

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. 1402UN **EXPIRY:** 2023-04-28

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests. However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

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

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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 Mean of all Instruments section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

NOTES

® All trademarks recognised.

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

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

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	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	
Alkaline Phosphatase	U/l	169	143	195	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	164	139	189	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	166	141	191	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	95	80	110	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	106	90	122	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Enzymatic
Bile Acids	µmol/l	23.4	18.7	28.1	2.35	4.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	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	28.4	22.5	34.3	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.66	1.32	2.00	0.17	0.34	
	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	

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Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazonium ion
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
Cholinesterase	U/l	6621	5297	7945	662.00	1324.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC serum start (DGKC) 37°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	195	160	230	17.50	35.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	13.3	10.6	16.0	1.35	2.70	Colorimetric
	µg/dl	84.6	67.4	102	8.60	17.20	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	123	98.4	148	12.30	24.60	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	98.0	146	12.00	24.00	Jaffe rate blanked
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.97	5.08	6.86	0.45	0.89	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	


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Analyte	unit	Target	low	high	1SD	2SD	methods
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	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct Clearance Method
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	mmol/l	1.44	1.23	1.65	0.11	0.21	HDL - Ultra
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric with ppt.
	µg/dl	115	93.9	136	10.55	21.10	
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	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P 37°C
	U/l	201	170	232	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	0.96	0.85	1.08	0.06	0.12	Spectrophotometric
	mg/dl	0.667	0.587	0.747	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	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	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.6	32.0	49.2	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	227	179	275	24.00	48.00	
	µmol/l	46.1	36.4	55.8	4.85	9.70	Calculated from Transferrin
	µg/dl	258	203	313	27.50	55.00	
Triglycerides	mmol/l	1.02	0.86	1.19	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.7	105	7.30	14.60	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
	mmol/l	1.02	0.85	1.19	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	90.3	75.6	105	7.35	14.70	
UIBC	µmol/l	19.4	15.9	22.9	1.75	3.50	Direct Colorimetric
	µg/dl	108	88.9	127	9.55	19.10	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

Beckman Coulter AU Series®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	214	169	259	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Purple
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	256	218	294	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	198	169	227	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	43	34	52	4.50	9.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	31	47	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bile Acids	µmol/l	22.8	18.3	27.3	2.25	4.50	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	
Bilirubin Total	µmol/l	32.2	25.4	39.0	3.40	6.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	32.0	25.3	38.7	3.35	6.70	DPD (Beckman AU)
	mg/dl	1.87	1.48	2.26	0.20	0.39	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.24	2.02	2.46	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Chloride	mmol/l	96.5	88.7	104	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.25	3.70	4.80	0.28	0.55	Cholesterol Oxidase - IDMS
	mg/dl	164	143	185	10.50	21.00	
Cholinesterase	U/l	5369	4295	6443	537.00	1074.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	187	154	220	16.50	33.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	120	95.8	144	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Creatinine PAP method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	122	97.3	147	12.35	24.70	Jaffe rate blanked
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	113	90.7	135	11.15	22.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.28	1.02	1.54	0.13	0.26	
	µmol/l	112	89.4	135	11.30	22.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.27	1.01	1.53	0.13	0.26	

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Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Creatinine	µmol/l	117	93.2	141	11.90	23.80	IDMS traceable	
	mg/dl	1.32	1.05	1.59	0.14	0.27		
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.29	0.02	0.04	Tris buffer 100mmol pH 8.5	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	43	37	49	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C	
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	49	42	56	3.50	7.00	Beckman Szasz (Extinction Coeff) 37°C	
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose dehydrogenase	
	mg/dl	112	95.5	129	8.25	16.50		
	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	6.20	5.27	7.13	0.47	0.93	Glucose oxidase	
	mg/dl	112	95.0	129	8.50	17.00		
HDL - Cholesterol	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL Immunoseparation	
	mg/dl	50.6	43.2	58.0	3.70	7.40		
	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	1.40	1.19	1.61	0.11	0.21	HDL - Ultra	
	mg/dl	54.0	45.9	62.1	4.05	8.10		
	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		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	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.5	11.1	15.9	1.20	2.40		

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LD (LDH)	U/l	198	168	228	15.00	30.00	L->P 37°C
	U/l	429	364	494	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	190	162	218	14.00	28.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.95	0.84	1.07	0.06	0.12	Spectrophotometric
	mg/dl	0.662	0.582	0.742	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.97	2.49	0.13	0.26	
Osmolality	mOsm/kg	287	230	344	28.50	57.00	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	3.92	3.60	4.24	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction kinetic
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.0	34.8	53.2	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	246	195	297	25.50	51.00	
Total T4	nmol/l	112	84.3	140	13.85	27.70	Microgenics DRI assay
	µg/dl	8.74	6.58	10.9	1.08	2.16	
	ng/ml	87.4	65.8	109	10.80	21.60	Microgenics DRI assay

