



PRODUCT INFORMATION

HN1530 / HS2611

1623UN

The reconstituted stability for Human Assayed Multi-Sera Level 2 lot 1623UN for Total PSA is
2 days when stored at +2°C to +8°C.
Total PSA is stable for 30 days when frozen once at -18°C to -24°C.

INC1082 / INC1106

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

CAT. NO. HNI530
CAT. NO. HS2611
LOT NO. 1623UN

GTIN: 05055273203783
GTIN: 05055273203813
EXPIRY: 2024-01-28

SIZE: 20 x 5ml
SIZE: 5 x 5ml

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

GLDH is stable for 2 days at 2-8°C.

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

Total PSA is stable for 2 days at +2°C to +8°C, or 30 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 Method section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

NOTES

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

The presence of a vertical bar in the margin indicates a technical update from the previous revision.

EC	REP
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Randox Teoranta, Meenmore,
Dungloe, Donegal,
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Rev. 16 Nov '22 me

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
	g/l	39.7	33.7	45.7	3.00	6.00	Turbidimetric Assays
	g/dl	3.97	3.37	4.57	0.30	0.60	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Ortho Vitros Microslide Systems 37°C
	U/l	269	229	309	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	210	178	242	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	172	146	198	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	167	142	192	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	130	111	149	9.50	19.00	AMP optimised to NVKC/SFBC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to NVKC/SFBC 25°C
	U/l	163	138	188	12.50	25.00	AMP non-optimised 37°C
	U/l	127	108	146	9.50	19.00	AMP non-optimised 30°C
	U/l	104	88	120	8.00	16.00	AMP non-optimised 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C
	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
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	41	33	49	4.00	8.00	Ortho Vitros MicroSlide visible 37°C
	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	69	58	80	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	96	81	111	7.50	15.00	pNP Maltotriose substrates 37°C
	U/l	95	80	110	7.50	15.00	Siemens - blocked pNPG7 37°C
	U/l	77	65	89	6.00	12.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	105	89	121	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	77	103	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	102	86	118	8.00	16.00	Siemens - maltopenta/hexaoside 37°C
	U/l	86	73	99	6.50	13.00	Saccharogenic 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	70	59	81	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	97	82	112	7.50	15.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Beckman Synchron AMY7 37°C
	U/l	97	83	111	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	109	93	125	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.04	0.85	1.23	0.09	0.19	Immunoturbidimetric
	mg/dl	104	85.3	123	9.35	18.70	
Apolipoprotein B	g/l	0.65	0.53	0.76	0.06	0.12	Immunoturbidimetric
	mg/dl	64.5	52.9	76.1	5.80	11.60	
Acid Phosphatase (Total)	U/l	12.2	8.17	16.2	2.02	4.03	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	56	44	68	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	28	40	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer with P5P 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	μmol/l	26.2	21.0	31.4	2.60	5.20	4th Generation Colorimetric
	μmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Colorimetric
	mmol/l	14.9	11.8	18.0	1.55	3.10	Ortho Vitros Microslide Systems

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Differential rate pH change
	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
	mmol/l	13.7	10.8	16.6	1.45	2.90	Ion selective electrode
Bilirubin Direct	μmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	μmol/l	20.4	16.1	24.7	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	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	
	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	17.5	13.8	21.2	1.85	3.70	Modified Jendrassik
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	μmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	μmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	μmol/l	28.4	22.5	34.3	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.32	2.00	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	25.4	20.0	30.8	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.17	1.81	0.16	0.32	
	μmol/l	26.0	20.5	31.5	2.75	5.50	Diazonium ion
	mg/dl	1.52	1.20	1.84	0.16	0.32	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	30.8	24.4	37.2	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.43	2.17	0.19	0.37	
	µmol/l	35.3	27.9	42.7	3.70	7.40	Modified Jendrassik
	mg/dl	2.07	1.63	2.51	0.22	0.44	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.08	1.88	2.28	0.10	0.20	Ion selective electrode
	mg/dl	8.34	7.54	9.14	0.40	0.80	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Cholesterol	mmol/l	0.89	0.80	0.98	0.04	0.09	Ionised calcium
	mg/dl	3.56	3.20	3.92	0.18	0.36	
	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	129	169	10.00	20.00	
	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	99.7	91.7	108	4.00	8.00	Colorimetric
	mmol/l	97.8	90.0	106	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE direct
Cholinesterase	U/l	5656	4525	6787	565.50	1131.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	184	151	217	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	208	171	245	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	130	107	153	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	88	73	103	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	199	163	235	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
	U/l	131	108	154	11.50	23.00	Monothioglycerol 30°C
	U/l	89	73	105	8.00	16.00	Monothioglycerol 25°C
Copper	µmol/l	16.6	13.3	19.9	1.65	3.30	Atomic absorption
	µg/dl	106	84.6	127	10.70	21.40	
	µmol/l	15.9	12.7	19.1	1.60	3.20	Colorimetric
	µg/dl	101	80.8	121	10.10	20.20	
Cortisol	nmol/l	448	336	560	56.00	112.00	Roche Cobas E411
	µg/dl	16.1	12.1	20.1	2.00	4.00	
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	

