

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

**CAT. NO.** HN1530  
**CAT. NO.** HS2611  
**LOT NO.** 1389UN

**GTIN:** 05055273203783  
**GTIN:** 05055273203813  
**EXPIRY:** 2023-03-28

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

### INTENDED USE

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

### DEVICE DESCRIPTION

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

### SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

### STORAGE AND STABILITY

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

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

### LIMITATIONS

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

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

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

GLDH is stable for 2 days at 2-8°C.

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

Total PSA is stable for 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  $\pm 2\text{S.D.}$

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](mailto: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.

**EC REP**

Randox Teoranta, Meenmore,  
Dungloe, Donegal,  
F94 TV06, Ireland

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## Abbott Alinity/ Architect c/ci Systems®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Purple
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	151	128	174	11.50	23.00	AMP optimised to NVKC/SFBC 37°C
	U/l	153	130	176	11.50	23.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Immuno inhibition EPS substrate 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	103	87	119	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.1	9.57	14.6	1.27	2.53	Enzymatic
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.4	15.4	23.4	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.901	1.36	0.11	0.23	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	26.3	20.7	31.9	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.21	1.87	0.17	0.33	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.9	21.3	32.5	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Arsenazo III
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Chloride	mmol/l	102	94.2	110	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	6575	5260	7890	657.50	1315.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	163	233	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	129	104	154	12.50	25.00	Jaffe rate blanked
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	IDMS traceable
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	

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Analyte		unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose oxidase	
	mg/dl	110	93.7	126	8.15	16.30		
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL PPD	
	mg/dl	58.3	49.4	67.2	4.45	8.90		
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method	
	mg/dl	56.7	48.3	65.1	4.20	8.40		
	mmol/l	1.47	1.25	1.69	0.11	0.22	HDL - Ultra	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.	
	µg/dl	107	87.8	126	9.60	19.20		
	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.	
	µg/dl	107	87.8	126	9.60	19.20		
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.4	11.0	15.8	1.20	2.40		
LD (LDH)	U/l	195	166	224	14.50	29.00	L->P 37°C	
	U/l	196	166	226	15.00	30.00		
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C	
Lithium	mmol/l	1.06	0.94	1.18	0.06	0.12	Spectrophotometric	
	mg/dl	0.736	0.650	0.822	0.04	0.09		
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Arsenazo III	
	mg/dl	2.30	2.02	2.58	0.14	0.28		
	mmol/l	0.98	0.86	1.09	0.06	0.12	Xylylid Blue	
	mg/dl	2.37	2.09	2.65	0.14	0.28		
	mmol/l	0.95	0.83	1.06	0.06	0.11	Enzymatic	
	mg/dl	2.30	2.02	2.58	0.14	0.28		

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#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.35	1.14	1.56	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.19	3.53	4.85	0.33	0.66	
	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
	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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	38.1	30.1	46.1	4.00	8.00	FE+UIBC(saturation with iron)
	μg/dl	213	168	258	22.50	45.00	
	μmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	μg/dl	255	202	308	26.50	53.00	
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.2	104	7.10	14.20	
	mmol/l	1.04	0.87	1.21	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	89.4	75.4	103	7.00	14.00	
UIBC	μmol/l	19.3	15.9	22.7	1.70	3.40	Direct Colorimetric
	μg/dl	108	88.9	127	9.55	19.10	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

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Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	207	163	251	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	39.7	33.7	45.7	3.00	6.00	Bromocresol Green
	g/dl	3.97	3.37	4.57	0.30	0.60	
	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	244	207	281	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	182	154	210	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	39	32	46	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	pNP Maltotrioseide substrates 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	82	70	94	6.00	12.00	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	37	30	44	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	13.4	10.7	16.1	1.35	2.70	Enzymatic
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	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	29.9	23.6	36.2	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	1.38	2.12	0.19	0.37	

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#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	DPD (Beckman AU)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	100	92.4	108	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5260	4208	6312	526.00	1052.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	212	174	250	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	193	159	227	17.00	34.00	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	14.8	11.9	17.7	1.45	2.90	Colorimetric
	µg/dl	94.1	75.7	113	9.20	18.40	
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	131	105	157	13.00	26.00	Enzymatic UV method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	125	99.9	150	12.55	25.10	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	121	96.6	145	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	

