50	63.00	P->L SFBC 37°C
	U/l	306	261	351	22.50	45.00	P->L SFBC 30°C
	U/l	215	183	247	16.00	32.00	P->L SFBC 25°C
	U/l	217	184	250	16.50	33.00	L->P IFCC 37°C
	U/l	157	133	181	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	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.620	0.782	0.04	0.08	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.19	1.63	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.37	3.69	5.05	0.34	0.68	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.31	3.69	4.93	0.31	0.62	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction kinetic
	g/dl	5.78	4.62	6.94	0.58	1.16	
PSA Total	ng/ml =	14.0	10.5	17.5	1.75	3.50	Roche Cobas 6000/8000
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.34	1.07	1.61	0.14	0.27	Roche Cobas e601/602
TIBC	μmol/l	38.6	30.5	46.7	4.05	8.10	FE+UIBC(saturation with iron)
	μg/dl	216	170	262	23.00	46.00	
	μmol/l	47.7	37.7	57.7	5.00	10.00	Calculated from Transferrin
	μg/dl	267	211	323	28.00	56.00	
Total T3	nmol/l	2.22	1.67	2.77	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.45	1.09	1.81	0.18	0.36	
	ng/dl	145	109	181	18.00	36.00	Roche Cobas e601/602
Total T4	nmol/l	91.8	68.9	115	11.45	22.90	Roche Cobas e601/602
	μg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Roche Cobas e601/602

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
UIBC	µmol/l	20.0	16.4	23.6	1.80	3.60	Direct Colorimetric
	µg/dl	112	91.7	132	10.15	20.30	
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	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	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	
mg/dl	5.64	4.92	6.36	0.36	0.72	Uricase Peroxidase with ascorbate oxidase @ 546nm	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Green
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.8	14.9	22.7	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.872	1.33	0.11	0.23	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Roche JG factored
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion	
	mg/dl	1.53	1.21	1.85	0.16	0.32		
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Cresolphthalein complexone	
	mg/dl	9.06	8.18	9.94	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		
Chloride	mmol/l	101	92.7	109	4.15	8.30	ISE indirect	
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - Abell Kendall	
	mg/dl	160	139	181	10.50	21.00		
	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - IDMS	
	mg/dl	159	138	180	10.50	21.00		
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C	
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C	
	U/l	84	69	99	7.50	15.00	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	128	102	154	13.00	26.00	Roche Creatinine Plus	
	mg/dl	1.45	1.15	1.75	0.15	0.30		
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.41	1.13	1.69	0.14	0.28		
	gamma-GT	U/l	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	5.92	5.03	6.81	0.45	0.89	Hexokinase	
	mg/dl	107	90.6	123	8.20	16.40		

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.72	1.47	1.97	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	66.4	56.7	76.1	4.85	9.70	
LD (LDH)	U/l	218	186	250	16.00	32.00	L->P IFCC 37°C
	U/l	157	134	180	11.50	23.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction end point
	g/dl	5.92	4.73	7.11	0.60	1.19	
Sodium	mmol/l	141	134	148	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	79.7	110	7.50	15.00	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
Urea	mmol/l	6.79	5.77	7.81	0.51	1.02	Urease kinetic
	mg/dl	40.8	34.7	46.9	3.05	6.10	
	mmol/l	6.79	5.77	7.81	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