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Creatinine	μmol/l	132	105	159	13.50	27.00	Creatinine PAP method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	129	104	154	12.50	25.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	μmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	126	101	151	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.20	1.76	2.64	0.22	0.44	Immunoturbidimetric
	ng/ml	1.72	1.37	2.07	0.18	0.35	
Folate	nmol/l	33.0	25.1	40.9	3.95	7.90	Roche Cobas E411
	ng/ml	14.6	11.1	18.1	1.75	3.50	
Free T4	pmol/l	16.5	12.4	20.6	2.05	4.10	Abbott Architect
	ng/dl	1.29	0.967	1.61	0.16	0.32	
	pg/ml	12.9	9.67	16.1	1.62	3.23	Abbott Architect
	pmol/l	18.6	14.0	23.2	2.30	4.60	Siemens Centaur XP/XPT/Classic
	ng/dl	1.45	1.09	1.81	0.18	0.36	
	pg/ml	14.5	10.9	18.1	1.80	3.60	Siemens Centaur XP/XPT/Classic
	pmol/l	17.8	13.3	22.3	2.25	4.50	Beckman Access
	ng/dl	1.39	1.04	1.74	0.18	0.35	
	pg/ml	13.9	10.4	17.4	1.75	3.50	Beckman Access

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Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	16.8	12.6	21.0	2.10	4.20	Beckman Dxl800
	ng/dl	1.31	0.983	1.64	0.16	0.33	
	pg/ml	13.1	9.83	16.4	1.64	3.27	Beckman Dxl800
	pmol/l	33.3	24.9	41.7	4.20	8.40	Vitros ECi
	ng/dl	2.60	1.94	3.26	0.33	0.66	
	pg/ml	26.0	19.4	32.6	3.30	6.60	Vitros ECi
	pmol/l	21.2	15.9	26.5	2.65	5.30	Roche Cobas E411
	ng/dl	1.65	1.24	2.06	0.21	0.41	
	pg/ml	16.5	12.4	20.6	2.05	4.10	Roche Cobas E411
	pmol/l	20.7	15.5	25.9	2.60	5.20	Roche Cobas 6000/8000
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Cobas 6000/8000
	pmol/l	19.3	14.5	24.1	2.40	4.80	Biomerieux Vidas FT4N Kit
	ng/dl	1.51	1.13	1.89	0.19	0.38	
	pg/ml	15.1	11.3	18.9	1.90	3.80	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.72	6.18	9.26	0.77	1.54	Immunoturbidimetric
	µg/ml	3.69	2.95	4.43	0.37	0.74	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	32	46	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	2.00	4.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	1.50	3.00	Gamma glutamyl-4-nitroanilide 25°C