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Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	121	96.5	146	12.25	24.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.8	146	12.10	24.20	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	51	43	59	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.42	5.45	7.39	0.49	0.97	Glucose dehydrogenase
	mg/dl	116	98.2	134	8.90	17.80	
	mmol/l	6.36	5.41	7.31	0.48	0.95	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
	mmol/l	6.39	5.44	7.34	0.48	0.95	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct Clearance Method
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.47	1.25	1.69	0.11	0.22	HDL - Ultra
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Iron	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	
	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	195	166	224	14.50	29.00	L->P 37°C
	U/l	423	359	487	32.00	64.00	P->L Scandinavian & Dutch 37°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
	U/l	182	155	209	13.50	27.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
	U/l	37	30	44	3.50	7.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.15	0.06	0.13	Spectrophotometric
	mg/dl	0.708	0.621	0.795	0.04	0.09	
Magnesium	mmol/l	0.98	0.86	1.09	0.06	0.12	Xylylidyl Blue
	mg/dl	2.37	2.09	2.65	0.14	0.28	
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction end point
	g/dl	5.78	4.62	6.94	0.58	1.16	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.9	34.7	53.1	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	245	194	296	25.50	51.00	

## Beckman Coulter AU Series®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.08	0.90	1.26	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	95.6	80.0	111	7.80	15.60	
UIBC	µmol/l	23.8	19.5	28.1	2.15	4.30	Direct Colorimetric
	µg/dl	133	109	157	12.00	24.00	
Urea	mmol/l	7.55	6.41	8.69	0.57	1.14	Urease end point
	mg/dl	45.4	38.5	52.3	3.45	6.90	
	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease kinetic
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.42	6.31	8.53	0.56	1.11	BUN
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

**Beckman CX4/5/7/9/LX20®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	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	164	139	189	12.50	25.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Differential rate pH change
Bilirubin Total	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Ion selective electrode
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	102	93.5	111	4.25	8.50	ISE indirect
Cholesterol	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
Creatinine	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	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.19	5.27	7.11	0.46	0.92	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.10	5.18	7.02	0.46	0.92	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	

**Beckman CX4/5/7/9/LX20®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.50	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	163	138	188	12.50	25.00	L->P 37°C
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Calmagite
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	3.95	3.64	4.26	0.16	0.31	ISE method - indirect
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	
	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	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	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	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.96	6.46	0.38	0.75	

## Beckman Dx<sup>C</sup>600/800®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	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	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	164	139	189	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Differential rate pH change
	mmol/l	11.3	8.96	13.6	1.17	2.34	Ion selective electrode
Bilirubin Total	µmol/l	30.0	23.7	36.3	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Ion selective electrode
	mg/dl	8.30	7.45	9.15	0.43	0.85	
	mmol/l	2.02	1.82	2.22	0.10	0.20	Arsenazo III
	mg/dl	8.10	7.29	8.91	0.41	0.81	
Chloride	mmol/l	101	93.1	109	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	

## Beckman Dx<sup>C</sup>600/800®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	213	175	251	19.00	38.00	Monothioglycerol 37°C
	U/l	202	166	238	18.00	36.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Oxygen electrode
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PPD
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.51	1.28	1.74	0.12	0.23	HDL - Ultra
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Iron	µmol/l	19.6	16.0	23.2	1.80	3.60	Colorimetric without ppt.
	µg/dl	110	89.4	131	10.30	20.60	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	162	138	186	12.00	24.00	L->P 37°C

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	526	447	605	39.50	79.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 37°C
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.12	Calmagite
	mg/dl	2.32	2.04	2.60	0.14	0.28	
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	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction kinetic
	g/dl	5.67	4.54	6.80	0.57	1.13	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
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	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
Urea	mmol/l	7.71	6.55	8.87	0.58	1.16	Urease end point
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.73	6.57	8.89	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	

## BIOSYSTEMS A15

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	170	145	195	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	113	151	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Glucose oxidase
	mg/dl	114	97.3	131	8.35	16.70	
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.5	113	7.95	15.90	

**BIOSYSTEMS A15****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.97	5.92	8.02	0.53	1.05	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	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	

## Biotechnica/Wiener BT and CB Series

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.7	33.8	45.6	2.95	5.90	Bromocresol Green
	g/dl	3.97	3.38	4.56	0.30	0.59	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	122	97.7	146	12.15	24.30	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	

