

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

CAT. NO. HNI530	GTIN: 05055273203783	SIZE: 20 x 5ml
CAT. NO. HS2611	GTIN: 05055273203813	SIZE: 5 x 5ml
LOT NO. 1622UN	EXPIRY: 2024-01-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

GLDH is stable for 2 days at 2-8°C.

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

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

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

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

The control should not be used as a calibration material.

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

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

1. 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.
2. Refer to the Control section of the individual analyser application.
3. 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.

EC	REP
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METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.4	36.9	49.9	3.25	6.50	Bromocresol Purple
	g/dl	4.34	3.69	4.99	0.33	0.65	
	g/l	40.5	34.4	46.6	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.05	3.44	4.66	0.31	0.61	
	g/l	41.6	35.4	47.8	3.10	6.20	Turbidimetric Assays
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	247	210	284	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	192	164	220	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	158	134	182	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	175	149	201	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	95	129	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	177	150	204	13.50	27.00	AMP non-optimised 37°C
	U/l	138	117	159	10.50	21.00	AMP non-optimised 30°C
	U/l	113	96	130	8.50	17.00	AMP non-optimised 25°C
	U/l	163	139	187	12.00	24.00	Colorimetric 37°C
	U/l	127	108	146	9.50	19.00	Colorimetric 30°C
	U/l	104	89	119	7.50	15.00	Colorimetric 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	36	29	43	3.50	7.00	Colorimetric 37°C
	U/l	27	21	33	3.00	6.00	Colorimetric 30°C
	U/l	20	16	24	2.00	4.00	Colorimetric 25°C
	U/l	42	34	50	4.00	8.00	Tris buffer with P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	31	47	4.00	8.00	Phosphate buffer DGKC 37°C
	U/l	29	23	35	3.00	6.00	Phosphate buffer DGKC 30°C
	U/l	22	17	27	2.50	5.00	Phosphate buffer DGKC 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer with P5P NVKC 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer with P5P NVKC 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer with P5P NVKC 25°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C
	U/l	42	34	50	4.00	8.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	91	78	104	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C

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Amylase Total	U/l	95	80	110	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	94	80	108	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	82	70	94	6.00	12.00	Saccharogenic 37°C
	U/l	85	72	98	6.50	13.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	89	75	103	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	69	59	79	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	88	74	102	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	86	73	99	6.50	13.00	Agappe - CNPG3 37°C
	U/l	91	77	105	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	100	85	115	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	95	81	109	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	89	76	102	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.10	0.90	1.30	0.10	0.20	Immunoturbidimetric
	mg/dl	110	90.2	130	9.90	19.80	
Apolipoprotein B	g/l	0.60	0.49	0.71	0.05	0.11	Immunoturbidimetric
	mg/dl	59.8	49.0	70.6	5.40	10.80	
Acid Phosphatase (Total)	U/l	11.1	7.44	14.8	1.83	3.66	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Colorimetric 37°C
	U/l	23	19	27	2.00	4.00	Colorimetric 30°C
	U/l	16	13	19	1.50	3.00	Colorimetric 25°C

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Lot. No. 1622UN 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	53	43	63	5.00	10.00	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	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
	U/l	37	30	44	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	25	20	30	2.50	5.00	Phosphate buffer DGKC 30°C
	U/l	18	14	22	2.00	4.00	Phosphate buffer DGKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P NVKC 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	36	28	44	4.00	8.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	4th Generation Colorimetric
	µmol/l	24.8	19.8	29.8	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	14.4	11.4	17.4	1.50	3.00	Colorimetric
	mmol/l	15.5	12.3	18.7	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	14.4	11.5	17.3	1.45	2.90	Enzymatic
	mmol/l	15.5	12.3	18.7	1.60	3.20	Ion selective electrode
	mmol/l	15.7	12.5	18.9	1.60	3.20	Manometric
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.866	1.33	0.12	0.23	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	μmol/l	17.4	13.8	21.0	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	μmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	μmol/l	17.4	13.7	21.1	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.02	0.801	1.24	0.11	0.22	
	μmol/l	13.8	10.9	16.7	1.45	2.90	Modified Jendrassik
	mg/dl	0.807	0.638	0.976	0.08	0.17	
	μmol/l	23.0	18.1	27.9	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Bilirubin Total	μmol/l	29.7	23.5	35.9	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	μmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	μmol/l	26.4	20.9	31.9	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	25.1	19.9	30.3	2.60	5.20	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	μmol/l	28.5	22.5	34.5	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	μmol/l	31.3	24.7	37.9	3.30	6.60	Modified Jendrassik
	mg/dl	1.83	1.44	2.22	0.20	0.39	

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Lot. No. 1622UN 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	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.23	2.00	2.46	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.94	8.02	9.86	0.46	0.92	
	mmol/l	2.14	1.93	2.35	0.11	0.21	Ion selective electrode
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.16	1.95	2.37	0.11	0.21	Methylthymol blue
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.16	1.95	2.37	0.11	0.21	Phosphonazo
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	2.18	1.97	2.39	0.11	0.21	NM-BAPTA
	mg/dl	8.74	7.90	9.58	0.42	0.84	
	mmol/l	3.88	3.38	4.38	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	150	130	170	10.00	20.00	
	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	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Dehydrogenase
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	101	92.7	109	4.15	8.30	Colorimetric
	mmol/l	100	92.3	108	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect

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Chloride	mmol/l	100	92.3	108	3.85	7.70	ISE direct
	mmol/l	109	101	117	4.00	8.00	Optical Fluorescence
Cholinesterase	U/l	5044	4035	6053	504.50	1009.00	Colorimetric Benzoylcholine 37°C
	U/l	5213	4170	6256	521.50	1043.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5085	4068	6102	508.50	1017.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	203	167	239	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	198	162	234	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
	U/l	135	111	159	12.00	24.00	Monothioglycerol 30°C
	U/l	92	75	109	8.50	17.00	Monothioglycerol 25°C
	U/l	197	162	232	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	123	101	145	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	84	69	99	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C
	U/l	200	164	236	18.00	36.00	Creatinine phosphate substrate Start 37°C
	U/l	125	103	147	11.00	22.00	Creatinine phosphate substrate Start 30°C
	U/l	85	70	100	7.50	15.00	Creatinine phosphate substrate Start 25°C
Copper	µmol/l	18.4	14.7	22.1	1.85	3.70	Atomic absorption
	µg/dl	117	93.5	141	11.75	23.50	

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Copper	µmol/l	17.8	14.2	21.4	1.80	3.60	Colorimetric
	µg/dl	113	90.3	136	11.35	22.70	
Cortisol	nmol/l	498	374	622	62.00	124.00	Roche Cobas E411
	µg/dl	17.9	13.5	22.3	2.20	4.40	
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	134	108	160	13.00	26.00	Enzymatic UV method
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Creatinine PAP method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	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	
	µmol/l	136	109	163	13.50	27.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	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	134	108	160	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	IDMS traceable
	mg/dl	1.51	1.21	1.81	0.15	0.30	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.23	1.78	2.68	0.23	0.45	Immunoturbidimetric
	ng/ml	1.74	1.39	2.09	0.18	0.35	
Folate	nmol/l	30.4	23.1	37.7	3.65	7.30	Roche Cobas E411
	ng/ml	13.4	10.2	16.6	1.60	3.20	
Free T4	pmol/l	19.2	14.4	24.0	2.40	4.80	Abbott Architect
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Abbott Architect
	pmol/l	19.1	14.4	23.8	2.35	4.70	Siemens Centaur XP/XPT/Classic
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Siemens Centaur XP/XPT/Classic
	pmol/l	22.2	16.7	27.7	2.75	5.50	Siemens Immulite 2000/2500
	ng/dl	1.73	1.30	2.16	0.22	0.43	
	pg/ml	17.3	13.0	21.6	2.15	4.30	Siemens Immulite 2000/2500
	pmol/l	23.2	17.4	29.0	2.90	5.80	Siemens Immulite 1000
	ng/dl	1.81	1.36	2.26	0.23	0.45	
	pg/ml	18.1	13.6	22.6	2.25	4.50	Siemens Immulite 1000
	pmol/l	20.1	15.1	25.1	2.50	5.00	Beckman Dxl800
	ng/dl	1.57	1.18	1.96	0.20	0.39	
	pg/ml	15.7	11.8	19.6	1.95	3.90	Beckman Dxl800
	pmol/l	24.5	18.4	30.6	3.05	6.10	Roche Elecsys
	ng/dl	1.91	1.44	2.38	0.24	0.47	
	pg/ml	19.1	14.4	23.8	2.35	4.70	Roche Elecsys
	pmol/l	20.4	15.3	25.5	2.55	5.10	Beckman Access
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Beckman Access