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 @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	11.8	9.36	14.2	1.22	2.44	Enzymatic
Bilirubin Direct	µmol/l	20.4	16.1	24.7	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	µmol/l	20.3	16.1	24.5	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	µmol/l	20.2	16.0	24.4	2.10	4.20	Roche JG factored
	mg/dl	1.18	0.936	1.42	0.12	0.24	
Bilirubin Total	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.21	1.83	0.16	0.31	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.9	20.5	31.3	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	25.9	20.5	31.3	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	92.4	85.0	99.8	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	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	
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	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	131	105	157	13.00	26.00	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	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	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	5.89	5.01	6.77	0.44	0.88	Glucose oxidase
	mg/dl	106	90.3	122	7.85	15.70	
HDL - Cholesterol	mmol/l	1.74	1.48	2.00	0.13	0.26	Direct HDL Roche 4th Generation
	mg/dl	67.2	57.1	77.3	5.05	10.10	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	413	351	475	31.00	62.00	P->L German methods 37°C
	U/l	298	253	343	22.50	45.00	P->L German methods 30°C
	U/l	209	178	240	15.50	31.00	P->L German methods 25°C
	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C
	U/l	158	134	182	12.00	24.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.4	111	7.60	15.20	
Urea	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Purple
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	42.6	36.2	49.0	3.20	6.40	Turbidimetric Assays
	g/dl	4.26	3.62	4.90	0.32	0.64	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	106	144	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	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	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.5	9.91	15.1	1.30	2.59	Enzymatic
Bile Acids	µmol/l	23.1	18.5	27.7	2.30	4.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.866	1.33	0.12	0.23	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Roche JG factored
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazonium ion
mg/dl	1.49	1.18	1.80	0.16	0.31		
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.18	1.97	2.39	0.11	0.21	NM-BAPTA
	mg/dl	8.74	7.90	9.58	0.42	0.84	
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	
	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Cholinesterase	U/l	4140	3312	4968	414.00	828.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	108	160	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	5.98	5.08	6.88	0.45	0.90	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.73	1.47	1.99	0.13	0.26	Direct HDL Roche 4th Generation
	mg/dl	66.8	56.7	76.9	5.05	10.10	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	
Lactate	mmol/l	1.63	1.34	1.92	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.1	17.3	1.30	2.60	
LD (LDH)	U/l	215	183	247	16.00	32.00	L->P IFCC 37°C
	U/l	155	132	178	11.50	23.00	L->P IFCC 30°C
	U/l	109	93	125	8.00	16.00	L->P IFCC 25°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.97	2.49	0.13	0.26	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	41.5	32.8	50.2	4.35	8.70	FE+UIBC(saturation with iron)
	μg/dl	232	183	281	24.50	49.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
UIBC	μmol/l	21.1	17.3	24.9	1.90	3.80	Direct Colorimetric
	μg/dl	118	96.7	139	10.65	21.30	
Urea	mmol/l	6.96	5.91	8.01	0.53	1.05	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	6.96	5.92	8.00	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with 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 no 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	
mg/dl	5.66	4.94	6.38	0.36	0.72	Uricase Peroxidase with ascorbate oxidase @ 546nm	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
Alkaline Phosphatase	U/l	278	236	320	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	3.98	7.95	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.45	6.90	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	30.4	24.0	36.8	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Chloride	mmol/l	92.7	85.2	100	3.75	7.50	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.51	3.92	5.10	0.30	0.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	174	151	197	11.50	23.00	
CK Total	U/l	228	187	269	20.50	41.00	CK-NAC substrate start (DGKC) 37°C
	U/l	252	207	297	22.50	45.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	131	105	157	13.00	26.00	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Hexokinase
	mg/dl	117	99.3	135	8.85	17.70	
	mmol/l	6.47	5.50	7.44	0.49	0.97	Glucose oxidase
	mg/dl	117	99.1	135	8.95	17.90	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	437	372	502	32.50	65.00	P->L German methods 37°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	43	35	52	4.20	8.40	Randox Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Colorimetric
	mg/dl	0.715	0.629	0.801	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1502UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - direct
	mmol/l	4.04	3.72	4.36	0.16	0.32	Enzymatic
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
	mmol/l	143	136	150	3.50	7.00	Enzymatic
TIBC	µmol/l	51.3	40.5	62.1	5.40	10.80	Direct Colorimetric
	µg/dl	287	226	348	30.50	61.00	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.0	111	7.80	15.60	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bile Acids	µmol/l	28.5	22.8	34.2	2.85	5.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.06	0.842	1.28	0.11	0.22	
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
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	2.22	2.00	2.44	0.11	0.22	Arsenazo III
mg/dl	8.90	8.02	9.78	0.44	0.88		
Chloride	mmol/l	96.2	88.5	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	

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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	124	99.0	149	12.50	25.00	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	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	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.96	5.07	6.85	0.45	0.89	Hexokinase
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	5.84	4.97	6.71	0.44	0.87	Glucose oxidase
	mg/dl	105	89.6	120	7.70	15.40	
HDL - Cholesterol	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct Clearance Method
	mg/dl	49.8	42.1	57.5	3.85	7.70	
Iron	μmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	μg/dl	104	85.5	123	9.25	18.50	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	425	361	489	32.00	64.00	P->L German methods 37°C
	U/l	218	185	251	16.50	33.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	220	187	253	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	43	35	51	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.90	1.16	0.06	0.13	Spectrophotometric
	mg/dl	0.715	0.628	0.802	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	

**SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	48.1	38.0	58.2	5.05	10.10	Direct Colorimetric
	μg/dl	269	212	326	28.50	57.00	
	μmol/l	43.1	34.0	52.2	4.55	9.10	Calculated from Transferrin
	μg/dl	241	190	292	25.50	51.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Purple
	g/dl	4.37	3.71	5.03	0.33	0.66	
Alkaline Phosphatase	U/l	168	142	194	13.00	26.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Tris buffer with P5P 37°C
	U/l	46	37	55	4.50	9.00	Tris buffer with P5P NVKC 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	13.7	10.8	16.6	1.45	2.90	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.801	0.632	0.970	0.08	0.17	
Bilirubin Total	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
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	
	mmol/l	3.93	3.42	4.44	0.26	0.51	Dimension-Siemens reagents
	mg/dl	152	132	172	10.00	20.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	206	169	243	18.50	37.00	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	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.12	5.21	7.03	0.46	0.91	Hexokinase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.64	1.40	1.88	0.12	0.24	Direct HDL PEGME
	mg/dl	63.3	54.0	72.6	4.65	9.30	
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	208	177	239	15.50	31.00	L->P IFCC 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.45	1.24	1.66	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.6	49.3	73.9	6.15	12.30	Biuret reaction end point
	g/dl	6.16	4.93	7.39	0.62	1.23	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.4	106	7.40	14.80	

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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.03	0.87	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
Urea	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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	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	


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	169	144	194	12.50	25.00	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	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	14.2	11.2	17.2	1.50	3.00	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.831	0.655	1.01	0.09	0.18	
Bilirubin Total	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	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	96.8	89.1	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.89	3.39	4.39	0.25	0.50	Dimension-Siemens reagents
	mg/dl	150	131	169	9.50	19.00	
CK Total	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°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	140	112	168	14.00	28.00	IDMS traceable
	mg/dl	1.58	1.27	1.89	0.16	0.31	


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

Lot No. 1502UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	62	52	72	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Hexokinase
	mg/dl	111	94.8	127	8.10	16.20	
HDL - Cholesterol	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL PEGME
	mg/dl	62.9	53.7	72.1	4.60	9.20	
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	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	0.89	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.5	74.6	102	6.95	13.90	
Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1502UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2024-06-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.68	4.94	6.42	0.37	0.74	