## Biotechnica/Wiener BT and CB Series

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.7	132	10.15	20.30	
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	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Triglycerides	mmol/l	0.99	0.84	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.0	73.9	102	7.05	14.10	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Purple
	g/dl	4.16	3.54	4.78	0.31	0.62	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	136	115	157	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	87	73	101	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	89	76	102	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	73	97	6.00	12.00	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

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Roche JG factored
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.10	1.89	2.31	0.11	0.21	NM-BAPTA
	mg/dl	8.42	7.58	9.26	0.42	0.84	
Chloride	mmol/l	101	93.4	109	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	193	159	227	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	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	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	U/l	45	39	51	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	31	39	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
gamma-GT	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	6.24	5.31	7.17	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.42	5.46	7.38	0.48	0.96	Hexokinase
	mg/dl	116	98.4	134	8.80	17.60	
	mmol/l	6.35	5.40	7.30	0.48	0.95	Glucose oxidase
	mg/dl	114	97.3	131	8.35	16.70	
HDL - Cholesterol	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.7	54.0	73.4	4.85	9.70	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	92.2	132	9.90	19.80	
	µmol/l	19.9	16.4	23.4	1.75	3.50	Colorimetric without ppt.
	µg/dl	111	91.7	130	9.65	19.30	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	380	323	437	28.50	57.00	P->L German methods 37°C
	U/l	274	233	315	20.50	41.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C
	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	27	22	32	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.617	0.785	0.04	0.08	
Magnesium	mmol/l	0.99	0.88	1.11	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.42	2.13	2.71	0.15	0.29	
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	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	54.8	43.8	65.8	5.50	11.00	Biuret reaction end point
	g/dl	5.48	4.38	6.58	0.55	1.10	
	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction kinetic
	g/dl	5.69	4.55	6.83	0.57	1.14	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.7	32.2	49.2	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	228	180	276	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	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.4	112	7.55	15.10	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.3	112	7.60	15.20	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.16	6.66	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

**Elitech/Vitalab Selectra Series****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	220	187	253	16.50	33.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Creatinine	µmol/l	122	97.5	147	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Glucose	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Protein Total	g/l	55.9	44.7	67.1	5.60	11.20	Biuret reaction end point
	g/dl	5.59	4.47	6.71	0.56	1.12	
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.8	112	7.85	15.70	
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease kinetic
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

**Elitech/Vitalab Selectra Series****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	

## HITACHI SERIES®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	12.2	8.17	16.2	2.02	4.03	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	132	112	152	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	103	87	119	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 25°C
	U/l	172	146	198	13.00	26.00	Randox AMP 37°C
	U/l	134	114	154	10.00	20.00	Randox AMP 30°C
	U/l	110	93	127	8.50	17.00	Randox AMP 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethyldene pNPG7 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Randox Liquid Ethyldene 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	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
gamma-GT	U/l	53	45	61	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
LD (LDH)	U/l	209	177	241	16.00	32.00	L->P IFCC 37°C
	U/l	151	128	174	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Xylylid Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Green
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	264	224	304	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	206	174	238	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	169	143	195	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	149	127	171	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.0	13.4	20.6	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	µmol/l	25.4	20.0	30.8	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.17	1.81	0.16	0.32	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Arsenazo III
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	103	94.8	111	4.10	8.20	ISE direct

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	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	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.44	5.47	7.41	0.49	0.97	Hexokinase
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL PEGME
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
Iron	µmol/l	19.6	16.0	23.2	1.80	3.60	Colorimetric without ppt.
	µg/dl	110	89.4	131	10.30	20.60	
LD (LDH)	U/l	390	331	449	29.50	59.00	P->L SFBC 37°C
	U/l	282	239	325	21.50	43.00	P->L SFBC 30°C
	U/l	198	168	228	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. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylylid Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.92	3.60	4.24	0.16	0.32	ISE method - direct
Protein Total	g/l	56.6	45.3	67.9	5.65	11.30	Biuret reaction end point
	g/dl	5.66	4.53	6.79	0.57	1.13	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
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	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