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	41.5	31.2	51.8	5.15	10.30	Vitros ECI
	ng/dl	3.24	2.43	4.05	0.41	0.81	
	pg/ml	32.4	24.3	40.5	4.05	8.10	Vitros ECI
	pmol/l	24.7	18.5	30.9	3.10	6.20	Roche Cobas 4000/E411
	ng/dl	1.93	1.44	2.42	0.25	0.49	
	pg/ml	19.3	14.4	24.2	2.45	4.90	Roche Cobas 4000/E411
	pmol/l	24.5	18.3	30.7	3.10	6.20	Roche Cobas e601/602
	ng/dl	1.91	1.43	2.39	0.24	0.48	
	pg/ml	19.1	14.3	23.9	2.40	4.80	Roche Cobas e601/602
	pmol/l	24.0	18.0	30.0	3.00	6.00	SNIBE Maglumi Analysers
	ng/dl	1.87	1.40	2.34	0.24	0.47	
	pg/ml	18.7	14.0	23.4	2.35	4.70	SNIBE Maglumi Analysers
	pmol/l	24.1	18.1	30.1	3.00	6.00	Biomerieux Vidas FT4N Kit
	ng/dl	1.88	1.41	2.35	0.24	0.47	
	pg/ml	18.8	14.1	23.5	2.35	4.70	Biomerieux Vidas FT4N Kit
	pmol/l	23.1	17.3	28.9	2.90	5.80	Siemens Dimension Exl LOCI
	ng/dl	1.80	1.35	2.25	0.23	0.45	
	pg/ml	18.0	13.5	22.5	2.25	4.50	Siemens Dimension Exl LOCI
	pmol/l	20.9	15.7	26.1	2.60	5.20	Siemens Centaur CP
	ng/dl	1.63	1.22	2.04	0.21	0.41	
	pg/ml	16.3	12.2	20.4	2.05	4.10	Siemens Centaur CP
Gentamicin	µmol/l	7.61	6.09	9.13	0.76	1.52	Immunoturbidimetric
	µg/ml	3.64	2.91	4.37	0.37	0.73	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	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

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	58	49	67	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	30	42	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.9	124	8.05	16.10	
	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	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Oxygen electrode
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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-HBDH	U/l	216	171	261	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	163	129	197	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	122	97	147	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PPD
	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 HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Vitros Magnetic HDL
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PEGME
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	54.8	46.3	63.3	4.25	8.50	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
Immunoglobulin A	g/l	1.62	1.22	2.02	0.20	0.40	Immunoturbidimetric
	mg/dl	162	122	202	20.00	40.00	
Immunoglobulin G	g/l	6.29	5.16	7.42	0.57	1.13	Immunoturbidimetric
	mg/dl	629	516	742	56.50	113.00	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Immunoglobulin M	g/l	0.68	0.54	0.82	0.07	0.14	Immunoturbidimetric
	mg/dl	68.0	54.4	81.6	6.80	13.60	
Iron	μmol/l	21.0	17.2	24.8	1.90	3.80	Colorimetric with ppt.
	μg/dl	117	96.1	138	10.45	20.90	
	μmol/l	21.3	17.4	25.2	1.95	3.90	Colorimetric without ppt.
	μg/dl	119	97.3	141	10.85	21.70	
	μmol/l	22.0	18.0	26.0	2.00	4.00	Ortho Vitros Microslide Systems
	μg/dl	123	101	145	11.00	22.00	
Lactate	mmol/l	1.57	1.28	1.86	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.47	1.20	1.74	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.57	1.29	1.85	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.6	16.6	1.25	2.50	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Ion selective electrode
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.57	1.29	1.85	0.14	0.28	UV LDH
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	591	503	679	44.00	88.00	Ortho Vitros Microslide Systems 37°C
	U/l	192	163	221	14.50	29.00	
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	97	83	111	7.00	14.00	
	U/l	408	347	469	30.50	61.00	P->L Scandinavian & Dutch 37°C
	U/l	295	251	339	22.00	44.00	
	U/l	207	176	238	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l						

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	392	333	451	29.50	59.00	P->L SFBC 37°C
	U/l	283	240	326	21.50	43.00	P->L SFBC 30°C
	U/l	199	169	229	15.00	30.00	P->L SFBC 25°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	146	124	168	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
	U/l	240	204	276	18.00	36.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	203	163	243	20.00	40.00	Ortho Vitros Microslide Systems 37°C
	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Turbidimetric with colipase 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
	U/l	129	103	155	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.806	0.708	0.904	0.05	0.10	
	mmol/l	1.09	0.96	1.22	0.07	0.13	Flame photometry
	mg/dl	0.757	0.665	0.849	0.05	0.09	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Ion selective electrode
	mg/dl	0.715	0.630	0.800	0.04	0.09	
	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.638	0.806	0.04	0.08	
Magnesium	mmol/l	0.85	0.74	0.95	0.05	0.10	Arsenazo III
	mg/dl	2.05	1.81	2.29	0.12	0.24	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	0.86	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.10	1.85	2.35	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Atomic absorption
	mg/dl	2.10	1.85	2.35	0.13	0.25	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Calmagite
	mg/dl	2.07	1.82	2.32	0.13	0.25	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.12	1.87	2.37	0.13	0.25	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Enzymatic
	mg/dl	2.07	1.82	2.32	0.13	0.25	
NEFA	mmol/l	1.53	1.22	1.84	0.16	0.31	Colorimetric
Osmolality	mOsm/kg	293	235	351	29.00	58.00	Calculated
	mOsm/kg	312	250	374	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.4	9.08	13.7	1.16	2.32	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.40	3.72	5.08	0.34	0.68	
	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	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	4.04	3.72	4.36	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	3.94	3.62	4.26	0.16	0.32	Enzymatic
	mmol/l	3.99	3.67	4.31	0.16	0.32	Flame photometry
	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - direct
	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
	mmol/l	3.95	3.63	4.27	0.16	0.32	Optical Fluorescence
	mmol/l	3.86	3.55	4.17	0.16	0.31	Colorimetric
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.79	4.63	6.95	0.58	1.16	
	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	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
PSA Total	ng/ml =	6.83	5.12	8.54	0.86	1.71	Tosoh Series
	ng/ml =	9.81	7.36	12.3	1.23	2.45	Siemens Immulite 1000
	ng/ml =	9.54	7.16	11.9	1.19	2.38	Roche Elecsys Modular E170
	ng/ml =	9.16	6.87	11.5	1.15	2.29	bioMerieux VIDAS TPSA
	ng/ml =	8.57	6.43	10.7	1.07	2.14	Siemens Centaur XP/XPT/Classic
	ng/ml =	8.28	6.21	10.4	1.04	2.07	Abbott Architect
	ng/ml =	9.32	6.99	11.7	1.17	2.33	Siemens Dimension
	ng/ml =	10.6	7.92	13.3	1.34	2.68	Cobas E411
	ng/ml =	10.6	7.92	13.3	1.34	2.68	Roche Cobas 6000/8000
Salicylate	mmol/l	0.44	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	6.00	4.80	7.20	0.60	1.20	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	Flame photometry
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
	mmol/l	139	132	146	3.50	7.00	Optical Fluorescence
	mmol/l	141	134	148	3.50	7.00	Colorimetric
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	0.90	0.72	1.07	0.09	0.18	Abbott Architect
	µU/ml =	1.21	0.97	1.45	0.12	0.24	bioMerieux VIDAS TSH
	µU/ml =	1.15	0.92	1.38	0.12	0.23	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.16	0.92	1.40	0.12	0.24	Siemens Immulite 2000/2500
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Elecsys
	µU/ml =	1.02	0.81	1.23	0.10	0.21	Beckman Access Fast TSH
	µU/ml =	1.05	0.84	1.26	0.10	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Vitros ECI
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Cobas 4000/E411
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Roche Cobas e601/602
	µU/ml =	1.26	1.01	1.51	0.13	0.25	SNIBE Maglumi Analysers
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Siemens Dimension EXL LOCI
	µU/ml =	1.02	0.81	1.23	0.10	0.21	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	44.7	35.3	54.1	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	250	197	303	26.50	53.00	Siemens Dimension EXL LOCI
	µmol/l	36.0	28.5	43.5	3.75	7.50	Removal of excess free iron
	µg/dl	201	159	243	21.00	42.00	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	37.6	29.7	45.5	3.95	7.90	FE+UIBC(saturation with iron)
	μg/dl	210	166	254	22.00	44.00	
	μmol/l	38.4	30.3	46.5	4.05	8.10	Direct Colorimetric
	μg/dl	215	169	261	23.00	46.00	
	μmol/l	40.2	31.8	48.6	4.20	8.40	Calculated from Transferrin
	μg/dl	225	178	272	23.50	47.00	
	μmol/l	47.5	37.5	57.5	5.00	10.00	Randox Direct
	μg/dl	266	210	322	28.00	56.00	
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	1.84	1.38	2.30	0.23	0.46	Abbott Architect
	ng/ml	1.20	0.898	1.50	0.15	0.30	
	ng/dl	120	89.8	150	15.10	30.20	Abbott Architect
	nmol/l	1.97	1.48	2.46	0.25	0.49	BioMerieux Vidas
	ng/ml	1.28	0.963	1.60	0.16	0.32	
	ng/dl	128	96.3	160	15.85	31.70	BioMerieux Vidas
	nmol/l	2.10	1.58	2.62	0.26	0.52	Siemens Centaur XP/XPT/Classic
	ng/ml	1.37	1.03	1.71	0.17	0.34	
	ng/dl	137	103	171	17.00	34.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.29	1.71	2.87	0.29	0.58	Roche Elecsys
	ng/ml	1.49	1.11	1.87	0.19	0.38	
	ng/dl	149	111	187	19.00	38.00	Roche Elecsys
	nmol/l	1.86	1.40	2.32	0.23	0.46	Tosoh Series
	ng/ml	1.21	0.911	1.51	0.15	0.30	
	ng/dl	121	91.1	151	14.95	29.90	Tosoh Series