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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
	U/l	54	46	62	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose dehydrogenase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	5.88	5.00	6.76	0.44	0.88	Oxygen electrode
	mg/dl	106	90.1	122	7.95	15.90	
alpha-HBDH	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
	U/l	219	173	265	23.00	46.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	165	131	199	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	124	98	150	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PPD
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.35	1.14	1.56	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	52.1	44.0	60.2	4.05	8.10	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Vitros Magnetic HDL
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PEGME
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct Clearance Method
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.49	1.26	1.72	0.12	0.23	HDL - Ultra
	mg/dl	57.5	48.6	66.4	4.45	8.90	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Immunoglobulin A	g/l	1.73	1.30	2.16	0.22	0.43	Immunoturbidimetric
	mg/dl	173	130	216	21.50	43.00	
Immunoglobulin G	g/l	6.72	5.51	7.93	0.61	1.21	Immunoturbidimetric
	mg/dl	672	551	793	60.50	121.00	
Immunoglobulin M	g/l	0.83	0.66	0.99	0.08	0.17	Immunoturbidimetric
	mg/dl	82.8	66.2	99.4	8.30	16.60	
Iron	μmol/l	20.7	16.9	24.5	1.90	3.80	Colorimetric with ppt.
	μg/dl	116	94.5	138	10.75	21.50	
	μmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric without ppt.
	μg/dl	115	94.5	136	10.25	20.50	
	μmol/l	20.6	16.9	24.3	1.85	3.70	Ortho Vitros Microslide Systems
	μg/dl	115	94.5	136	10.25	20.50	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.38	1.13	1.63	0.13	0.25	Ion selective electrode
	mg/dl	12.4	10.2	14.6	1.10	2.20	
	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
	mmol/l	1.52	1.25	1.79	0.14	0.27	Enzymatic Electrode
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LAP	U/l	16	14	18	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	590	502	678	44.00	88.00	Ortho Vitros Microslide Systems 37°C
	U/l	193	164	222	14.50	29.00	L->P 37°C
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	98	83	113	7.50	15.00	L->P 25°C
	U/l	443	377	509	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	320	272	368	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	225	191	259	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	404	344	464	30.00	60.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	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	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	248	211	285	18.50	37.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
	U/l	237	190	284	23.50	47.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.33	1.17	1.49	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.924	0.812	1.04	0.06	0.11	
	mmol/l	1.14	1.00	1.28	0.07	0.14	Ion selective electrode
	mg/dl	0.792	0.694	0.890	0.05	0.10	
	mmol/l	1.16	1.02	1.30	0.07	0.14	Spectrophotometric
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	1.20	1.06	1.34	0.07	0.14	Randox Colorimetric
	mg/dl	0.833	0.736	0.930	0.05	0.10	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Arsenazo III
	mg/dl	2.04	1.79	2.29	0.13	0.25	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.07	1.82	2.32	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Calmagite
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.87	0.77	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Methylthymol blue
	mg/dl	2.05	1.80	2.30	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.88	2.38	0.13	0.25	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.03	1.79	2.27	0.12	0.24	
NEFA	mmol/l	1.31	1.11	1.51	0.10	0.20	Colorimetric
Osmolality	mOsm/kg	292	233	351	29.50	59.00	Calculated
	mOsm/kg	303	243	363	30.00	60.00	Freezing point depression
	mOsm/kg	299	239	359	30.00	60.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.5	9.23	13.8	1.14	2.27	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.59	3.91	5.27	0.34	0.68	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.46	3.81	5.11	0.33	0.65	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - direct
	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction CX4/5/7
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	58.3	46.6	70.0	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.83	4.66	7.00	0.59	1.17	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction kinetic
	g/dl	5.74	4.59	6.89	0.58	1.15	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	10.6	7.98	13.2	1.31	2.62	Beckman Access standardised to Hybritech
	ng/ml =	10.4	7.78	13.0	1.31	2.62	bioMerieux VIDAS TPSA
	ng/ml =	7.90	5.93	9.87	0.99	1.97	Siemens Centaur XP/XPT/Classic
	ng/ml =	8.19	6.14	10.2	1.03	2.05	Abbott Architect
	ng/ml =	10.7	8.02	13.4	1.34	2.68	Cobas E411
	ng/ml =	10.6	7.98	13.2	1.31	2.62	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	144	137	151	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.12	0.23	Abbott Architect
	µU/ml =	1.44	1.15	1.73	0.15	0.29	bioMerieux VIDAS TSH
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Roche Cobas E411
	µU/ml =	1.58	1.27	1.89	0.16	0.31	Roche Cobas 6000/8000
TIBC	µmol/l	45.7	36.1	55.3	4.80	9.60	Ortho Vitros Microslide Systems
	µg/dl	255	202	308	26.50	53.00	
	µmol/l	38.2	30.2	46.2	4.00	8.00	Removal of excess free iron
	µg/dl	214	169	259	22.50	45.00	
	µmol/l	41.0	32.4	49.6	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	229	181	277	24.00	48.00	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	45.8	36.2	55.4	4.80	9.60	Direct Colorimetric
	μg/dl	256	202	310	27.00	54.00	
	μmol/l	45.0	35.5	54.5	4.75	9.50	Calculated from Transferrin
	μg/dl	252	198	306	27.00	54.00	
	μmol/l	47.2	37.3	57.1	4.95	9.90	Randox Direct
	μg/dl	264	209	319	27.50	55.00	
Tobramycin	μmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	μg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.78	1.33	2.23	0.23	0.45	Abbott Architect
	ng/ml	1.16	0.866	1.45	0.15	0.29	
	ng/dl	116	86.6	145	14.70	29.40	Abbott Architect
	nmol/l	2.22	1.66	2.78	0.28	0.56	Roche Cobas E411
	ng/ml	1.45	1.08	1.82	0.19	0.37	
	ng/dl	145	108	182	18.50	37.00	Roche Cobas E411
	nmol/l	2.08	1.56	2.60	0.26	0.52	Roche Cobas 6000/8000
	ng/ml	1.35	1.02	1.68	0.17	0.33	
	ng/dl	135	102	168	16.50	33.00	Roche Cobas 6000/8000
Total T4	nmol/l	93.5	70.1	117	11.70	23.40	Abbott Architect
	μg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	Abbott Architect
	nmol/l	83.3	62.5	104	10.40	20.80	Siemens Centaur XP/XPT/Classic
	μg/dl	6.50	4.88	8.12	0.81	1.62	
	ng/ml	65.0	48.8	81.2	8.10	16.20	Siemens Centaur XP/XPT/Classic
	nmol/l	94.1	70.6	118	11.75	23.50	Roche Cobas E411
	μg/dl	7.34	5.51	9.17	0.92	1.83	
	ng/ml	73.4	55.1	91.7	9.15	18.30	Roche Cobas E411

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	88.1	66.1	110	11.00	22.00	Roche Cobas 6000/8000
	µg/dl	6.87	5.16	8.58	0.86	1.71	
	ng/ml	68.7	51.6	85.8	8.55	17.10	Roche Cobas 6000/8000
Transferrin	g/l	1.95	1.56	2.34	0.20	0.39	Immunoturbidimetric
	mg/dl	195	156	234	19.50	39.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	76.0	105	7.15	14.30	
	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	91.2	76.5	106	7.35	14.70	
	mmol/l	1.02	0.86	1.19	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	90.3	75.7	105	7.30	14.60	
	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	75.3	104	7.05	14.10	
	mmol/l	0.99	0.84	1.15	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	88.0	73.9	102	7.05	14.10	
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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.16	6.66	0.38	0.75	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