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
	U/l	162	128	196	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	121	96	146	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	12.2	8.17	16.2	2.02	4.03	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Green
	g/dl	4.16	3.53	4.79	0.32	0.63	
	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Purple
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	39.5	33.6	45.4	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.95	3.36	4.54	0.30	0.59	
	g/l	40.8	34.6	47.0	3.10	6.20	Turbidimetric Assays
	g/dl	4.08	3.46	4.70	0.31	0.62	
Alkaline Phosphatase	U/l	137	117	157	10.00	20.00	Ortho Vitros Microslide Systems 37°C
	U/l	245	209	281	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	191	163	219	14.00	28.00	Diethanolamine buffer DEA 30°C
	U/l	157	134	180	11.50	23.00	Diethanolamine buffer DEA 25°C
	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	126	108	144	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	104	88	120	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	152	129	175	11.50	23.00	AMP optimised to NVKC/SFBC 37°C
	U/l	118	100	136	9.00	18.00	AMP optimised to NVKC/SFBC 30°C
	U/l	97	82	112	7.50	15.00	AMP optimised to NVKC/SFBC 25°C

## MEAN OF ALL INSTRUMENTS

Lot. No. 1389UN Cat. No. HN1530 / HS2611

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	AMP non-optimised 37°C
	U/l	122	104	140	9.00	18.00	AMP non-optimised 30°C
	U/l	100	85	115	7.50	15.00	AMP non-optimised 25°C
	U/l	136	115	157	10.50	21.00	Colorimetric 37°C
	U/l	106	90	122	8.00	16.00	Colorimetric 30°C
	U/l	87	73	101	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	33	51	4.50	9.00	Tris buffer with P5P 37°C
	U/l	31	24	38	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	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
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	63	54	72	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	63	54	72	4.50	9.00	Roche EPS Liquid 37°C
	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	84	71	97	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	89	75	103	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	81	69	93	6.00	12.00	Saccharogenic 37°C
	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	66	56	76	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	83	71	95	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	82	70	94	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.21	0.99	1.43	0.11	0.22	Immunoturbidimetric
	mg/dl	121	99.2	143	10.90	21.80	
Apolipoprotein B	g/l	0.56	0.46	0.66	0.05	0.10	Immunoturbidimetric
	mg/dl	55.8	45.8	65.8	5.00	10.00	
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer with P5P 30°C
	U/l	26	21	31	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	33	26	40	3.50	7.00	Tris buffer SCE 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Colorimetric
	mmol/l	14.9	11.8	18.0	1.55	3.10	Ortho Vitros Microslide Systems

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	12.8	10.2	15.4	1.30	2.60	Differential rate pH change
	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	4th Generation Colorimetric
	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	19.5	15.4	23.6	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	16.5	13.1	19.9	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.965	0.766	1.16	0.10	0.20	
Bilirubin Total	µmol/l	13.3	10.5	16.1	1.40	2.80	Modified Jendrassik
	mg/dl	0.778	0.614	0.942	0.08	0.16	
	µmol/l	23.3	18.4	28.2	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.17	1.81	0.16	0.32	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	31.4	24.8	38.0	3.30	6.60	Modified Jendrassik
	mg/dl	1.84	1.45	2.23	0.20	0.39	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.07	1.87	2.27	0.10	0.20	Ion selective electrode
	mg/dl	8.30	7.49	9.11	0.41	0.81	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Methylthymol blue
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	1.02	0.92	1.12	0.05	0.10	Ionised calcium
	mg/dl	4.09	3.68	4.50	0.21	0.41	
Cholesterol	mmol/l	101	92.9	109	4.05	8.10	Colorimetric
	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems