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	2.65	1.99	3.31	0.33	0.66	Vitros ECI
	ng/ml	1.73	1.30	2.16	0.22	0.43	
	ng/dl	173	130	216	21.50	43.00	Vitros ECI
	nmol/l	2.17	1.62	2.72	0.28	0.55	Roche Cobas 4000/E411
	ng/ml	1.41	1.05	1.77	0.18	0.36	
	ng/dl	141	105	177	18.00	36.00	Roche Cobas 4000/E411
	nmol/l	2.13	1.60	2.66	0.27	0.53	Roche Cobas e601/602
	ng/ml	1.39	1.04	1.74	0.18	0.35	
	ng/dl	139	104	174	17.50	35.00	Roche Cobas e601/602
	nmol/l	2.22	1.66	2.78	0.28	0.56	Siemens Centaur CP
	ng/ml	1.45	1.08	1.82	0.19	0.37	
	ng/dl	145	108	182	18.50	37.00	Siemens Centaur CP
Total T4	nmol/l	100	75.1	125	12.45	24.90	Abbott Architect
	µg/dl	7.80	5.86	9.74	0.97	1.94	
	ng/ml	78.0	58.6	97.4	9.70	19.40	Abbott Architect
	nmol/l	93.4	70.1	117	11.65	23.30	BioMerieux Vidas
	µg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	BioMerieux Vidas
	nmol/l	90.9	68.2	114	11.35	22.70	Siemens Centaur XP/XPT/Classic
	µg/dl	7.09	5.32	8.86	0.89	1.77	
	ng/ml	70.9	53.2	88.6	8.85	17.70	Siemens Centaur XP/XPT/Classic
	nmol/l	96.5	72.4	121	12.05	24.10	Beckman Access
	µg/dl	7.53	5.65	9.41	0.94	1.88	
	ng/ml	75.3	56.5	94.1	9.40	18.80	Beckman Access

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	91.1	68.3	114	11.40	22.80	Tosoh Series
	µg/dl	7.11	5.33	8.89	0.89	1.78	
	ng/ml	71.1	53.3	88.9	8.90	17.80	Tosoh Series
	nmol/l	85.3	64.0	107	10.65	21.30	Vitros ECI
	µg/dl	6.65	4.99	8.31	0.83	1.66	
	ng/ml	66.5	49.9	83.1	8.30	16.60	Vitros ECI
	nmol/l	94.6	71.0	118	11.80	23.60	Roche Cobas 4000/E411
	µg/dl	7.38	5.54	9.22	0.92	1.84	
	ng/ml	73.8	55.4	92.2	9.20	18.40	Roche Cobas 4000/E411
	nmol/l	91.4	68.6	114	11.40	22.80	Roche Cobas e601/602
	µg/dl	7.13	5.35	8.91	0.89	1.78	
	ng/ml	71.3	53.5	89.1	8.90	17.80	Roche Cobas e601/602
	nmol/l	98.9	74.2	124	12.35	24.70	Siemens Centaur CP
	µg/dl	7.71	5.79	9.63	0.96	1.92	
	ng/ml	77.1	57.9	96.3	9.60	19.20	Siemens Centaur CP
Transferrin	g/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	mg/dl	187	150	224	18.50	37.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	95.6	80.5	111	7.55	15.10	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.07	0.90	1.24	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.20	1.01	1.39	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	106	89.4	123	8.30	16.60	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Reduction methods
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Urea	mmol/l	7.14	6.06	8.22	0.54	1.08	Ortho Vitros Microslide Systems
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.55	6.41	8.69	0.57	1.14	Urease end point
	mg/dl	45.4	38.5	52.3	3.45	6.90	
	mmol/l	7.52	6.39	8.65	0.57	1.13	Urease kinetic
	mg/dl	45.2	38.4	52.0	3.40	6.80	
	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease hypochlorite
	mg/dl	44.3	37.6	51.0	3.35	6.70	

METHOD

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.52	6.39	8.65	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Vitamin B12	pmol/l	454	363	545	45.50	91.00	Roche Cobas E411
	pg/ml	615	492	738	61.50	123.00	
Zinc	μmol/l	21.4	17.2	25.6	2.10	4.20	Atomic absorption
	μg/dl	140	112	168	14.00	28.00	
	μmol/l	21.2	17.0	25.4	2.10	4.20	Colorimetric with deproteinisation
	μg/dl	138	111	165	13.50	27.00	
	μmol/l	21.4	17.1	25.7	2.15	4.30	Colorimetric without deprot.
	μg/dl	140	112	168	14.00	28.00	

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

Lot. No. 1622UN 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		5.6	4.3	6.9	0.67	1.34	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.5	5.7	9.3	0.90	1.80	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		68.6	61.8	75.4	3.40	6.80	% of total Protein (Beckman Capillary)
beta-globulin		8.8	6.7	10.9	1.06	2.11	% of total Protein (Beckman Capillary)
gamma-globulin		9.5	7.2	11.8	1.14	2.28	% of total Protein (Beckman Capillary)

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	
	g/l	44.3	37.6	51.0	3.35	6.70	Bromocresol Purple
	g/dl	4.43	3.76	5.10	0.34	0.67	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	165	140	190	12.50	25.00	AMP non-optimised 37°C
	U/l	161	137	185	12.00	24.00	Colorimetric 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	95	81	109	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	μmol/l	25.5	20.4	30.6	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	μmol/l	19.9	15.7	24.1	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	μmol/l	19.5	15.4	23.6	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	μmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
Bilirubin Total	μmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.19	1.81	0.16	0.31	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	25.2	19.9	30.5	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Dehydrogenase
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	101	93.1	109	3.95	7.90	ISE indirect
Cholinesterase	U/l	6236	4988	7484	624.00	1248.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	211	173	249	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	213	175	251	19.00	38.00	Monothioglycerol 37°C
	U/l	211	173	249	19.00	38.00	Creatinine phosphate substrate Start 37°C
	U/l	208	170	246	19.00	38.00	Abbott CK-NAC (IFCC) 37°C
Creatinine	μmol/l	139	111	167	14.00	28.00	Alkaline picrate with deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	μmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	μmol/l	136	108	164	14.00	28.00	Jaffe rate blanked
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	μmol/l	133	107	159	13.00	26.00	IDMS traceable
	mg/dl	1.50	1.21	1.79	0.15	0.29	
Free T4	pmol/l	18.7	14.0	23.4	2.35	4.70	Abbott Architect
	ng/dl	1.46	1.09	1.83	0.19	0.37	
	pg/ml	14.6	10.9	18.3	1.85	3.70	Abbott Architect
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	53	45	61	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	5.90	5.01	6.79	0.45	0.89	Hexokinase
	mg/dl	106	90.3	122	7.85	15.70	
	mmol/l	6.03	5.12	6.94	0.46	0.91	Glucose oxidase
	mg/dl	109	92.3	126	8.35	16.70	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PPD
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct Clearance Method
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.45	1.23	1.67	0.11	0.22	HDL - Ultra
	mg/dl	56.0	47.5	64.5	4.25	8.50	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	21.3	17.5	25.1	1.90	3.80	Colorimetric with ppt.
	μg/dl	119	97.8	140	10.60	21.20	
	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	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.636	0.808	0.04	0.09	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Arsenazo III
	mg/dl	2.04	1.80	2.28	0.12	0.24	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Xylidyl Blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Enzymatic
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Osmolality	mOsm/kg	295	236	354	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	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	
PSA Total	ng/ml =	7.86	5.90	9.82	0.98	1.96	Abbott Architect
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	0.87	0.70	1.04	0.09	0.17	Abbott Architect
TIBC	μmol/l	36.5	28.8	44.2	3.85	7.70	FE+UIBC(saturation with iron)
	μg/dl	204	161	247	21.50	43.00	
	μmol/l	38.8	30.6	47.0	4.10	8.20	Calculated from Transferrin
	μg/dl	217	171	263	23.00	46.00	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.8	105	7.25	14.50	
	mmol/l	0.98	0.82	1.13	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	86.3	72.5	100	6.90	13.80	
	mmol/l	1.04	0.88	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.4	107	7.30	14.60	
	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	75.1	104	7.15	14.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.07	6.63	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	7.60	6.46	8.74	0.57	1.14	Urease end point
	mg/dl	45.7	38.8	52.6	3.45	6.90	