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 no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease end point
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease hypochlorite
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Vitamin B12	pmol/l	420	336	504	42.00	84.00	Roche Cobas E411
	pg/ml	569	455	683	57.00	114.00	
Zinc	µmol/l	23.8	19.1	28.5	2.35	4.70	Colorimetric with deproteinisation
	µg/dl	155	125	185	15.00	30.00	

**METHOD (Elec.)****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-1-globulin		5.9	4.5	7.3	0.71	1.42	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.3	5.6	9.1	0.88	1.75	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		67.1	60.5	73.7	3.30	6.60	% of total Protein (Beckman Capillary)
beta-globulin		9.5	7.2	11.8	1.14	2.28	% of total Protein (Beckman Capillary)
gamma-globulin		10.2	7.8	12.7	1.23	2.45	% of total Protein (Beckman Capillary)

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	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	163	139	187	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	167	142	192	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	161	137	185	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	109	93	125	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.3	20.3	30.3	2.50	5.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Enzymatic
Bilirubin Direct	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	20.9	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	26.5	21.0	32.0	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	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	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	ISE indirect
Cholinesterase	U/l	6749	5399	8099	675.00	1350.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	201	164	238	18.50	37.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	11.8	9.44	14.2	1.18	2.36	Colorimetric
	µg/dl	75.0	60.0	90.0	7.50	15.00	
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
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	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL PPD
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct Clearance Method
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	HDL - Ultra
	mg/dl	57.1	48.6	65.6	4.25	8.50	
Iron	µmol/l	20.9	17.2	24.6	1.85	3.70	Colorimetric with ppt.
	µg/dl	117	96.1	138	10.45	20.90	
	µmol/l	21.2	17.4	25.0	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.3	141	10.85	21.70	
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	205	174	236	15.50	31.00	L->P 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.17	1.03	1.31	0.07	0.14	Spectrophotometric
	mg/dl	0.812	0.715	0.909	0.05	0.10	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Arsenazo III
	mg/dl	2.04	1.79	2.29	0.13	0.25	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.04	1.79	2.29	0.13	0.25	
Osmolality	mOsm/kg	298	238	358	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.14	3.80	4.48	0.17	0.34	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	
	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	142	134	150	4.00	8.00	ISE method - indirect
TIBC	μmol/l	39.7	31.4	48.0	4.15	8.30	FE+UIBC(saturation with iron)
	μg/dl	222	176	268	23.00	46.00	
	μmol/l	46.9	37.1	56.7	4.90	9.80	Calculated from Transferrin
	μg/dl	262	207	317	27.50	55.00	
Triglycerides	mmol/l	0.97	0.82	1.13	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	86.0	72.3	99.7	6.85	13.70	
	mmol/l	0.99	0.83	1.15	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	87.6	73.5	102	7.05	14.10	
	mmol/l	0.97	0.82	1.13	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	86.0	72.3	99.7	6.85	13.70	
UIBC	μmol/l	18.4	15.1	21.7	1.65	3.30	Direct Colorimetric
	μg/dl	103	84.4	122	9.30	18.60	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
Urea	mmol/l	7.21	6.12	8.30	0.55	1.09	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	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	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	22.7	18.0	27.4	2.35	4.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
Iron	µmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric without ppt.
	µg/dl	115	94.5	136	10.25	20.50	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.62	1.37	1.87	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.02	4.25	5.79	0.39	0.77	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - direct
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.09	6.02	8.16	0.54	1.07	Urease end point
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Purple
	g/dl	4.43	3.77	5.09	0.33	0.66	
Alkaline Phosphatase	U/l	264	224	304	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	191	163	219	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	87	74	100	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	96	82	110	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	41	33	49	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	21.1	16.6	25.6	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
Bilirubin Total	µmol/l	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	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	30.3	24.0	36.6	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	μmol/l	30.0	23.7	36.3	3.15	6.30	DPD (Beckman AU)
	mg/dl	1.76	1.39	2.13	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	2.18	1.97	2.39	0.11	0.21	Arsenazo III
	mg/dl	8.74	7.90	9.58	0.42	0.84	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	161	140	182	10.50	21.00	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
Cholinesterase	U/l	5461	4369	6553	546.00	1092.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	199	163	235	18.00	36.00	Beckman CK-NAC (Extinction Coeff) 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	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	135	108	162	13.50	27.00	Creatinine PAP method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	119	95.5	143	11.75	23.50	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	μmol/l	124	99.5	149	12.25	24.50	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	45	59	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	51	43	59	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct Clearance Method
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.50	1.28	1.72	0.11	0.22	HDL - Ultra
	mg/dl	57.9	49.4	66.4	4.25	8.50	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	21.5	17.7	25.3	1.90	3.80	Colorimetric with ppt.
	µg/dl	120	98.9	141	10.55	21.10	
	µmol/l	20.8	17.1	24.5	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.6	136	10.20	20.40	
Lactate	mmol/l	1.47	1.20	1.74	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P 37°C
	U/l	439	373	505	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	416	354	478	31.00	62.00	P->L German methods 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.14	1.00	1.28	0.07	0.14	Spectrophotometric
	mg/dl	0.792	0.694	0.890	0.05	0.10	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Osmolality	mOsm/kg	289	232	346	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.6	46.0	69.2	5.80	11.60	Biuret reaction end point
	g/dl	5.76	4.60	6.92	0.58	1.16	
	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction kinetic
	g/dl	5.76	4.61	6.91	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	44.2	35.0	53.4	4.60	9.20	FE+UIBC(saturation with iron)
	μg/dl	247	196	298	25.50	51.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	76.0	105	7.15	14.30	
	mmol/l	1.02	0.85	1.19	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	90.3	75.5	105	7.40	14.80	
UIBC	μmol/l	23.6	19.4	27.8	2.10	4.20	Direct Colorimetric
	μg/dl	132	108	156	12.00	24.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	
Urea	mmol/l	7.64	6.50	8.78	0.57	1.14	Urease end point
	mg/dl	45.9	39.1	52.7	3.40	6.80	
	mmol/l	7.63	6.49	8.77	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Purple
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	98	84	112	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	31.8	25.1	38.5	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.86	1.47	2.25	0.20	0.39	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Ion selective electrode
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.00	20.00	
Chloride	mmol/l	98.0	90.1	106	3.95	7.90	ISE indirect
CK Total	U/l	209	172	246	18.50	37.00	Monothioglycerol 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	IDMS traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°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	
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	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	165	141	189	12.00	24.00	L->P 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Calmagite
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
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	
	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction kinetic
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
Urea	mmol/l	8.02	6.82	9.22	0.60	1.20	Urease kinetic
	mg/dl	48.2	41.0	55.4	3.60	7.20	
	mmol/l	8.02	6.82	9.22	0.60	1.20	BUN
	mg/dl	22.5	19.1	25.9	1.70	3.40	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	171	145	197	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer SCE 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Differential rate pH change
	mmol/l	13.5	10.7	16.3	1.40	2.80	Ion selective electrode
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	31.6	24.9	38.3	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.08	1.88	2.28	0.10	0.20	Ion selective electrode
	mg/dl	8.34	7.54	9.14	0.40	0.80	
Cholesterol	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.00	20.00	
	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
CK Total	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
	U/l	207	170	244	18.50	37.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	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	102	154	13.00	26.00	IDMS traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°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	
	mmol/l	5.97	5.08	6.86	0.45	0.89	Glucose oxidase
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL PPD
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.53	1.30	1.76	0.12	0.23	HDL - Ultra
	mg/dl	59.1	50.2	68.0	4.45	8.90	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	167	142	192	12.50	25.00	L->P 37°C
	U/l	534	454	614	40.00	80.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	171	145	197	13.00	26.00	L->P IFCC 37°C