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	105	78.7	131	13.15	26.30	Thermo Scientific - DRI
	µg/dl	8.19	6.14	10.2	1.03	2.05	
	ng/ml	81.9	61.4	102	10.25	20.50	Thermo Scientific - DRI
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.4	109	7.70	15.40	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
UIBC	mg/dl	93.8	79.0	109	7.40	14.80	
	µmol/l	23.4	19.2	27.6	2.10	4.20	Direct Colorimetric
Urea	µg/dl	131	107	155	12.00	24.00	
	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease end point
Urea	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease kinetic
Urea	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.38	6.27	8.49	0.56	1.11	BUN
Uric Acid (Urate)	mg/dl	20.7	17.6	23.8	1.55	3.10	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
Uric Acid (Urate)	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
Uric Acid (Urate)	mg/dl	5.91	5.16	6.66	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
Zinc	mg/dl	5.85	5.07	6.63	0.39	0.78	
	µmol/l	24.1	19.3	28.9	2.40	4.80	Colorimetric with deproteinisation
Zinc	µg/dl	157	126	188	15.50	31.00	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	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	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Differential rate pH change
Bilirubin Total	µmol/l	31.9	25.2	38.6	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
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	
CK Total	U/l	209	171	247	19.00	38.00	Monothioglycerol 37°C
Creatinine	µmol/l	122	97.9	146	12.05	24.10	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.03	5.13	6.93	0.45	0.90	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	5.90	5.02	6.78	0.44	0.88	Glucose oxidase
	mg/dl	106	90.5	122	7.75	15.50	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	165	140	190	12.50	25.00	L->P 37°C
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.87	3.56	4.18	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	
	g/l	56.2	44.9	67.5	5.65	11.30	Biuret reaction kinetic
	g/dl	5.62	4.49	6.75	0.57	1.13	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Urea	mmol/l	7.68	6.53	8.83	0.58	1.15	Urease kinetic
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	mmol/l	7.68	6.53	8.83	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Purple
	g/dl	4.44	3.77	5.11	0.34	0.67	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	179	152	206	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.4	11.4	17.4	1.50	3.00	Differential rate pH change
	mmol/l	13.7	10.9	16.5	1.40	2.80	Ion selective electrode
Bilirubin Direct	µmol/l	13.9	11.0	16.8	1.45	2.90	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.813	0.644	0.982	0.08	0.17	
Bilirubin Total	µmol/l	31.9	25.2	38.6	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Ion selective electrode
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE indirect
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	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
CK Total	U/l	205	168	242	18.50	37.00	Monothioglycerol 37°C
	U/l	198	162	234	18.00	36.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	
mg/dl	1.38	1.11	1.65	0.14	0.27		
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Oxygen electrode
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	5.92	5.03	6.81	0.45	0.89	
mg/dl	107	90.6	123	8.20	16.40		
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	1.42	1.21	1.63	0.11	0.21	HDL - Ultra
mg/dl	54.8	46.7	62.9	4.05	8.10		
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	165	140	190	12.50	25.00	L->P 37°C
	U/l	544	462	626	41.00	82.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	165	140	190	12.50	25.00	L->P IFCC 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.40	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	3.88	3.57	4.19	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction kinetic
	g/dl	5.74	4.59	6.89	0.58	1.15	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.2	111	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease end point
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.70	6.54	8.86	0.58	1.16	Urease kinetic
	mg/dl	46.3	39.3	53.3	3.50	7.00	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	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	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	100	85	115	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	25.5	20.2	30.8	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	118	94.4	142	11.80	23.60	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	124	99.4	149	12.30	24.60	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
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	
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
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	
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.1	74.0	102	7.05	14.10	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Green
	g/dl	4.36	3.71	5.01	0.33	0.65	
	g/l	40.8	34.7	46.9	3.05	6.10	Turbidimetric Assays
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	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	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	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	58	80	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	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
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.913	1.41	0.12	0.25	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Roche JG factored
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
mg/dl	1.59	1.26	1.92	0.17	0.33		
Calcium	mmol/l	2.19	1.98	2.40	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.78	7.94	9.62	0.42	0.84	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	186	152	220	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	122	98.0	146	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.38	1.11	1.65	0.14	0.27	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	124	98.8	149	12.60	25.20	Roche Creatinine Plus	
	mg/dl	1.40	1.12	1.68	0.14	0.28		
	µmol/l	122	97.9	146	12.05	24.10	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.38	1.11	1.65	0.14	0.27		
	µmol/l	122	97.2	147	12.40	24.80	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.38	1.10	1.66	0.14	0.28		
	gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase	
	mg/dl	112	95.7	128	8.15	16.30		
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PEGME	
	mg/dl	53.7	45.5	61.9	4.10	8.20		
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 4th Generation	
Iron	mg/dl	56.0	47.5	64.5	4.25	8.50		
	µmol/l	20.8	17.0	24.6	1.90	3.80	Colorimetric with ppt.	
	µg/dl	116	95.0	137	10.50	21.00		
	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.	
Lactate	µg/dl	115	93.9	136	10.55	21.10		
	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase	
LD (LDH)	mg/dl	14.6	12.0	17.2	1.30	2.60		
	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	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.96	0.85	1.08	0.06	0.12	Ion selective electrode
	mg/dl	0.667	0.587	0.747	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.46	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	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	55.5	44.4	66.6	5.55	11.10	Biuret reaction end point
	g/dl	5.55	4.44	6.66	0.56	1.11	
	g/l	57.3	45.9	68.7	5.70	11.40	Biuret reaction kinetic
	g/dl	5.73	4.59	6.87	0.57	1.14	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	228	179	277	24.50	49.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.1	111	7.75	15.50	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
UIBC	µmol/l	20.4	16.7	24.1	1.85	3.70	Direct Colorimetric
	µg/dl	114	93.4	135	10.30	20.60	
Urea	mmol/l	6.97	5.93	8.01	0.52	1.04	Urease kinetic
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.97	5.92	8.02	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Green
	g/dl	4.42	3.76	5.08	0.33	0.66	
Alkaline Phosphatase	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	
Cholesterol	mmol/l	4.19	3.65	4.73	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	162	141	183	10.50	21.00	
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	117	93.7	140	11.65	23.30	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
LD (LDH)	U/l	190	161	219	14.50	29.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.61	1.36	1.86	0.13	0.25	Phosphomolybdate UV
	mg/dl	4.99	4.22	5.76	0.39	0.77	
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.86	5.83	7.89	0.52	1.03	Urease kinetic
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	6.86	5.83	7.89	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	12.7	8.51	16.9	2.10	4.19	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	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	194	165	223	14.50	29.00	Radox AMP 37°C
	U/l	151	129	173	11.00	22.00	Radox AMP 30°C
	U/l	124	105	143	9.50	19.00	Radox AMP 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	5th Generation Colorimetric
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	94.5	86.9	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	52	44	60	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
	mmol/l	6.24	5.31	7.17	0.47	0.93	Glucose oxidase
	mg/dl	112	95.7	128	8.15	16.30	
Iron	µmol/l	19.8	16.3	23.3	1.75	3.50	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
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	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.05	0.89	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.3	108	7.30	14.60	