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Zinc	μmol/l	20.4	16.3	24.5	2.05	4.10	Colorimetric with deproteinisation
	μg/dl	133	106	160	13.50	27.00	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	µmol/l	27.5	21.8	33.2	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
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	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	102	93.6	110	4.20	8.40	ISE direct
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	137	109	165	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.23	1.87	0.16	0.32	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	55	47	63	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	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	19.5	15.9	23.1	1.80	3.60	Colorimetric without ppt.
	µg/dl	109	88.9	129	10.05	20.10	
LD (LDH)	U/l	373	317	429	28.00	56.00	P->L German methods 37°C
	U/l	220	187	253	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - direct
Protein Total	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction end point
	g/dl	5.76	4.61	6.91	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
Urea	mmol/l	6.94	5.89	7.99	0.53	1.05	Urease kinetic
	mg/dl	41.7	35.4	48.0	3.15	6.30	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	6.94	5.90	7.98	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Purple
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	176	149	203	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	85	73	97	6.00	12.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Colorimetric 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Beckman Mod. IFCC Ref. without P5P 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	19.1	15.1	23.1	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.6	15.4	23.8	2.10	4.20	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.15	0.901	1.40	0.12	0.25	
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	29.5	23.3	35.7	3.10	6.20	DPD (Beckman AU)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.25	2.03	2.47	0.11	0.22	Ion selective electrode
	mg/dl	9.02	8.14	9.90	0.44	0.88	
	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	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	
	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Dehydrogenase
	mg/dl	151	132	170	9.50	19.00	
	mmol/l	99.7	91.7	108	4.00	8.00	Colorimetric
	mmol/l	99.5	91.5	108	4.00	8.00	ISE indirect
Cholinesterase	U/l	5106	4085	6127	510.50	1021.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	212	173	251	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	206	169	243	18.50	37.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	μmol/l	128	103	153	12.50	25.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	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	138	110	166	14.00	28.00	Enzymatic UV method
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	μmol/l	141	113	169	14.00	28.00	Creatinine PAP method
	mg/dl	1.59	1.28	1.90	0.16	0.31	
	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	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	
	μmol/l	127	102	152	12.50	25.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	55	47	63	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	GOD/02-Beckman method
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose dehydrogenase
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.32	1.13	1.51	0.10	0.19	Direct HDL PEGME
	mg/dl	51.0	43.6	58.4	3.70	7.40	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Direct Clearance Method
	mg/dl	54.8	46.3	63.3	4.25	8.50	
	mmol/l	1.37	1.17	1.57	0.10	0.20	HDL - Ultra
	mg/dl	52.9	45.2	60.6	3.85	7.70	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.47	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	
Iron	µmol/l	21.1	17.3	24.9	1.90	3.80	Colorimetric with ppt.
	µg/dl	118	96.7	139	10.65	21.30	
	µmol/l	21.4	17.5	25.3	1.95	3.90	Colorimetric without ppt.
	µg/dl	120	97.8	142	11.10	22.20	
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	199	169	229	15.00	30.00	L->P 37°C
	U/l	434	369	499	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	203	172	234	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Ion selective electrode
	mg/dl	0.722	0.637	0.807	0.04	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.626	0.790	0.04	0.08	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Osmolality	mOsm/kg	294	236	352	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Beckman PHOSm (365nm)
	mg/dl	4.37	3.72	5.02	0.33	0.65	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction CX4/5/7
	g/dl	5.80	4.64	6.96	0.58	1.16	
	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.4	31.9	48.9	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	226	178	274	24.00	48.00	
	μmol/l	40.4	31.9	48.9	4.25	8.50	Direct Colorimetric
	μg/dl	226	178	274	24.00	48.00	
	μmol/l	37.7	29.8	45.6	3.95	7.90	Calculated from Transferrin
	μg/dl	211	167	255	22.00	44.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.1	111	7.75	15.50	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.8	109	7.50	15.00	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.93	5.17	6.69	0.38	0.76	
Urea	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	
	mmol/l	7.74	6.58	8.90	0.58	1.16	Beckman-Conductivity
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.81	6.64	8.98	0.59	1.17	Urease end point
	mg/dl	46.9	39.9	53.9	3.50	7.00	
Zinc	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
	µmol/l	21.4	17.1	25.7	2.15	4.30	Colorimetric with deproteinisation
	µg/dl	140	112	168	14.00	28.00	
	µmol/l	20.1	16.1	24.1	2.00	4.00	Colorimetric without deprot.
	µg/dl	131	105	157	13.00	26.00	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Purple
	g/dl	4.42	3.76	5.08	0.33	0.66	
Alkaline Phosphatase	U/l	177	150	204	13.50	27.00	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	44	35	53	4.50	9.00	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Differential rate pH change
Bilirubin Direct	µmol/l	13.6	10.7	16.5	1.45	2.90	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.796	0.626	0.966	0.09	0.17	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Ion selective electrode
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	

Beckman DxC600/800®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	99.7	91.7	108	4.00	8.00	ISE indirect
Cholinesterase	U/l	5345	4276	6414	534.50	1069.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	216	178	254	19.00	38.00	Monothioglycerol 37°C
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	μmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	GOD/02-Beckman method
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.89	5.01	6.77	0.44	0.88	Hexokinase
	mg/dl	106	90.3	122	7.85	15.70	
	mmol/l	5.84	4.96	6.72	0.44	0.88	Oxygen electrode
	mg/dl	105	89.4	121	7.80	15.60	
	mmol/l	5.81	4.94	6.68	0.44	0.87	Glucose oxidase
	mg/dl	105	89.0	121	8.00	16.00	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.49	1.27	1.71	0.11	0.22	HDL - Ultra
	mg/dl	57.5	49.0	66.0	4.25	8.50	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	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	164	140	188	12.00	24.00	L->P 37°C
	U/l	538	458	618	40.00	80.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	238	202	274	18.00	36.00	L->P IFCC 37°C
Lipase	U/l	37	29	45	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.616	0.786	0.04	0.09	
Magnesium	mmol/l	0.85	0.75	0.96	0.05	0.10	Calmagite
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Osmolality	mOsm/kg	299	239	359	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction CX4/5/7
	g/dl	5.89	4.71	7.07	0.59	1.18	
	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	58.2	46.5	69.9	5.85	11.70	Biuret reaction kinetic
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.9	109	7.45	14.90	

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Beckman-Conductivity
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.77	6.60	8.94	0.59	1.17	Urease kinetic
	mg/dl	46.7	39.7	53.7	3.50	7.00	
	mmol/l	7.77	6.60	8.94	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	

BIOSYSTEMS A15

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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	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	μmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Creatinine	μmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	54	45	63	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	35	51	4.00	8.00	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

BIOSYSTEMS A15

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.4	112	7.55	15.10	
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	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	6.63	5.64	7.62	0.50	0.99	Urease end point
	mg/dl	39.8	33.9	45.7	2.95	5.90	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

BIOSYSTEMS A25

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Cholesterol	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	
Cholinesterase	U/l	4864	3892	5836	486.00	972.00	Colorimetric Butyrylthiocholine 37°C
Creatinine	μmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

BIOSYSTEMS A25

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Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL PPD
	mg/dl	59.4	50.6	68.2	4.40	8.80	
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	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease end point
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.0	48.8	3.20	6.40	
	mmol/l	7.05	5.99	8.11	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

Biotechnica/Wiener BT and CB Series

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Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Green
	g/dl	4.09	3.48	4.70	0.31	0.61	
Alkaline Phosphatase	U/l	272	231	313	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	212	180	244	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	174	148	200	13.00	26.00	Diethanolamine buffer DEA 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	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	15.6	12.4	18.8	1.60	3.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.913	0.725	1.10	0.09	0.19	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	23.5	18.6	28.4	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	