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Calmagite
	mg/dl	2.12	1.86	2.38	0.13	0.26	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
	g/l	56.8	45.5	68.1	5.65	11.30	Biuret reaction kinetic
	g/dl	5.68	4.55	6.81	0.57	1.13	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.3	104	7.05	14.10	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	75.8	105	7.25	14.50	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.71	6.55	8.87	0.58	1.16	Urease end point
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	8.00	6.80	9.20	0.60	1.20	Urease kinetic
	mg/dl	48.1	40.9	55.3	3.60	7.20	
	mmol/l	8.00	6.80	9.20	0.60	1.20	BUN
	mg/dl	22.5	19.1	25.9	1.70	3.40	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

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	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	22.4	17.7	27.1	2.35	4.70	Diazo with Sulphanilic Acid
	mg/dl	1.31	1.04	1.58	0.14	0.27	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Cholesterol	mmol/l	4.18	3.63	4.73	0.28	0.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	140	182	10.50	21.00	
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
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	
Triglycerides	mmol/l	0.98	0.82	1.13	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	86.6	72.7	101	6.95	13.90	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.48	5.64	7.32	0.42	0.84	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.20	6.12	8.28	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	23.8	18.8	28.8	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	122	97.3	147	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.56	1.33	1.79	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.84	4.12	5.56	0.36	0.72	
Protein Total	g/l	58.9	47.2	70.6	5.85	11.70	Biuret reaction end point
	g/dl	5.89	4.72	7.06	0.59	1.17	
Triglycerides	mmol/l	0.94	0.79	1.08	0.07	0.15	Lipase/GPO-PAP no correction
	mg/dl	82.7	69.6	95.8	6.55	13.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	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	143	121	165	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	94	128	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	147	125	169	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	115	97	133	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	94	80	108	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	70	59	81	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.20	0.948	1.45	0.13	0.25	
	µmol/l	20.4	16.1	24.7	2.15	4.30	Roche JG factored
	mg/dl	1.19	0.942	1.44	0.12	0.25	
Bilirubin Total	µmol/l	25.6	20.3	30.9	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazonium ion
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	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	
Cholesterol	mmol/l	2.13	1.92	2.34	0.11	0.21	NM-BAPTA
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Cholesterol	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE indirect
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	57.5	49.0	66.0	4.25	8.50	
Iron	μmol/l	20.9	17.1	24.7	1.90	3.80	Colorimetric with ppt.
	μg/dl	117	95.6	138	10.70	21.40	
	μmol/l	20.8	17.1	24.5	1.85	3.70	Colorimetric without ppt.
	μg/dl	116	95.6	136	10.20	20.40	
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	389	331	447	29.00	58.00	P->L German methods 37°C
	U/l	281	239	323	21.00	42.00	P->L German methods 30°C
	U/l	197	168	226	14.50	29.00	P->L German methods 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
	U/l	156	133	179	11.50	23.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.11	0.98	1.24	0.07	0.13	Ion selective electrode
	mg/dl	0.771	0.681	0.861	0.05	0.09	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.68	3.97	5.39	0.36	0.71	
	mmol/l	1.48	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	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	55.3	44.3	66.3	5.50	11.00	Biuret reaction end point
	g/dl	5.53	4.43	6.63	0.55	1.10	
	g/l	56.4	45.1	67.7	5.65	11.30	Biuret reaction kinetic
	g/dl	5.64	4.51	6.77	0.57	1.13	
Sodium	mmol/l	141	134	148	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	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.7	106	7.25	14.50	
UIBC	µmol/l	18.9	15.5	22.3	1.70	3.40	Direct Colorimetric
	µg/dl	106	86.6	125	9.70	19.40	
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	