## MEAN OF ALL INSTRUMENTS

Lot. No. 1389UN Cat. No. HN1530 / HS2611

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
Cholinesterase	U/l	5489	4391	6587	549.00	1098.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	153	219	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	204	167	241	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	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
	U/l	213	175	251	19.00	38.00	Monothioglycerol 37°C
	U/l	133	110	156	11.50	23.00	Monothioglycerol 30°C
	U/l	91	74	108	8.50	17.00	Monothioglycerol 25°C
Copper	µmol/l	15.9	12.7	19.1	1.60	3.20	Atomic absorption
	µg/dl	101	80.8	121	10.10	20.20	
	µmol/l	15.6	12.5	18.7	1.55	3.10	Colorimetric
	µg/dl	99.2	79.5	119	9.85	19.70	
Cortisol	nmol/l	483	362	604	60.50	121.00	Roche Cobas E411
	µg/dl	17.4	13.0	21.8	2.20	4.40	
Creatinine	µmol/l	123	98.5	148	12.25	24.50	Alkaline picrate with deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	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	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	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	
D-3-Hydroxybutyrate	µmol/l	124	99.0	149	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.6	150	12.70	25.40	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Digoxin	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Folate	nmol/l	1.88	1.50	2.26	0.19	0.38	Immunoturbidimetric
	ng/ml	1.47	1.17	1.77	0.15	0.30	
Free T4	nmol/l	49.0	37.2	60.8	5.89	11.78	Roche Cobas 6000/8000
	ng/ml	21.6	16.4	26.8	2.60	5.20	
	pmol/l	17.0	12.8	21.2	2.10	4.20	Abbott Architect
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Abbott Architect
	pmol/l	17.3	13.0	21.6	2.15	4.30	Siemens Centaur XP/XPT/Classic
	ng/dl	1.35	1.01	1.69	0.17	0.34	
	pg/ml	13.5	10.1	16.9	1.70	3.40	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	18.6	13.9	23.3	2.35	4.70	Beckman Access
	ng/dl	1.45	1.08	1.82	0.19	0.37	
	pg/ml	14.5	10.8	18.2	1.85	3.70	Beckman Access
	pmol/l	17.6	13.2	22.0	2.20	4.40	Beckman Dxl800
	ng/dl	1.37	1.03	1.71	0.17	0.34	
	pg/ml	13.7	10.3	17.1	1.70	3.40	Beckman Dxl800
	pmol/l	20.5	15.4	25.6	2.55	5.10	Siemens Immulite 2000/2500
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Siemens Immulite 2000/2500
	pmol/l	35.6	26.7	44.5	4.45	8.90	Vitros ECi
	ng/dl	2.78	2.08	3.48	0.35	0.70	
	pg/ml	27.8	20.8	34.8	3.50	7.00	Vitros ECi
TSH	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas E411
	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 E411
	pmol/l	21.3	16.0	26.6	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Roche Cobas 6000/8000
	pmol/l	19.2	14.4	24.0	2.40	4.80	Biomerieux Vidas FT4N Kit
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Biomerieux Vidas FT4N Kit
	pmol/l	21.3	16.0	26.6	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Roche Cobas 6000/8000
Gentamicin	µmol/l	7.51	6.01	9.01	0.75	1.50	Immunoturbidimetric
	µg/ml	3.59	2.87	4.31	0.36	0.72	
	U/l	49	42	56	3.50	7.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
gamma-GT	U/l	39	33	45	3.00	6.00	Gamma glutamyl-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl-3-carboxy-4-nitroanilide 25°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	53	45	61	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.15	5.22	7.08	0.47	0.93	Ortho Vitros Microslide Systems
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.03	5.13	6.93	0.45	0.90	Oxygen electrode
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.30	5.36	7.24	0.47	0.94	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PPD
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	56.0	47.9	64.1	4.05	8.10	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros Magnetic HDL
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct HDL PEGME
	mg/dl	57.5	48.6	66.4	4.45	8.90	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct Clearance Method
	mg/dl	52.5	44.8	60.2	3.85	7.70	
Immunoglobulin A	mmol/l	1.48	1.26	1.70	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	HDL - Ultra
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
	g/l	1.58	1.19	1.97	0.20	0.39	Immunoturbidimetric
	mg/dl	158	119	197	19.50	39.00	
Immunoglobulin G	g/l	6.93	5.68	8.18	0.63	1.25	Immunoturbidimetric
	mg/dl	693	568	818	62.50	125.00	
Immunoglobulin M	g/l	0.69	0.55	0.83	0.07	0.14	Immunoturbidimetric
	mg/dl	69.0	55.2	82.8	6.90	13.80	
Iron	μmol/l	19.7	16.1	23.3	1.80	3.60	Colorimetric with ppt.