**HITACHI SERIES®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

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

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	281	239	323	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	180	153	207	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	162	137	187	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	126	107	145	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	104	88	120	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	Enzymatic Colorimetric
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	101	92.9	109	4.05	8.10	ISE direct
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	µmol/l	128	103	153	12.50	25.00	Creatinine PAP method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
Glucose	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
	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	
Iron	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct Clearance Method
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	µmol/l	22.8	18.7	26.9	2.05	4.10	Colorimetric without ppt.
LD (LDH)	µg/dl	127	105	149	11.00	22.00	
	U/l	398	339	457	29.50	59.00	P->L SFBC 37°C
	U/l	287	245	329	21.00	42.00	P->L SFBC 30°C
LD (LDH)	U/l	202	172	232	15.00	30.00	P->L SFBC 25°C



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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.82	3.51	4.13	0.16	0.31	ISE method - direct
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.05	0.89	1.21	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.4	107	7.25	14.50	
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.01	5.24	6.78	0.39	0.77	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	217	172	262	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	164	130	198	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	123	97	149	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	12.7	8.51	16.9	2.10	4.19	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Purple
	g/dl	4.38	3.72	5.04	0.33	0.66	
	g/l	40.6	34.5	46.7	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.06	3.45	4.67	0.31	0.61	
	g/l	41.1	34.9	47.3	3.10	6.20	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.11	3.49	4.73	0.31	0.62	
	U/l	150	127	173	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	273	232	314	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	213	181	245	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	174	148	200	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	137	117	157	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	96	128	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	167	142	192	12.50	25.00	AMP non-optimised 37°C
U/l	130	111	149	9.50	19.00	AMP non-optimised 30°C	
U/l	107	91	123	8.00	16.00	AMP non-optimised 25°C	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer SCE 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	44	35	53	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	79	67	91	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
	U/l	91	77	105	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	72	61	83	5.50	11.00	Radox Lyo. Ethylidene pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	88	75	101	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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
	U/l	95	80	110	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	106	90	122	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	85	72	98	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.13	0.93	1.33	0.10	0.20	Immunoturbidimetric
	mg/dl	113	92.7	133	10.15	20.30	
Apolipoprotein B	g/l	0.63	0.51	0.74	0.06	0.11	Immunoturbidimetric
	mg/dl	62.7	51.4	74.0	5.65	11.30	
AST (GOT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer with P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	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	35	28	42	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
Bicarbonate	mmol/l	14.4	11.5	17.3	1.45	2.90	Colorimetric
	mmol/l	16.1	12.8	19.4	1.65	3.30	Ortho Vitros Microslide Systems
	mmol/l	14.4	11.4	17.4	1.50	3.00	Differential rate pH change
	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
	mmol/l	13.9	11.1	16.7	1.40	2.80	Ion selective electrode
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	4th Generation Colorimetric