**COBAS INTEGRA®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.24	6.82	0.40	0.79	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.1	33.3	44.9	2.90	5.80	Bromocresol Green
	g/dl	3.91	3.33	4.49	0.29	0.58	
Alkaline Phosphatase	U/l	282	240	324	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	220	187	253	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	180	153	207	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
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	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.6	20.5	30.7	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	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	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.17	1.81	0.16	0.32	

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

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Arsenazo III
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	134	172	9.50	19.00	
Chloride	mmol/l	101	92.8	109	4.10	8.20	ISE direct
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	Alkaline picrate no deproteinization
	mg/dl	1.51	1.22	1.80	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	
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	6.30	5.36	7.24	0.47	0.94	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PEGME
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct Clearance Method
	mg/dl	57.9	49.0	66.8	4.45	8.90	
Iron	μmol/l	22.9	18.8	27.0	2.05	4.10	Colorimetric without ppt.
	μg/dl	128	105	151	11.50	23.00	

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

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	3.98	3.67	4.29	0.16	0.31	ISE method - direct
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.23	5.43	7.03	0.40	0.80	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	241	205	277	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	188	160	216	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	154	131	177	11.50	23.00	Diethanolamine buffer DEA 25°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	92	126	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	30.7	24.2	37.2	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	30.3	24.0	36.6	3.15	6.30	Oxidation to Biliverdin/Vanadate
	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	Arsenazo III
	mg/dl	8.90	7.98	9.82	0.46	0.92	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5515	4412	6618	551.50	1103.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.45	5.49	7.41	0.48	0.96	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	
LD (LDH)	U/l	428	364	492	32.00	64.00	P->L German methods 37°C
	U/l	309	263	355	23.00	46.00	P->L German methods 30°C
	U/l	217	185	249	16.00	32.00	P->L German methods 25°C
	U/l	407	346	468	30.50	61.00	P->L SFBC 37°C
	U/l	294	250	338	22.00	44.00	P->L SFBC 30°C
	U/l	206	175	237	15.50	31.00	P->L SFBC 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Protein Total	g/l	60.2	48.2	72.2	6.00	12.00	Biuret reaction end point
	g/dl	6.02	4.82	7.22	0.60	1.20	
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	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.18	5.38	6.98	0.40	0.80	
	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.15	5.36	6.94	0.40	0.79	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.10	5.31	6.89	0.40	0.79	
Urea	mmol/l	7.79	6.62	8.96	0.59	1.17	Urease kinetic
	mg/dl	46.8	39.8	53.8	3.50	7.00	
	mmol/l	7.79	6.62	8.96	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	33	49	4.00	8.00	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	56	44	68	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.8	10.9	16.7	1.45	2.90	BuBc Vitros Slide
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	129	169	10.00	20.00	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5458	4366	6550	546.00	1092.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	184	151	217	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Vitros Magnetic HDL
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	20.6	16.9	24.3	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	115	94.5	136	10.25	20.50	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	590	502	678	44.00	88.00	Ortho Vitros Microslide Systems 37°C
	U/l	248	211	285	18.50	37.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	237	190	284	23.50	47.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	140	133	147	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	45.7	36.1	55.3	4.80	9.60	Ortho Vitros Microslide Systems
	µg/dl	255	202	308	26.50	53.00	
Triglycerides	mmol/l	1.20	1.00	1.40	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	106	88.5	124	8.75	17.50	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.73	4.99	6.47	0.37	0.74	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.2	48.8	3.15	6.30	Bromocresol Green
	g/dl	4.25	3.62	4.88	0.32	0.63	
Alkaline Phosphatase	U/l	144	122	166	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	112	95	129	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	92	78	106	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	90	77	103	6.50	13.00	AMP optimised to IFCC 25°C
	U/l	146	124	168	11.00	22.00	Colorimetric 37°C
	U/l	114	97	131	8.50	17.00	Colorimetric 30°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	94	80	108	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	22	30	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.924	1.44	0.13	0.26	
	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.20	0.948	1.45	0.13	0.25	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.02	3.49	4.55	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	101	93.1	109	3.95	7.90	ISE indirect
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
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	129	104	154	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
LD (LDH)	U/l	221	188	254	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	112	95	129	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Potassium	mmol/l	4.18	3.84	4.52	0.17	0.34	ISE method - indirect
Protein Total	g/l	58.8	47.1	70.5	5.85	11.70	Biuret reaction end point
	g/dl	5.88	4.71	7.05	0.59	1.17	
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	76.5	106	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.05	5.26	6.84	0.40	0.79	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Purple
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	40.1	34.1	46.1	3.00	6.00	Turbidimetric Assays
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	138	117	159	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	91	125	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	88	75	101	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	μmol/l	25.1	20.0	30.2	2.55	5.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Colorimetric