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Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	104	95.2	113	4.40	8.80	Colorimetric
Cholinesterase	U/l	5243	4195	6291	524.00	1048.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
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	134	108	160	13.00	26.00	Jaffe rate blanked
	mg/dl	1.51	1.22	1.80	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	HDL - Ultra
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	μmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric with ppt.
	μg/dl	110	90.6	129	9.70	19.40	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	μmol/l	20.7	17.0	24.4	1.85	3.70	Colorimetric without ppt.
	μg/dl	116	95.0	137	10.50	21.00	
LD (LDH)	U/l	371	315	427	28.00	56.00	P->L German methods 37°C
	U/l	268	227	309	20.50	41.00	P->L German methods 30°C
	U/l	188	160	216	14.00	28.00	P->L German methods 25°C
	U/l	389	331	447	29.00	58.00	P->L SFBC 37°C
	U/l	281	239	323	21.00	42.00	P->L SFBC 30°C
	U/l	197	168	226	14.50	29.00	P->L SFBC 25°C
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - direct
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	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.1	108	7.40	14.80	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.01	5.24	6.78	0.39	0.77	
Urea	mmol/l	7.81	6.64	8.98	0.59	1.17	Urease kinetic
	mg/dl	46.9	39.9	53.9	3.50	7.00	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.81	6.64	8.98	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.4	36.9	49.9	3.25	6.50	Bromocresol Green
	g/dl	4.34	3.69	4.99	0.33	0.65	
	g/l	44.3	37.6	51.0	3.35	6.70	Bromocresol Purple
	g/dl	4.43	3.76	5.10	0.34	0.67	
	g/l	42.1	35.8	48.4	3.15	6.30	Turbidimetric Assays
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	146	124	168	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	114	97	131	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	93	79	107	7.00	14.00	AMP optimised to IFCC 25°C
	U/l	143	121	165	11.00	22.00	Colorimetric 37°C
	U/l	111	94	128	8.50	17.00	Colorimetric 30°C
	U/l	91	77	105	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	76	102	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	μmol/l	17.9	14.2	21.6	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	μmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	μmol/l	18.1	14.3	21.9	1.90	3.80	Roche DPD JG standardised
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	μmol/l	18.2	14.4	22.0	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	μmol/l	24.1	19.0	29.2	2.55	5.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.41	1.11	1.71	0.15	0.30	
	μmol/l	24.3	19.2	29.4	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Calcium	μmol/l	24.5	19.4	29.6	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	μmol/l	24.3	19.2	29.4	2.55	5.10	Diazonium ion
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	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	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.00	
	mmol/l	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	100	92.3	108	3.85	7.70	ISE indirect
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	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
	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	204	168	240	18.00	36.00	Creatinine phosphate substrate Start 37°C
	U/l	128	105	151	11.50	23.00	Creatinine phosphate substrate Start 30°C
	U/l	87	71	103	8.00	16.00	Creatinine phosphate substrate Start 25°C
Creatinine	μmol/l	130	104	156	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	134	108	160	13.00	26.00	Enzymatic UV method
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	μmol/l	132	105	159	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.49	1.19	1.79	0.15	0.30	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	μmol/l	128	102	154	13.00	26.00	IDMS traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	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
Glucose	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
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
Iron	μmol/l	22.1	18.1	26.1	2.00	4.00	Colorimetric with ppt.
	μg/dl	124	101	147	11.50	23.00	
	μmol/l	22.0	18.0	26.0	2.00	4.00	Colorimetric without ppt.
	μg/dl	123	101	145	11.00	22.00	
LD (LDH)	U/l	209	177	241	16.00	32.00	L->P 37°C
	U/l	151	128	174	11.50	23.00	L->P 30°C
	U/l	106	90	122	8.00	16.00	L->P 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	381	323	439	29.00	58.00	P->L German methods 37°C
	U/l	275	233	317	21.00	42.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Ion selective electrode
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	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	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.24	1.66	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	mmol/l	1.46	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	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.0	44.0	66.0	5.50	11.00	Biuret reaction end point
	g/dl	5.50	4.40	6.60	0.55	1.10	
	g/l	54.3	43.4	65.2	5.45	10.90	Biuret reaction kinetic
	g/dl	5.43	4.34	6.52	0.55	1.09	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	37.5	29.7	45.3	3.90	7.80	FE+UIBC(saturation with iron)
	μg/dl	210	166	254	22.00	44.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	79.1	109	7.35	14.70	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	95.6	80.5	111	7.55	15.10	
Uric Acid (Urate)	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.8	110	7.45	14.90	
	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	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	
Urea	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	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
Alkaline Phosphatase	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.00	20.00	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked
	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	6.25	5.31	7.19	0.47	0.94	Hexokinase
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.30	1.10	1.50	0.10	0.20	HDL - Ultra
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
	mmol/l	1.14	0.95	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.3	118	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	113	96	130	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	93	79	107	7.00	14.00	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
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.9	14.9	22.9	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	18.9	14.9	22.9	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.16	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	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	103	94.6	111	4.20	8.40	Colorimetric
	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	5040	4032	6048	504.00	1008.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	μmol/l	136	109	163	13.50	27.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	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	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.47	1.25	1.69	0.11	0.22	Direct HDL PEGME
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.24	1.05	1.43	0.10	0.19	HDL - Ultra
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
	µmol/l	21.4	17.5	25.3	1.95	3.90	Colorimetric without ppt.
	µg/dl	120	97.8	142	11.10	22.20	
LD (LDH)	U/l	388	330	446	29.00	58.00	P->L German methods 37°C
	U/l	280	238	322	21.00	42.00	P->L German methods 30°C
	U/l	197	167	227	15.00	30.00	P->L German methods 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
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	83.7	116	8.15	16.30	
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	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
Urea	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	7.65	6.51	8.79	0.57	1.14	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
Urea	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	260	221	299	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	172	234	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	166	141	191	12.50	25.00	Diethanolamine buffer DEA 25°C
	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	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	90	76	104	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	13.1	10.3	15.9	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.603	0.929	0.08	0.16	
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.28	1.94	0.17	0.33	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	5335	4268	6402	533.50	1067.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	94	136	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C
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	135	108	162	13.50	27.00	Creatinine PAP method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
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	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	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	47.9	40.5	55.3	3.70	7.40	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.22	1.04	1.40	0.09	0.18	HDL - Ultra
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	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	
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	422	359	485	31.50	63.00	P->L SFBC 37°C
	U/l	305	259	351	23.00	46.00	P->L SFBC 30°C
	U/l	214	182	246	16.00	32.00	P->L SFBC 25°C
Lipase	U/l	34	28	40	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction end point
	g/dl	5.71	4.57	6.85	0.57	1.14	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.08	0.91	1.25	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.6	111	7.50	15.00	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
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	

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

Lot. No. 1622UN 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	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Arsenazo III
	mg/dl	8.70	7.86	9.54	0.42	0.84	
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	

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

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.95	3.43	4.47	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	101	93.2	109	3.90	7.80	ISE direct
CK Total	U/l	215	177	253	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	139	111	167	14.00	28.00	Enzymatic UV method
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	120	95.6	144	12.20	24.40	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL PEGME
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	