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	5th Generation 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	20.0	15.8	24.2	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.17	0.924	1.42	0.12	0.25	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.04	0.825	1.26	0.11	0.22	
Bilirubin Total	µmol/l	17.9	14.1	21.7	1.90	3.80	Modified Jendrassik
	mg/dl	1.05	0.825	1.28	0.11	0.23	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	38.2	30.2	46.2	4.00	8.00	Diazo with Dichloroaniline (DCA)
	mg/dl	2.23	1.77	2.69	0.23	0.46	
	µmol/l	30.3	24.0	36.6	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazonium ion
	mg/dl	1.64	1.29	1.99	0.18	0.35	
µmol/l	32.6	25.7	39.5	3.45	6.90	Oxidation to Biliverdin/Vanadate	
mg/dl	1.91	1.50	2.32	0.21	0.41		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	37.0	29.2	44.8	3.90	7.80	Modified Jendrassik
	mg/dl	2.16	1.71	2.61	0.23	0.45	
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	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Ion selective electrode
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Arsenazo III
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
mmol/l	0.90	0.81	0.99	0.05	0.09	Ionised calcium	
mg/dl	3.60	3.24	3.96	0.18	0.36		
Chloride	mmol/l	102	93.8	110	4.10	8.20	Colorimetric
	mmol/l	97.5	89.7	105	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	96.2	88.5	104	3.85	7.70	ISE indirect
	mmol/l	97.5	89.7	105	3.90	7.80	ISE direct
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - IDMS	
mg/dl	157	136	178	10.50	21.00		
Cholinesterase	U/l	5628	4502	6754	563.00	1126.00	Colorimetric Butyrylthiocholine 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	175	143	207	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	192	157	227	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	191	157	225	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	81	67	95	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	205	168	242	18.50	37.00	Monothioglycerol 37°C
	U/l	128	105	151	11.50	23.00	Monothioglycerol 30°C
U/l	87	71	103	8.00	16.00	Monothioglycerol 25°C	
Copper	µmol/l	17.0	13.6	20.4	1.70	3.40	Atomic absorption
	µg/dl	108	86.5	130	10.75	21.50	
	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	469	352	586	58.50	117.00	Roche Cobas E411
	µg/dl	16.9	12.7	21.1	2.10	4.20	
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Alkaline picrate with deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	125	99.8	150	12.60	25.20	Enzymatic UV method
mg/dl	1.41	1.13	1.69	0.14	0.28		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	125	100	150	12.50	25.00	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	119	95.5	143	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
	ng/ml	2.06	1.65	2.47	0.21	0.41	
Digoxin	nmol/l	2.06	1.65	2.47	0.21	0.41	Immunoturbidimetric
	ng/ml	1.61	1.29	1.93	0.16	0.32	
Folate	nmol/l	46.7	35.5	57.9	5.60	11.20	Roche Cobas 6000/8000
	ng/ml	20.6	15.7	25.5	2.45	4.90	
Free T4	pmol/l	16.6	12.5	20.7	2.05	4.10	Abbott Architect
	ng/dl	1.29	0.975	1.61	0.16	0.32	
	pg/ml	12.9	9.75	16.1	1.58	3.15	Abbott Architect
	pmol/l	17.1	12.8	21.4	2.15	4.30	
	ng/dl	1.33	0.998	1.66	0.17	0.33	Siemens Centaur XP/XPT/Classic
	pg/ml	13.3	9.98	16.6	1.66	3.32	
	pmol/l	17.7	13.3	22.1	2.20	4.40	Beckman Access
	ng/dl	1.38	1.04	1.72	0.17	0.34	
pg/ml	13.8	10.4	17.2	1.70	3.40	Beckman Access	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	16.8	12.6	21.0	2.10	4.20	Beckman Dxl800
	ng/dl	1.31	0.983	1.64	0.16	0.33	
	pg/ml	13.1	9.83	16.4	1.64	3.27	Beckman Dxl800
	pmol/l	19.6	14.7	24.5	2.45	4.90	Siemens Immulite 2000/2500
	ng/dl	1.53	1.15	1.91	0.19	0.38	
	pg/ml	15.3	11.5	19.1	1.90	3.80	Siemens Immulite 2000/2500
	pmol/l	35.7	26.8	44.6	4.45	8.90	Vitros ECi
	ng/dl	2.78	2.09	3.47	0.35	0.69	
	pg/ml	27.8	20.9	34.7	3.45	6.90	Vitros ECi
	pmol/l	21.4	16.1	26.7	2.65	5.30	Roche Cobas E411
	ng/dl	1.67	1.26	2.08	0.21	0.41	
	pg/ml	16.7	12.6	20.8	2.05	4.10	Roche Cobas E411
	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 6000/8000
	ng/dl	1.64	1.23	2.05	0.21	0.41	
	pg/ml	16.4	12.3	20.5	2.05	4.10	Roche Cobas 6000/8000
Gentamicin	pmol/l	19.5	14.6	24.4	2.45	4.90	Biomerieux Vidas FT4N Kit
	ng/dl	1.52	1.14	1.90	0.19	0.38	
	pg/ml	15.2	11.4	19.0	1.90	3.80	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.55	6.04	9.06	0.76	1.51	Immunoturbidimetric
	µg/ml	3.61	2.89	4.33	0.36	0.72	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	21	29	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	52	44	60	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.02	5.11	6.93	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Oxygen electrode
	mg/dl	111	94.4	128	8.30	16.60	
mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase	
	mg/dl	113	95.7	130	8.65		17.30
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.0	43.2	58.8	3.90	7.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros Magnetic HDL
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	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	1.29	1.09	1.49	0.10	0.20	Direct Clearance Method
	mg/dl	49.8	42.1	57.5	3.85	7.70	
	mmol/l	1.31	1.12	1.50	0.10	0.19	Vitros 5.1 FS microtip assay
	mg/dl	50.6	43.2	58.0	3.70	7.40	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.44	1.22	1.66	0.11	0.22	HDL - Ultra
	mg/dl	55.6	47.1	64.1	4.25	8.50	
mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation	
mg/dl	55.6	47.1	64.1	4.25	8.50		
Immunoglobulin A	g/l	1.71	1.28	2.14	0.22	0.43	Immunoturbidimetric
	mg/dl	171	128	214	21.50	43.00	
Immunoglobulin G	g/l	7.18	5.89	8.47	0.65	1.29	Immunoturbidimetric
	mg/dl	718	589	847	64.50	129.00	
Immunoglobulin M	g/l	0.85	0.68	1.02	0.09	0.17	Immunoturbidimetric
	mg/dl	85.0	68.0	102	8.50	17.00	
Iron	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	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	μg/dl	112	92.2	132	9.90	19.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	20.3	16.7	23.9	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	93.4	133	9.80	19.60	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Ion selective electrode
	mg/dl	13.9	11.4	16.4	1.25	2.50	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.47	1.21	1.73	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.9	15.5	1.15	2.30	
mmol/l	1.58	1.30	1.86	0.14	0.28	Enzymatic Electrode	
mg/dl	14.2	11.7	16.7	1.25	2.50		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	183	156	210	13.50	27.00	L->P 37°C
	U/l	132	113	151	9.50	19.00	L->P 30°C
	U/l	93	79	107	7.00	14.00	L->P 25°C
	U/l	433	368	498	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	313	266	360	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	220	187	253	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	396	336	456	30.00	60.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	170	232	15.50	31.00	P->L German methods 25°C
	U/l	408	347	469	30.50	61.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	224	180	268	22.00	44.00	Ortho Vitros Microslide Systems 37°C
	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.09	0.06	0.12	Ion selective electrode
	mg/dl	0.674	0.593	0.755	0.04	0.08	
	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.674	0.594	0.754	0.04	0.08	
	mmol/l	0.97	0.85	1.08	0.06	0.12	Randox Colorimetric
	mg/dl	0.671	0.590	0.752	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.15	1.90	2.40	0.13	0.25	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III	
mg/dl	2.23	1.96	2.50	0.14	0.27		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.13	1.87	2.39	0.13	0.26	
NEFA	mmol/l	1.43	1.22	1.64	0.11	0.21	Colorimetric
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
	mOsm/kg	302	241	363	30.50	61.00	Freezing point depression
	mOsm/kg	303	242	364	30.50	61.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.8	9.38	14.2	1.21	2.42	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.41	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	4.00	3.68	4.32	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.02	3.70	4.34	0.16	0.32	Enzymatic
	mmol/l	3.90	3.58	4.22	0.16	0.32	ISE method - direct
	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
	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	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction kinetic
	g/dl	5.79	4.63	6.95	0.58	1.16	
PSA Total	ng/ml =	17.8	13.4	22.2	2.20	4.40	Beckman Access standardised to Hybritech