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
Bilirubin Direct	μmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	μmol/l	20.7	16.3	25.1	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	μmol/l	20.7	16.4	25.0	2.15	4.30	Roche JG factored
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	μmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	μmol/l	26.0	20.6	31.4	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.21	1.83	0.16	0.31	
	μmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.16	1.95	2.37	0.11	0.21	NM-BAPTA
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	92.9	85.4	100	3.75	7.50	ISE indirect
Cholinesterase	U/l	5445	4356	6534	544.50	1089.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	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	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	μmol/l	135	108	162	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	129	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	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	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	20.6	15.5	25.7	2.55	5.10	Roche Cobas 6000/8000
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Cobas 6000/8000
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

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	20.3	16.6	24.0	1.85	3.70	Colorimetric with ppt.
	µg/dl	113	92.8	133	10.10	20.20	
	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.
	µg/dl	115	93.9	136	10.55	21.10	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	144	123	165	10.50	21.00	L->P 30°C
	U/l	101	86	116	7.50	15.00	L->P 25°C
	U/l	400	340	460	30.00	60.00	P->L German methods 37°C
	U/l	289	245	333	22.00	44.00	P->L German methods 30°C
	U/l	203	172	234	15.50	31.00	P->L German methods 25°C
	U/l	209	177	241	16.00	32.00	L->P IFCC 37°C
	U/l	151	128	174	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.15	1.01	1.29	0.07	0.14	Spectrophotometric
	mg/dl	0.799	0.701	0.897	0.05	0.10	
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	286	229	343	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
PSA Total	ng/ml =	10.7	8.03	13.4	1.34	2.67	Roche Cobas 6000/8000
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.58	1.27	1.89	0.16	0.31	Roche Cobas 6000/8000
TIBC	μmol/l	39.6	31.3	47.9	4.15	8.30	FE+UIBC(saturation with iron)
	μg/dl	221	175	267	23.00	46.00	
	μmol/l	47.5	37.5	57.5	5.00	10.00	Calculated from Transferrin
	μg/dl	266	210	322	28.00	56.00	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.08	1.56	2.60	0.26	0.52	Roche Cobas 6000/8000
	ng/ml	1.35	1.02	1.68	0.17	0.33	
	ng/dl	135	102	168	16.50	33.00	Roche Cobas 6000/8000
Total T4	nmol/l	88.1	66.1	110	11.00	22.00	Roche Cobas 6000/8000
	µg/dl	6.87	5.16	8.58	0.86	1.71	
	ng/ml	68.7	51.6	85.8	8.55	17.10	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	76.9	107	7.55	15.10	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	75.9	105	7.20	14.40	
UIBC	µmol/l	19.1	15.7	22.5	1.70	3.40	Direct Colorimetric
	µg/dl	107	87.8	126	9.60	19.20	
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	0.35	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	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease end point
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Purple
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	87	74	100	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	92	78	106	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	20.9	16.5	25.3	2.20	4.40	Roche JG factored
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	18.2	14.4	22.0	1.90	3.80	Roche DPD Dumas Standardised
	mg/dl	1.06	0.842	1.28	0.11	0.22	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.21	1.83	0.16	0.31	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.70	7.86	9.54	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	133	171	9.50	19.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	93.1	85.7	101	3.70	7.40	ISE indirect
	mmol/l	94.0	86.5	102	3.75	7.50	ISE direct
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.19	5.27	7.11	0.46	0.92	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	1.20	2.40	
LD (LDH)	U/l	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	211	180	242	15.50	31.00	L->P IFCC 37°C
	U/l	152	130	174	11.00	22.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	33	26	40	3.50	7.00	Colorimetric, Roche ACN(8)789 / ID 0-052
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	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	4.20	3.86	4.54	0.17	0.34	ISE method - direct
	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	228	179	277	24.50	49.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	79.0	109	7.40	14.80	
UIBC	µmol/l	19.6	16.1	23.1	1.75	3.50	Direct Colorimetric
	µg/dl	110	90.0	130	10.00	20.00	
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	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