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

Lot. No. 1622UN 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	21.8	17.9	25.7	1.95	3.90	Colorimetric without ppt.
	µg/dl	122	100	144	11.00	22.00	
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	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	3.91	3.60	4.22	0.16	0.31	ISE method - direct
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction end point
	g/dl	5.78	4.62	6.94	0.58	1.16	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.05	5.26	6.84	0.40	0.79	
Urea	mmol/l	7.68	6.53	8.83	0.58	1.15	Urease end point
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	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. 1622UN 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	41.6	35.3	47.9	3.15	6.30	Bromocresol Green
	g/dl	4.16	3.53	4.79	0.32	0.63	
	g/l	39.9	33.9	45.9	3.00	6.00	Agappe - Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	82	70	94	6.00	12.00	Agappe - CNPG3 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	38	31	45	3.50	7.00	Agappee - IFCC 37°C
	U/l	26	21	31	2.50	5.00	Agappee - IFCC 30°C
	U/l	18	15	21	1.50	3.00	Agappee - IFCC 25°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	26.4	20.8	32.0	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	μmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	μmol/l	26.4	20.8	32.0	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	μmol/l	26.7	21.1	32.3	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.13	1.91	2.35	0.11	0.22	Ion selective electrode
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	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	
	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	
Chloride	mmol/l	3.85	3.35	4.35	0.25	0.50	Agappe - CHOD-PAP
	mg/dl	149	129	169	10.00	20.00	
	mmol/l	98.7	90.8	107	3.95	7.90	Colorimetric
CK Total	mmol/l	99.7	91.7	108	4.00	8.00	ISE direct
	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC (IFCC) 30°C
CK Total	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	132	106	158	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	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	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	119	95.1	143	11.95	23.90	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	U/l	53	45	61	4.00	8.00	Agappe - Szasz Kinetic 37°C
	U/l	42	35	49	3.50	7.00	Agappe - Szasz Kinetic 30°C
	U/l	33	28	38	2.50	5.00	Agappe - Szasz Kinetic 25°C
	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.15	5.22	7.08	0.47	0.93	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.12	5.20	7.04	0.46	0.92	Agappe - GOD-PAP
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL PPD
	mg/dl	56.0	47.9	64.1	4.05	8.10	
	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	49.8	42.1	57.5	3.85	7.70	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.32	1.13	1.51	0.10	0.19	HDL - Ultra
	mg/dl	51.0	43.6	58.4	3.70	7.40	
Iron	mmol/l	1.55	1.31	1.79	0.12	0.24	Agappe - Selective Inhibition
	mg/dl	59.8	50.6	69.0	4.60	9.20	
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	
LD (LDH)	U/l	390	332	448	29.00	58.00	P->L German methods 37°C
	U/l	282	240	324	21.00	42.00	P->L German methods 30°C
	U/l	198	168	228	15.00	30.00	P->L German methods 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.91	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	0.85	0.75	0.95	0.05	0.10	Enzymatic
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
	g/l	56.6	45.3	67.9	5.65	11.30	Agappe - Biuret
	g/dl	5.66	4.53	6.79	0.57	1.13	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.0	77.6	106	7.20	14.40	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.07	0.90	1.24	0.08	0.17	Agappe - GPO - TOPS
	mg/dl	94.7	79.8	110	7.45	14.90	
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	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	
Urea	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease end point
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	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	6.98	5.93	8.03	0.53	1.05	Urease hypochlorite
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.26	6.17	8.35	0.55	1.09	Agappe - Urease GLDH
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	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	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	40.5	34.4	46.6	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	69	59	79	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	43	63	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	23.0	18.1	27.9	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Cholesterol	mmol/l	3.88	3.38	4.38	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	150	130	170	10.00	20.00	
Chloride	mmol/l	100	92.3	108	3.85	7.70	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5085	4068	6102	508.50	1017.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Vitros IDMS Traceable
	mg/dl	1.51	1.21	1.81	0.15	0.30	
Free T4	pmol/l	41.5	31.2	51.8	5.15	10.30	Vitros ECi
	ng/dl	3.24	2.43	4.05	0.41	0.81	
	pg/ml	32.4	24.3	40.5	4.05	8.10	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Vitros Magnetic HDL
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	54.8	46.3	63.3	4.25	8.50	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
Iron	µmol/l	22.0	18.0	26.0	2.00	4.00	Ortho Vitros Microslide Systems
	µg/dl	123	101	145	11.00	22.00	
Lactate	mmol/l	1.47	1.20	1.74	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	591	503	679	44.00	88.00	Ortho Vitros Microslide Systems 37°C
	U/l	240	204	276	18.00	36.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	203	163	243	20.00	40.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	24	34	2.50	5.00	
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	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	Ortho Vitros Microslide Systems
	mg/dl	4.53	3.84	5.22	0.35	0.69	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	4.04	3.72	4.36	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.07	0.86	1.28	0.11	0.21	Vitros ECI
	µU/ml =	1.09	0.87	1.31	0.11	0.22	
TIBC	µmol/l	44.7	35.3	54.1	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	250	197	303	26.50	53.00	
Total T3	nmol/l	2.65	1.99	3.31	0.33	0.66	Vitros ECI
	ng/ml	1.73	1.30	2.16	0.22	0.43	
	ng/dl	173	130	216	21.50	43.00	Vitros ECI
Total T4	nmol/l	85.3	64.0	107	10.65	21.30	Vitros ECI
	µg/dl	6.65	4.99	8.31	0.83	1.66	
	ng/ml	66.5	49.9	83.1	8.30	16.60	Vitros ECI
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	106	89.4	123	8.30	16.60	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.91	6.37	0.37	0.73	
Urea	mmol/l	7.14	6.06	8.22	0.54	1.08	Ortho Vitros Microslide Systems
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	96	132	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	95	80	110	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	16.9	13.3	20.5	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.989	0.778	1.20	0.11	0.21	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.34	2.06	0.18	0.36	
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	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	3.92	3.41	4.43	0.26	0.51	Agappe - CHOD-PAP
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	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	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	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	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Agappe - GOD-PAP
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
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	
LD (LDH)	U/l	413	351	475	31.00	62.00	P->L German methods 37°C
	U/l	298	253	343	22.50	45.00	P->L German methods 30°C
	U/l	209	178	240	15.50	31.00	P->L German methods 25°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	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	
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.1	109	7.35	14.70	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.35	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	7.62	6.48	8.76	0.57	1.14	Urease kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.50	6.38	8.62	0.56	1.12	Agappe - Urease GLDH
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	41.4	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	146	124	168	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	114	97	131	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	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	90	76	104	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.5	13.8	21.2	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Roche DPD JG standardised
	mg/dl	1.03	0.813	1.25	0.11	0.22	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	17.2	13.6	20.8	1.80	3.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Diazonium ion
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	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	3.88	3.38	4.38	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	150	130	170	10.00	20.00	
	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	102	93.8	110	4.10	8.20	ISE indirect
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	134	107	161	13.50	27.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	
Iron	μmol/l	22.3	18.3	26.3	2.00	4.00	Colorimetric without ppt.
	μg/dl	125	102	148	11.50	23.00	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	29	24	34	2.50	5.00	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	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	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.46	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	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.4	113	8.00	16.00	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.3	112	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
	g/l	41.0	34.9	47.1	3.05	6.10	Turbidimetric Assays
	g/dl	4.10	3.49	4.71	0.31	0.61	
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	142	121	163	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	111	94	128	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	91	77	105	7.00	14.00	AMP optimised to IFCC 25°C
	U/l	143	122	164	10.50	21.00	Colorimetric 37°C
	U/l	111	95	127	8.00	16.00	Colorimetric 30°C
	U/l	91	78	104	6.50	13.00	Colorimetric 25°C
ALT (GPT)	U/l	37	29	45	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	21	16	26	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	74	98	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	86	74	98	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
Acid Phosphatase (Total)	U/l	15.2	10.2	20.2	2.50	5.00	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.4	10.3	20.5	2.55	5.10	Naphthyl phosphate substrate End point 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.3	11.4	17.2	1.45	2.90	Colorimetric
	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Roche DPD JG standardised
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Roche DPD Dumas standardised
	mg/dl	1.04	0.825	1.26	0.11	0.22	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	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	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	25.0	19.7	30.3	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	μmol/l	25.4	20.1	30.7	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.00	
	mmol/l	3.85	3.35	4.35	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	149	129	169	10.00	20.00	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholinesterase	U/l	5087	4069	6105	509.00	1018.00	Colorimetric Benzoylcholine 37°C
	U/l	5040	4032	6048	504.00	1008.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	196	160	232	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	123	100	146	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	198	162	234	18.00	36.00	Creatinine phosphate substrate Start 37°C
	U/l	124	101	147	11.50	23.00	Creatinine phosphate substrate Start 30°C
	U/l	84	69	99	7.50	15.00	Creatinine phosphate substrate Start 25°C
Copper	µmol/l	16.5	13.2	19.8	1.65	3.30	Colorimetric
	µg/dl	105	84.0	126	10.50	21.00	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	137	110	164	13.50	27.00	Enzymatic UV method
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	138	110	166	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	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	
Free T4	pmol/l	24.5	18.3	30.7	3.10	6.20	Roche Cobas e601/602
	ng/dl	1.91	1.43	2.39	0.24	0.48	
	pg/ml	19.1	14.3	23.9	2.40	4.80	Roche Cobas e601/602

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	6.09	5.17	7.01	0.46	0.92	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.60	1.36	1.84	0.12	0.24	Direct HDL Immunoseparation
	mg/dl	61.8	52.5	71.1	4.65	9.30	
	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL PEGME
	mg/dl	62.9	53.7	72.1	4.60	9.20	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	
Iron	µmol/l	21.7	17.8	25.6	1.95	3.90	Colorimetric with ppt.
	µg/dl	121	99.5	143	10.75	21.50	
	µmol/l	21.7	17.8	25.6	1.95	3.90	Colorimetric without ppt.
	µg/dl	121	99.5	143	10.75	21.50	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	205	174	236	15.50	31.00	L->P 37°C
	U/l	148	126	170	11.00	22.00	L->P 30°C
	U/l	104	88	120	8.00	16.00	L->P 25°C
	U/l	384	326	442	29.00	58.00	P->L Scandinavian & Dutch 37°C
	U/l	277	235	319	21.00	42.00	P->L Scandinavian & Dutch 30°C
	U/l	195	165	225	15.00	30.00	P->L Scandinavian & Dutch 25°C
	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
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
	U/l	147	126	168	10.50	21.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Turbidimetric with colipase 37°C
	U/l	30	24	36	3.00	6.00	
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Ion selective electrode
	mg/dl	0.715	0.632	0.798	0.04	0.08	
	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.636	0.808	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Arsenazo III
	mg/dl	2.09	1.84	2.34	0.13	0.25	
	mmol/l	0.87	0.76	0.97	0.05	0.10	Atomic absorption
	mg/dl	2.10	1.85	2.35	0.13	0.25	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.86	2.38	0.13	0.26	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	Chlorphosphonazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Enzymatic
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Osmolality	mOsm/kg	293	235	351	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction kinetic
	g/dl	5.88	4.70	7.06	0.59	1.18	
PSA Total	ng/ml =	10.6	7.92	13.3	1.34	2.68	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Elecsys
	μU/ml =	1.32	1.05	1.59	0.14	0.27	Roche Cobas e601/602
TIBC	μmol/l	36.6	28.9	44.3	3.85	7.70	FE+UIBC(saturation with iron)
	μg/dl	205	162	248	21.50	43.00	
	μmol/l	36.5	28.9	44.1	3.80	7.60	Direct Colorimetric
	μg/dl	204	162	246	21.00	42.00	
	μmol/l	44.1	34.8	53.4	4.65	9.30	Calculated from Transferrin
	μg/dl	247	195	299	26.00	52.00	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	2.13	1.60	2.66	0.27	0.53	Roche Cobas e601/602
	ng/ml	1.39	1.04	1.74	0.18	0.35	
	ng/dl	139	104	174	17.50	35.00	Roche Cobas e601/602
Total T4	nmol/l	91.4	68.6	114	11.40	22.80	Roche Cobas e601/602
	µg/dl	7.13	5.35	8.91	0.89	1.78	
	ng/ml	71.3	53.5	89.1	8.90	17.80	Roche Cobas e601/602
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	81.5	113	7.95	15.90	
Uric Acid (Urate)	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	