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	14.6	10.9	18.3	1.85	3.70	bioMerieux VIDAS TPSA
	ng/ml =	13.2	9.94	16.5	1.63	3.26	Siemens Centaur XP/XPT/Classic
	ng/ml =	11.8	8.87	14.7	1.47	2.93	Abbott Architect
	ng/ml =	16.4	12.3	20.5	2.05	4.10	Cobas E411
	ng/ml =	16.3	12.2	20.4	2.05	4.10	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	136	150	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.10	0.88	1.32	0.11	0.22	Abbott Architect
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.56	1.25	1.87	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.65	1.32	1.98	0.17	0.33	Roche Cobas E411
	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Beckman Dxl800 Hyper TSH
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	45.1	35.7	54.5	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	252	200	304	26.00	52.00	
	µmol/l	39.7	31.3	48.1	4.20	8.40	Removal of excess free iron
	µg/dl	222	175	269	23.50	47.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	41.1	32.5	49.7	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	230	182	278	24.00	48.00	
	μmol/l	44.7	35.3	54.1	4.70	9.40	Direct Colorimetric
	μg/dl	250	197	303	26.50	53.00	
	μmol/l	44.9	35.5	54.3	4.70	9.40	Calculated from Transferrin
	μg/dl	251	198	304	26.50	53.00	
Tobramycin	μmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	μg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.81	1.36	2.26	0.23	0.45	Abbott Architect
	ng/ml	1.18	0.885	1.48	0.15	0.30	
	ng/dl	118	88.5	148	14.75	29.50	Abbott Architect
	nmol/l	1.98	1.48	2.48	0.25	0.50	Beckman Access
	ng/ml	1.29	0.963	1.62	0.16	0.33	
	ng/dl	129	96.3	162	16.35	32.70	Beckman Access
	nmol/l	2.14	1.60	2.68	0.27	0.54	Siemens Centaur XP/XPT/Classic
	ng/ml	1.39	1.04	1.74	0.18	0.35	
	ng/dl	139	104	174	17.50	35.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.02	1.52	2.52	0.25	0.50	BioMerieux Vidas
	ng/ml	1.32	0.990	1.65	0.17	0.33	
	ng/dl	132	99.0	165	16.50	33.00	BioMerieux Vidas
nmol/l	2.08	1.56	2.60	0.26	0.52	Roche Cobas E411	
ng/ml	1.35	1.02	1.68	0.17	0.33		
ng/dl	135	102	168	16.50	33.00	Roche Cobas E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.04	1.53	2.55	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.33	0.996	1.66	0.17	0.33	
	ng/dl	133	99.6	166	16.70	33.40	Roche Cobas 6000/8000
Total T4	nmol/l	93.5	70.1	117	11.70	23.40	Abbott Architect
	µg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	Abbott Architect
	nmol/l	87.5	65.6	109	10.95	21.90	Siemens Centaur XP/XPT/Classic
	µg/dl	6.83	5.12	8.54	0.86	1.71	
	ng/ml	68.3	51.2	85.4	8.55	17.10	Siemens Centaur XP/XPT/Classic
	nmol/l	93.2	69.9	117	11.65	23.30	Siemens Immulite 2000/2500
	µg/dl	7.27	5.45	9.09	0.91	1.82	
	ng/ml	72.7	54.5	90.9	9.10	18.20	Siemens Immulite 2000/2500
	nmol/l	86.7	65.0	108	10.85	21.70	Roche Cobas E411
	µg/dl	6.76	5.07	8.45	0.85	1.69	
	ng/ml	67.6	50.7	84.5	8.45	16.90	Roche Cobas E411
	nmol/l	86.6	64.9	108	10.85	21.70	Roche Cobas 6000/8000
	µg/dl	6.75	5.06	8.44	0.85	1.69	
	ng/ml	67.5	50.6	84.4	8.45	16.90	Roche Cobas 6000/8000
	nmol/l	113	85.0	141	14.00	28.00	Microgenics DRI assay
	µg/dl	8.81	6.63	11.0	1.09	2.18	
	ng/ml	88.1	66.3	110	10.90	21.80	Microgenics DRI assay
nmol/l	105	78.7	131	13.15	26.30	Thermo Scientific - DRI	
µg/dl	8.19	6.14	10.2	1.03	2.05		
ng/ml	81.9	61.4	102	10.25	20.50	Thermo Scientific - DRI	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.90	1.52	2.28	0.19	0.38	Immunoturbidimetric
	mg/dl	190	152	228	19.00	38.00	
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	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.07	0.90	1.25	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.9	108	7.50	15.00	
mmol/l	1.22	1.02	1.42	0.10	0.20	Ortho Vitros Microslide Systems	
mg/dl	108	90.3	126	8.85	17.70		
UIBC	µmol/l	20.1	16.5	23.7	1.80	3.60	Direct Colorimetric
	µg/dl	112	92.2	132	9.90	19.80	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	7.32	6.23	8.41	0.55	1.09	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease hypochlorite
	mg/dl	42.7	36.3	49.1	3.20	6.40	
mmol/l	7.24	6.15	8.33	0.55	1.09	BUN	
mg/dl	20.3	17.3	23.3	1.50	3.00		
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Vitamin B12	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.04	6.52	0.37	0.74	
Vitamin B12	pmol/l	447	358	536	44.50	89.00	Roche Cobas E411
	pg/ml	606	485	727	60.50	121.00	
Zinc	µmol/l	24.4	19.5	29.3	2.45	4.90	Colorimetric with deproteinisation
	µg/dl	159	127	191	16.00	32.00	