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

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Purple
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	40.8	34.7	46.9	3.05	6.10	Turbidimetric Assays
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer with P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer with P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer with P5P 25°C
	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	69	58	80	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer with P5P 30°C
	U/l	26	20	32	3.00	6.00	Tris buffer with P5P 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	μmol/l	24.2	19.3	29.1	2.45	4.90	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
	mmol/l	13.3	10.6	16.0	1.35	2.70	PEP Carboxylase
Bilirubin Direct	μmol/l	20.7	16.3	25.1	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	μmol/l	20.5	16.2	24.8	2.15	4.30	Roche JG factored
	mg/dl	1.20	0.948	1.45	0.13	0.25	
	μmol/l	16.9	13.4	20.4	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.989	0.784	1.19	0.10	0.21	
Bilirubin Total	μmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	μmol/l	25.5	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	25.4	20.0	30.8	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.17	1.81	0.16	0.32	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	151	131	171	10.00	20.00	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect
Cholinesterase	U/l	5437	4350	6524	543.50	1087.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	137	110	164	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	μmol/l	137	110	164	13.50	27.00	Jaffe rate blanked
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	μmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (~26 μmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
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	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	μmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	μg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.52	1.24	1.80	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
	U/l	150	128	172	11.00	22.00	L->P IFCC 30°C
	U/l	105	90	120	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	31	25	37	3.00	6.00	Colorimetric, Roche ACN(8)789 / ID 0-052
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Spectrophotometric
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.85	2.37	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.4	46.0	68.8	5.70	11.40	Biuret reaction end point
	g/dl	5.74	4.60	6.88	0.57	1.14	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.9	32.3	49.5	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	229	181	277	24.00	48.00	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.2	106	7.50	15.00	
	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	
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	
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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	288	244	332	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	105	89	121	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	17.1	13.5	20.7	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.00	0.790	1.21	0.11	0.21	
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	29.4	23.2	35.6	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	
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	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.0	87.4	103	3.80	7.60	ISE direct
CK Total	U/l	229	188	270	20.50	41.00	CK-NAC substrate start (DGKC) 37°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
	mmol/l	6.51	5.54	7.48	0.49	0.97	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
Iron	µmol/l	21.0	17.2	24.8	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	96.1	138	10.45	20.90	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	417	354	480	31.50	63.00	P->L German methods 37°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.20	1.06	1.34	0.07	0.14	Colorimetric
	mg/dl	0.833	0.736	0.930	0.05	0.10	
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	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - direct
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	144	137	151	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
TIBC	µmol/l	47.2	37.3	57.1	4.95	9.90	Direct Colorimetric
	µg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.12	5.31	6.93	0.41	0.81	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.55	6.42	8.68	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Purple
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.7	12.4	19.0	1.65	3.30	Enzymatic
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	30.7	24.3	37.1	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
Chloride	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct Clearance Method
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	μmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	μg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.36	1.12	1.60	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	403	343	463	30.00	60.00	P->L German methods 37°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.15	1.02	1.28	0.06	0.13	Spectrophotometric
	mg/dl	0.799	0.708	0.890	0.05	0.09	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.05	1.80	2.30	0.13	0.25	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.15	3.81	4.49	0.17	0.34	ISE method - indirect

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	55.1	44.1	66.1	5.50	11.00	Biuret reaction end point
	g/dl	5.51	4.41	6.61	0.55	1.10	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	45.7	36.1	55.3	4.80	9.60	Direct Colorimetric
	μg/dl	255	202	308	26.50	53.00	
	μmol/l	43.8	34.6	53.0	4.60	9.20	Calculated from Transferrin
	μg/dl	245	193	297	26.00	52.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
Urea	mmol/l	7.74	6.58	8.90	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.74	6.58	8.90	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Purple
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	155	131	179	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	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	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 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	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	3.54	3.08	4.00	0.23	0.46	Cholesterol Oxidase - Abell Kendall
	mg/dl	137	119	155	9.00	18.00	
	mmol/l	3.56	3.10	4.02	0.23	0.46	Dimension-Siemens reagents
	mg/dl	137	120	154	8.50	17.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	136	108	164	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	μmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	55	75	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.29	5.34	7.24	0.48	0.95	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	μmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	μg/dl	110	90.0	130	10.00	20.00	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	133	107	159	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	0.96	0.80	1.11	0.08	0.15	Lipase/GPO-PAP no correction
	mg/dl	84.6	71.1	98.1	6.75	13.50	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	0.98	0.82	1.14	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	86.6	72.7	101	6.95	13.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Urea	mmol/l	7.63	6.49	8.77	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	156	133	179	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	14.6	11.5	17.7	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.11	1.89	2.33	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.46	7.58	9.34	0.44	0.88	
Cholesterol	mmol/l	3.56	3.10	4.02	0.23	0.46	Dimension-Siemens reagents
	mg/dl	137	120	154	8.50	17.00	
Chloride	mmol/l	97.1	89.4	105	3.85	7.70	ISE indirect
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	63	54	72	4.50	9.00	Siemens Dimension (non IFCC) 37°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	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PEGME
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Iron	μmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	μg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	198	168	228	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	203	172	234	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	134	108	160	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Methylthymol blue
	mg/dl	2.04	1.80	2.28	0.12	0.24	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Potassium	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect

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Lot. No. 1623UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	0.97	0.81	1.12	0.08	0.15	Lipase/GPO-PAP no correction
	mg/dl	85.4	71.8	99.0	6.80	13.60	
	mmol/l	0.94	0.79	1.10	0.08	0.15	Lipase/Glycerol Dehydrogenase
	mg/dl	83.5	70.2	96.8	6.65	13.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease end point
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.62	6.48	8.76	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	