Roche Cobas c303/501/502/503

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Zinc	μmol/l	21.1	16.8	25.4	2.15	4.30	Colorimetric without deprot.
	μg/dl	138	110	166	14.00	28.00	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	42.9	36.4	49.4	3.25	6.50	Bromocresol Purple
	g/dl	4.29	3.64	4.94	0.33	0.65	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	110	93	127	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 25°C
	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
ALT (GPT)	U/l	37	29	45	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	21	16	26	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	84	71	97	6.50	13.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	10.8	16.6	1.45	2.90	Enzymatic
Bilirubin Direct	μmol/l	18.9	14.9	22.9	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	μmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	μmol/l	18.8	14.9	22.7	1.95	3.90	Roche DPD JG standardised
	mg/dl	1.10	0.872	1.33	0.11	0.23	
	μmol/l	18.9	14.9	22.9	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
Bilirubin Total	μmol/l	17.6	13.9	21.3	1.85	3.70	Roche DPD Dumas standardised
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	μmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	μmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	μmol/l	25.6	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	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	150	130	170	10.00	20.00	
	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	150	130	170	10.00	20.00	
Chloride	mmol/l	96.6	88.8	104	3.90	7.80	ISE indirect
Cholinesterase	U/l	5087	4070	6104	508.50	1017.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	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
	U/l	198	163	233	17.50	35.00	Creatinine phosphate substrate Start 37°C
	U/l	124	102	146	11.00	22.00	Creatinine phosphate substrate Start 30°C
Creatinine	U/l	84	69	99	7.50	15.00	Creatinine phosphate substrate Start 25°C
	μmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	μmol/l	137	109	165	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.55	1.23	1.87	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	
	μmol/l	135	108	162	13.50	27.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	136	108	164	14.00	28.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.54	1.22	1.86	0.16	0.32	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	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	55	46	64	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	28	40	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.09	5.17	7.01	0.46	0.92	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.51	1.29	1.73	0.11	0.22	Direct HDL PEGME
	mg/dl	58.3	49.8	66.8	4.25	8.50	
	mmol/l	1.60	1.36	1.84	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	61.8	52.5	71.1	4.65	9.30	
Iron	µmol/l	21.7	17.8	25.6	1.95	3.90	Colorimetric with ppt.
	µg/dl	121	99.5	143	10.75	21.50	
	µmol/l	21.6	17.7	25.5	1.95	3.90	Colorimetric without ppt.
	µg/dl	121	98.9	143	11.05	22.10	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	209	177	241	16.00	32.00	L->P 37°C
	U/l	151	128	174	11.50	23.00	L->P 30°C
	U/l	106	90	122	8.00	16.00	L->P 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	384	327	441	28.50	57.00	P->L German methods 37°C
	U/l	277	236	318	20.50	41.00	P->L German methods 30°C
	U/l	195	166	224	14.50	29.00	P->L German methods 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
	U/l	28	22	34	3.00	6.00	Roche Turbidimetric with colipase 37°C
	U/l	29	23	35	3.00	6.00	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Atomic absorption
	mg/dl	2.09	1.84	2.34	0.13	0.25	
	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	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Osmolality	mOsm/kg	287	229	345	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.43	3.75	5.11	0.34	0.68	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction kinetic
	g/dl	6.00	4.80	7.20	0.60	1.20	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	36.9	29.1	44.7	3.90	7.80	FE+UIBC(saturation with iron)
	μg/dl	206	163	249	21.50	43.00	
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.7	112	7.90	15.80	
	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.4	111	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	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	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	7.58	6.44	8.72	0.57	1.14	Urease end point
	mg/dl	45.6	38.7	52.5	3.45	6.90	
Urea	mmol/l	7.55	6.41	8.69	0.57	1.14	Urease kinetic
	mg/dl	45.4	38.5	52.3	3.45	6.90	
	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	135	115	155	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	105	90	120	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	35	28	42	3.50	7.00	Colorimetric 37°C
	U/l	26	21	31	2.50	5.00	Colorimetric 30°C
	U/l	20	16	24	2.00	4.00	Colorimetric 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	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Colorimetric 37°C
	U/l	22	18	26	2.00	4.00	Colorimetric 30°C
	U/l	16	13	19	1.50	3.00	Colorimetric 25°C
	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	18.5	14.6	22.4	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.3	14.4	22.2	1.95	3.90	Roche DPD JG standardised
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	14.6	11.5	17.7	1.55	3.10	Roche DPD Dumas standardised
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	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	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Diazonium ion
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	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	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	148	129	167	9.50	19.00	
	mmol/l	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholinesterase	U/l	5013	4011	6015	501.00	1002.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Enzymatic UV method
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	139	111	167	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.57	1.25	1.89	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	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	136	108	164	14.00	28.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
gamma-GT	µmol/l	137	110	164	13.50	27.00	IDMS traceable
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
Glucose	mmol/l	6.13	5.21	7.05	0.46	0.92	Hexokinase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.5	53.3	71.7	4.60	9.20	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	21.0	17.2	24.8	1.90	3.80	Colorimetric without ppt.
	μg/dl	117	96.1	138	10.45	20.90	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
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	
	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	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	37.7	29.8	45.6	3.95	7.90	FE+UIBC(saturation with iron)
	μg/dl	211	167	255	22.00	44.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	291	247	335	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	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	24.8	19.8	29.8	2.50	5.00	5th Generation Colorimetric
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	15.4	12.2	18.6	1.60	3.20	Oxidation to Biliverdin/Vanadate
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	99.8	91.8	108	4.00	8.00	ISE direct
CK Total	U/l	213	174	252	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
Creatinine	μmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	μmol/l	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
Iron	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	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	411	349	473	31.00	62.00	P->L German methods 37°C
	U/l	192	164	220	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	Enzymatic
	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	142	134	150	4.00	8.00	ISE method - direct
	mmol/l	145	138	152	3.50	7.00	Enzymatic
TIBC	μmol/l	47.5	37.5	57.5	5.00	10.00	Direct Colorimetric
	μg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.98	5.21	6.75	0.39	0.77	
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	
	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Purple
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	213	181	245	16.00	32.00	Diethanolamine buffer DEA 37°C
	U/l	155	131	179	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	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	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	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	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	28.8	22.7	34.9	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Chloride	mmol/l	101	92.7	109	4.15	8.30	ISE indirect
Cholinesterase	U/l	6165	4932	7398	616.50	1233.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	μmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	136	109	163	13.50	27.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.91	5.02	6.80	0.45	0.89	Hexokinase
	mg/dl	106	90.5	122	7.75	15.50	
	mmol/l	6.03	5.13	6.93	0.45	0.90	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.19	1.01	1.37	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct Clearance Method
	mg/dl	46.3	39.4	53.2	3.45	6.90	
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	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	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	202	172	232	15.00	30.00	L->P 37°C
	U/l	396	336	456	30.00	60.00	P->L German methods 37°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Spectrophotometric
	mg/dl	0.743	0.651	0.835	0.05	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	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	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.2	45.0	67.4	5.60	11.20	Biuret reaction end point
	g/dl	5.62	4.50	6.74	0.56	1.12	
	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.9	37.9	57.9	5.00	10.00	Removal of excess free iron
	μg/dl	268	212	324	28.00	56.00	
	μmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	248	196	300	26.00	52.00	
	μmol/l	45.2	35.7	54.7	4.75	9.50	Direct Colorimetric
	μg/dl	253	200	306	26.50	53.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.0	116	8.00	16.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	
Urea	mmol/l	7.89	6.71	9.07	0.59	1.18	Urease end point
	mg/dl	47.4	40.3	54.5	3.55	7.10	
	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease kinetic
	mg/dl	46.6	39.7	53.5	3.45	6.90	
	mmol/l	7.76	6.60	8.92	0.58	1.16	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.10	