**MEAN OF ALL INSTRUMENTS (Elec.)****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin (electrophoresis)		68.7	61.9	75.5	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.5	4.2	6.8	0.66	1.32	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.9	5.2	8.6	0.83	1.66	% of total Protein (Beckman Capillary)
beta-globulin		9.1	6.9	11.3	1.09	2.18	% of total Protein (Beckman Capillary)
gamma-globulin		9.8	7.5	12.2	1.18	2.35	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	137	117	157	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	96	128	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	33.0	26.1	39.9	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.93	1.53	2.33	0.20	0.40	
	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	
	µmol/l	32.1	25.3	38.9	3.40	6.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.88	1.48	2.28	0.20	0.40	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	114	91.1	137	11.45	22.90	Enzymatic UV method
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.30	5.36	7.24	0.47	0.94	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.51	5.54	7.48	0.49	0.97	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
LD (LDH)	U/l	415	353	477	31.00	62.00	P->L German methods 37°C
	U/l	300	255	345	22.50	45.00	P->L German methods 30°C
	U/l	210	179	241	15.50	31.00	P->L German methods 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	416	353	479	31.50	63.00	P->L SFBC 37°C
	U/l	300	255	345	22.50	45.00	P->L SFBC 30°C
	U/l	211	179	243	16.00	32.00	P->L SFBC 25°C
	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.98	2.54	0.14	0.28	
Phosphate Inorganic	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
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	
Urea	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.27	5.46	7.08	0.41	0.81	
	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	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	150	127	173	11.50	23.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	35	53	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin, Unconjugated Vitros BU	µmol/l	16.9	13.4	20.4	1.75	3.50	BuBc Vitros Slide
	mg/dl	0.989	0.784	1.19	0.10	0.21	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5327	4262	6392	532.50	1065.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	175	143	207	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.02	5.11	6.93	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Vitros Magnetic HDL
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
Iron	µmol/l	20.3	16.7	23.9	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	93.4	133	9.80	19.60	
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	234	199	269	17.50	35.00	
Lipase	U/l	224	180	268	22.00	44.00	Ortho Vitros Microslide Systems 37°C
	U/l	32	26	38	3.00	6.00	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	45.1	35.7	54.5	4.70	9.40	Ortho Vitros Microslide Systems
	µg/dl	252	200	304	26.00	52.00	