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	
Alkaline Phosphatase	U/l	156	132	180	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.35	2.07	0.18	0.36	
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	2.18	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	3.88	3.38	4.38	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	150	130	170	10.00	20.00	
	mmol/l	3.75	3.26	4.24	0.25	0.49	Cholesterol Oxidase - IDMS
	mg/dl	145	126	164	9.50	19.00	
Chloride	mmol/l	101	93.3	109	3.85	7.70	ISE indirect
Cholinesterase	U/l	6584	5267	7901	658.50	1317.00	Colorimetric Butyrylthiocholine 37°C

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	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	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
gamma-GT	U/l	55	46	64	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 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	5.94	5.05	6.83	0.45	0.89	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.00	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct Clearance Method
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	μmol/l	20.9	17.1	24.7	1.90	3.80	Colorimetric without ppt.
	μg/dl	117	95.6	138	10.70	21.40	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P 37°C
	U/l	201	171	231	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.11	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	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	3.84	3.53	4.15	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.2	44.9	67.5	5.65	11.30	Biuret reaction end point
	g/dl	5.62	4.49	6.75	0.57	1.13	

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.3	37.3	57.3	5.00	10.00	Direct Colorimetric
	μg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
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. 1622UN 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	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Purple
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	158	135	181	11.50	23.00	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	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
	mmol/l	14.7	11.6	17.8	1.55	3.10	
Bilirubin Direct	µmol/l	13.2	10.4	16.0	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.772	0.608	0.936	0.08	0.16	
	µmol/l	13.2	10.4	16.0	1.40	2.80	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.772	0.608	0.936	0.08	0.16	
Bilirubin Total	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	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.64	3.17	4.11	0.24	0.47	Cholesterol Oxidase - Abell Kendall
	mg/dl	141	122	160	9.50	19.00	
	mmol/l	3.62	3.15	4.09	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
Chloride	mmol/l	99.3	91.3	107	4.00	8.00	ISE indirect
Cholinesterase	U/l	8900	7120	10000	890.00	1780.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	μmol/l	136	109	163	13.50	27.00	Enzymatic UV method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	μmol/l	136	109	163	13.50	27.00	Creatinine PAP method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	μmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
Free T4	μmol/l	138	110	166	14.00	28.00	IDMS traceable
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	pmol/l	23.1	17.3	28.9	2.90	5.80	Siemens Dimension Exl LOCI
gamma-GT	ng/dl	1.80	1.35	2.25	0.23	0.45	Siemens Dimension Exl LOCI
	pg/ml	18.0	13.5	22.5	2.25	4.50	
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	U/l	68	57	79	5.50	11.00	Siemens Dimension (non IFCC) 37°C
	mmol/l	6.09	5.18	7.00	0.46	0.91	
	mg/dl	110	93.3	127	8.35	16.70	Hexokinase
	mmol/l	6.08	5.17	6.99	0.46	0.91	
	mg/dl	110	93.2	127	8.40	16.80	Oxygen electrode

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.18	1.58	0.10	0.20	Direct HDL PPD
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct HDL PEGME
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Iron	mmol/l	1.39	1.19	1.59	0.10	0.20	Direct Clearance Method
	mg/dl	53.7	45.9	61.5	3.90	7.80	
	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric with ppt.
	µg/dl	114	93.4	135	10.30	20.60	
Lactate	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
	mmol/l	1.58	1.30	1.86	0.14	0.28	UV LDH
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	191	162	220	14.50	29.00	L->P 37°C
	U/l	190	161	219	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	129	103	155	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Osmolality	mOsm/kg	289	232	346	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.62	3.94	5.30	0.34	0.68	
	mmol/l	1.47	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	3.96	3.64	4.28	0.16	0.32	ISE method - indirect

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
PSA Total	ng/ml =	9.31	6.98	11.6	1.17	2.33	Siemens Dimension
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	31.8	25.2	38.4	3.30	6.60	Removal of excess free iron
	μg/dl	178	141	215	18.50	37.00	
	μmol/l	34.6	27.4	41.8	3.60	7.20	FE+UIBC(saturation with iron)
	μg/dl	193	153	233	20.00	40.00	
	μmol/l	36.0	28.5	43.5	3.75	7.50	Direct Colorimetric
	μg/dl	201	159	243	21.00	42.00	
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.3	74.2	102	7.05	14.10	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	89.4	75.0	104	7.20	14.40	
	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	75.0	104	7.20	14.40	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.85	6.67	9.03	0.59	1.18	Urease end point
	mg/dl	47.2	40.1	54.3	3.55	7.10	
	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	

**SIEMENS DIMENSION EXL®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.73	6.57	8.89	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	37.1	50.3	3.30	6.60	Bromocresol Green
	g/dl	4.37	3.71	5.03	0.33	0.66	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	158	134	182	12.00	24.00	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	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	69	58	80	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	85	117	8.00	16.00	Siemens - maltopenta/hexaoside 37°C
	U/l	97	83	111	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	13.1	10.3	15.9	1.40	2.80	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.766	0.603	0.929	0.08	0.16	
Bilirubin Total	µmol/l	27.0	21.4	32.6	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	1.99	1.79	2.19	0.10	0.20	Arsenazo III
	mg/dl	7.98	7.17	8.79	0.41	0.81	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Cholesterol Oxidase - Abell Kendall
	mg/dl	140	122	158	9.00	18.00	
	mmol/l	3.63	3.16	4.10	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
Chloride	mmol/l	99.1	91.1	107	4.00	8.00	ISE indirect
Cholinesterase	U/l	9177	7342	10000	917.50	1835.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	137	109	165	14.00	28.00	Alkaline picrate with deproteinization
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	μmol/l	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	μmol/l	135	108	162	13.50	27.00	Enzymatic UV method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	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	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	μmol/l	139	111	167	14.00	28.00	IDMS traceable
	mg/dl	1.57	1.25	1.89	0.16	0.32	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	66	56	76	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	5.95	5.06	6.84	0.45	0.89	Glucose dehydrogenase
	mg/dl	107	91.2	123	7.90	15.80	
	mmol/l	6.15	5.22	7.08	0.47	0.93	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL PEGME
	mg/dl	53.3	45.5	61.1	3.90	7.80	
Iron	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct Clearance Method
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric with ppt.
	µg/dl	114	93.4	135	10.30	20.60	
	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
	mmol/l	1.55	1.27	1.83	0.14	0.28	UV LDH
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	190	161	219	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	129	103	155	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.07	0.13	Spectrophotometric
	mg/dl	0.757	0.664	0.850	0.05	0.09	
Magnesium	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	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	1.46	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	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	35.2	27.8	42.6	3.70	7.40	Removal of excess free iron
	µg/dl	197	155	239	21.00	42.00	
	µmol/l	35.1	27.7	42.5	3.70	7.40	FE+UIBC(saturation with iron)
	µg/dl	196	155	237	20.50	41.00	
	µmol/l	35.3	27.9	42.7	3.70	7.40	Direct Colorimetric
	µg/dl	197	156	238	20.50	41.00	
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	1.00	0.84	1.16	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	88.5	74.3	103	7.10	14.20	
	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	75.2	104	7.10	14.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Urea	mmol/l	7.48	6.35	8.61	0.57	1.13	Urease end point
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.68	6.52	8.84	0.58	1.16	Urease kinetic
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	mmol/l	7.68	6.53	8.83	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	44.2	37.6	50.8	3.30	6.60	Bromocresol Purple
	g/dl	4.42	3.76	5.08	0.33	0.66	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	162	137	187	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	13.3	10.5	16.1	1.40	2.80	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.778	0.614	0.942	0.08	0.16	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
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	
Cholesterol	mmol/l	3.71	3.23	4.19	0.24	0.48	Cholesterol Oxidase - Abell Kendall
	mg/dl	143	125	161	9.00	18.00	
	mmol/l	3.70	3.22	4.18	0.24	0.48	Dimension-Siemens reagents
	mg/dl	143	124	162	9.50	19.00	
Chloride	mmol/l	104	95.5	113	4.25	8.50	ISE indirect
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	U/l	66	56	76	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL PPD
	mg/dl	57.9	49.4	66.4	4.25	8.50	
	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	
Iron	μmol/l	21.1	17.3	24.9	1.90	3.80	Colorimetric without ppt.
	μg/dl	118	96.7	139	10.65	21.30	
LD (LDH)	U/l	195	165	225	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	144	115	173	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.8	117	8.10	16.20	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	

**SIEMENS DIMENSION Vista®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN 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	7.66	6.51	8.81	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.66	6.51	8.81	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1622UN Cat. No. HN1530 / ~~HS2614~~

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	253	215	291	19.00	38.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
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	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	132	170	9.50	19.00	
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	56.1	44.8	67.4	5.65	11.30	Biuret reaction end point
	g/dl	5.61	4.48	6.74	0.57	1.13	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
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	7.52	6.39	8.65	0.57	1.13	Urease kinetic
	mg/dl	45.2	38.4	52.0	3.40	6.80	
	mmol/l	7.52	6.39	8.65	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	