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	108	90.3	126	8.85	17.70	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Green
	g/dl	4.23	3.59	4.87	0.32	0.64	
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	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 Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	141	181	10.00	20.00	
Creatinine	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
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	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.3	50.3	3.25	6.50	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.84	6.32	0.37	0.74	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	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	14.2	11.3	17.1	1.45	2.90	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.7	18.9	28.5	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.924	1.44	0.13	0.26	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Roche JG factored
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazonium ion
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	93.3	85.9	101	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5426	4340	6512	543.00	1086.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	185	151	219	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	64	94	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.42	1.14	1.70	0.14	0.28		
µmol/l	129	103	155	13.00	26.00	IDMS traceable	
mg/dl	1.46	1.16	1.76	0.15	0.30		
D-3-Hydroxybutyrate	mmol/l	0.25	0.21	0.29	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 6000/8000
	ng/dl	1.64	1.23	2.05	0.21	0.41	
	pg/ml	16.4	12.3	20.5	2.05	4.10	Roche Cobas 6000/8000
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.7	132	10.15	20.30	
	µmol/l	20.3	16.6	24.0	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P 37°C
	U/l	142	121	163	10.50	21.00	L->P 30°C
	U/l	100	85	115	7.50	15.00	L->P 25°C
	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	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

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.678	0.596	0.760	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Osmolality	mOsm/kg	309	247	371	31.00	62.00	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	1.40	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	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction kinetic
	g/dl	5.78	4.62	6.94	0.58	1.16	
PSA Total	ng/ml =	16.3	12.2	20.4	2.05	4.10	Roche Cobas 6000/8000
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
TIBC	µmol/l	39.8	31.5	48.1	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	222	176	268	23.00	46.00	
	µmol/l	46.9	37.1	56.7	4.90	9.80	Calculated from Transferrin
	µg/dl	262	207	317	27.50	55.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.04	1.53	2.55	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.33	0.996	1.66	0.17	0.33	
	ng/dl	133	99.6	166	16.70	33.40	Roche Cobas 6000/8000
Total T4	nmol/l	86.6	64.9	108	10.85	21.70	Roche Cobas 6000/8000
	µg/dl	6.75	5.06	8.44	0.85	1.69	
	ng/ml	67.5	50.6	84.4	8.45	16.90	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.9	110	7.40	14.80	
	mmol/l	1.07	0.90	1.24	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
UIBC	µmol/l	18.9	15.5	22.3	1.70	3.40	Direct Colorimetric
	µg/dl	106	86.6	125	9.70	19.40	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.18	6.11	8.25	0.54	1.07	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Green
	g/dl	4.32	3.68	4.96	0.32	0.64	
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
	U/l	152	129	175	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	97	82	112	7.50	15.00	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	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	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	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	99.2	91.3	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.5	147	12.25	24.50	Roche Creatinine Plus
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	115	92.3	138	11.35	22.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	91	121	7.50	15.00	L->P IFCC 25°C
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.68	3.97	5.39	0.36	0.71	
	mmol/l	1.46	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	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.9	110	7.40	14.80	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
	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	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
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	89	75	103	7.00	14.00	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
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	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	20.0	15.8	24.2	2.10	4.20	Roche JG factored
mg/dl	1.17	0.924	1.42	0.12	0.25		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid	
	mg/dl	1.66	1.31	2.01	0.18	0.35		
	µmol/l	28.2	22.3	34.1	2.95	5.90	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.65	1.30	2.00	0.18	0.35		
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazonium ion	
	mg/dl	1.63	1.29	1.97	0.17	0.34		
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Cresolphthalein complexone	
	mg/dl	9.02	8.10	9.94	0.46	0.92		
	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA	
	mg/dl	8.90	8.02	9.78	0.44	0.88		
	mmol/l	93.4	85.9	101	3.75	7.50		ISE indirect
	mg/dl	93.4	85.9	101	3.75	7.50		ISE indirect
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall	
	mg/dl	157	137	177	10.00	20.00		
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - IDMS	
	mg/dl	156	136	176	10.00	20.00		
	U/l	190	156	224	17.00	34.00		CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00		CK-NAC (IFCC) 30°C
CK Total	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C	
	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization	
	mg/dl	1.45	1.16	1.74	0.15	0.29		
Creatinine	µmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus	
	mg/dl	1.48	1.19	1.77	0.15	0.29		
	µmol/l	123	98.4	148	12.30	24.60	Jaffe rate blanked	
	mg/dl	1.39	1.11	1.67	0.14	0.28		
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.42	1.14	1.70	0.14	0.28		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.29	5.34	7.24	0.48	0.95	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.58	1.29	1.87	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.6	16.8	1.30	2.60	
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	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	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	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.6	32.1	49.1	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	227	179	275	24.00	48.00	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.6	109	7.60	15.20	
UIBC	μmol/l	21.3	17.5	25.1	1.90	3.80	Direct Colorimetric
	μg/dl	119	97.8	140	10.60	21.20	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

**Roche Cobas C311®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Turbidimetric Assays
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	135	114	156	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	105	89	121	8.00	16.00	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	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	89	75	103	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
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	20.2	16.0	24.4	2.10	4.20	Roche JG factored
	mg/dl	1.18	0.936	1.42	0.12	0.24	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	17.0	13.4	20.6	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	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	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazonium ion
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	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	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	94.2	86.7	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5401	4321	6481	540.00	1080.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	185	151	219	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	64	94	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	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	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.685	0.602	0.768	0.04	0.08	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.95	2.47	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	3.99	3.67	4.31	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	143	136	150	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	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
UIBC	μmol/l	22.3	18.3	26.3	2.00	4.00	Direct Colorimetric
	μg/dl	125	102	148	11.50	23.00	
Urea	mmol/l	7.02	5.96	8.08	0.53	1.06	Urease kinetic
	mg/dl	42.2	35.8	48.6	3.20	6.40	
	mmol/l	7.02	5.97	8.07	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
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	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	



Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.7	48.1	3.10	6.20	Bromocresol Green
	g/dl	4.19	3.57	4.81	0.31	0.62	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	194	165	223	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.6	13.2	20.0	1.70	3.40	Enzymatic
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	33.4	26.3	40.5	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.95	1.54	2.36	0.21	0.41	
	µmol/l	31.3	24.7	37.9	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Chloride	mmol/l	95.0	87.4	103	3.80	7.60	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.52	3.93	5.11	0.30	0.59	Cholesterol Oxidase - Abell Kendall
	mg/dl	174	152	196	11.00	22.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	226	185	267	20.50	41.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	120	95.6	144	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.58	5.59	7.57	0.50	0.99	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	6.69	5.69	7.69	0.50	1.00	Glucose oxidase
	mg/dl	121	103	139	9.00	18.00	
Iron	µmol/l	21.3	17.5	25.1	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.8	140	10.60	21.20	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	401	341	461	30.00	60.00	P->L German methods 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.08	0.06	0.12	Colorimetric
	mg/dl	0.671	0.590	0.752	0.04	0.08	
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Enzymatic
	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - direct
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	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	µmol/l	46.4	36.7	56.1	4.85	9.70	Direct Colorimetric
	µg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	



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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Green
	g/dl	4.11	3.50	4.72	0.31	0.61	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	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	32.6	25.7	39.5	3.45	6.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.91	1.50	2.32	0.21	0.41	
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	Arsenazo III
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	5739	4591	6887	574.00	1148.00	Colorimetric Butyrylthiocholine 37°C

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	117	93.5	141	11.75	23.50	Enzymatic UV method
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)
mg/dl	1.39	1.11	1.67	0.14	0.28		
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.15	0.98	1.33	0.09	0.18	Direct Clearance Method
	mg/dl	44.4	37.6	51.2	3.40	6.80	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.41	1.16	1.66	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.5	14.9	1.10	2.20	
LD (LDH)	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	206	175	237	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.682	0.600	0.764	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	43.4	34.3	52.5	4.55	9.10	FE+UIBC(saturation with iron)
	μg/dl	243	192	294	25.50	51.00	
	μmol/l	45.2	35.7	54.7	4.75	9.50	Direct Colorimetric
	μg/dl	253	200	306	26.50	53.00	
	μmol/l	42.3	33.4	51.2	4.45	8.90	Calculated from Transferrin
	μg/dl	236	187	285	24.50	49.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
Urea	mmol/l	7.57	6.43	8.71	0.57	1.14	Urease kinetic
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	48	38	58	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	39	59	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	40	62	5.50	11.00	Tris buffer with P5P NVKC 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.6	10.7	16.5	1.45	2.90	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.796	0.626	0.966	0.09	0.17	
Bilirubin Total	µmol/l	30.3	24.0	36.6	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.48	3.02	3.94	0.23	0.46	Cholesterol Oxidase - Abell Kendall
	mg/dl	134	117	151	8.50	17.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.59	3.12	4.06	0.24	0.47	Dimension-Siemens reagents
	mg/dl	139	120	158	9.50	19.00	
CK Total	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	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	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PEGME
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
LD (LDH)	U/l	192	163	221	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	137	110	164	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Methylthymol blue
	mg/dl	2.12	1.87	2.37	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	3.90	3.59	4.21	0.16	0.31	ISE method - indirect

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	142	134	150	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	0.99	0.83	1.14	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.3	73.4	101	6.95	13.90	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction
Urea	mg/dl	89.4	74.9	104	7.25	14.50	Urease kinetic
	mmol/l	7.22	6.14	8.30	0.54	1.08	
	mg/dl	43.4	36.9	49.9	3.25	6.50	
Uric Acid (Urate)	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
	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	
mg/dl	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290	
	5.75	5.01	6.49	0.37	0.74		

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	48	39	57	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	51	40	62	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
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	30.6	24.1	37.1	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.41	2.17	0.19	0.38	
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	
Chloride	mmol/l	95.8	88.1	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	124	99.5	149	12.25	24.50	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	61	52	70	4.50	9.00	Siemens Dimension (non 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	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	μmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	μg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Methylthymol 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 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	3.91	3.59	4.23	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	74.9	104	7.25	14.50	

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

Lot No. 1402UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.5	106	7.35	14.70	
Urea	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
Uric Acid (Urate)	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.75	5.01	6.49	0.37	0.74	