	μg/dl	110	90.0	130	10.00	20.00	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	µmol/l	20.2	16.6	23.8	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.49	1.23	1.75	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.1	15.7	1.15	2.30	
	mmol/l	1.42	1.16	1.68	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.8	10.5	15.1	1.15	2.30	
	mmol/l	1.50	1.23	1.77	0.14	0.27	Enzymatic Electrode
	mg/dl	13.5	11.1	15.9	1.20	2.40	
	mmol/l	1.51	1.24	1.78	0.14	0.27	UV LDH
LAP	U/l	18	15	21	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	180	153	207	13.50	27.00	L->P 37°C
	U/l	130	110	150	10.00	20.00	L->P 30°C
	U/l	91	78	104	6.50	13.00	L->P 25°C
	U/l	426	362	490	32.00	64.00	P->L Scandinavian & Dutch 37°C
	U/l	308	261	355	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	216	184	248	16.00	32.00	P->L Scandinavian & Dutch 25°C
	U/l	389	331	447	29.00	58.00	P->L German methods 37°C
	U/l	281	239	323	21.00	42.00	P->L German methods 30°C
	U/l	197	168	226	14.50	29.00	P->L German methods 25°C
	U/l	395	336	454	29.50	59.00	P->L SFBC 37°C
	U/l	285	243	327	21.00	42.00	P->L SFBC 30°C
	U/l	200	170	230	15.00	30.00	P->L SFBC 25°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
	U/l	146	123	169	11.50	23.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C
	U/l	167	134	200	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.24	1.09	1.39	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.861	0.757	0.965	0.05	0.10	
	mmol/l	1.04	0.91	1.17	0.06	0.13	Ion selective electrode
	mg/dl	0.722	0.633	0.811	0.04	0.09	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
	mmol/l	1.04	0.92	1.17	0.06	0.13	Randox Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Arsenazo III
	mg/dl	2.30	2.02	2.58	0.14	0.28	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.95	0.84	1.07	0.06	0.12	Calmagite
	mg/dl	2.32	2.04	2.60	0.14	0.28	
	mmol/l	0.97	0.85	1.09	0.06	0.12	Xylylidyl Blue
	mg/dl	2.35	2.07	2.63	0.14	0.28	
	mmol/l	0.94	0.83	1.06	0.06	0.11	Methylthymol blue
	mg/dl	2.29	2.02	2.56	0.14	0.27	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.98	0.87	1.10	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.39	2.10	2.68	0.15	0.29	
	mmol/l	0.95	0.83	1.06	0.06	0.11	Enzymatic
	mg/dl	2.30	2.02	2.58	0.14	0.28	
NEFA	mmol/l	1.64	1.39	1.89	0.13	0.25	Colorimetric
Osmolality	mOsm/kg	293	234	352	29.50	59.00	Calculated
	mOsm/kg	306	245	367	30.50	61.00	Freezing point depression
	mOsm/kg	308	246	370	31.00	62.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.01	Colorimetric
	mg/l	11.6	9.38	13.8	1.11	2.22	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.65	3.94	5.36	0.36	0.71	
	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	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.06	3.74	4.38	0.16	0.32	Enzymatic
	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - direct
	mmol/l	4.03	3.70	4.36	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.82	4.65	6.99	0.59	1.17	
	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction kinetic
	g/dl	5.71	4.57	6.85	0.57	1.14	
PSA Total	ng/ml =	14.2	10.6	17.8	1.80	3.60	Beckman Access standardised to Hybritech
	ng/ml =	10.9	8.14	13.7	1.38	2.76	bioMerieux VIDAS TPSA
	ng/ml =	10.0	7.54	12.5	1.23	2.46	Siemens Centaur XP/XPT/Classic
	ng/ml =	9.33	7.00	11.7	1.17	2.33	Abbott Architect
	ng/ml =	13.0	9.72	16.3	1.64	3.28	Cobas E411
	ng/ml =	12.5	9.36	15.6	1.57	3.14	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.80	7.18	0.60	1.19	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	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 =	1.00	0.80	1.20	0.10	0.20	Abbott Architect
	µU/ml =	1.53	1.22	1.84	0.16	0.31	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.18	0.95	1.42	0.12	0.24	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.38	1.10	1.66	0.14	0.28	bioMerieux VIDAS TSH
	µU/ml =	1.31	1.05	1.57	0.13	0.26	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.31	1.05	1.57	0.13	0.26	Siemens Immulite 2000/2500
	µU/ml =	1.04	0.84	1.24	0.10	0.20	Vitros ECi
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Roche Cobas E411
	µU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	μU/ml =	1.16	0.93	1.39	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	μU/ml =	1.15	0.92	1.38	0.11	0.23	Beckman Dxl 600/800 Access (3rd IS)
TIBC	μmol/l	46.8	37.0	56.6	4.90	9.80	Ortho Vitros Microslide Systems
	μg/dl	262	207	317	27.50	55.00	
	μmol/l	38.6	30.5	46.7	4.05	8.10	Removal of excess free iron
	μg/dl	216	170	262	23.00	46.00	
	μmol/l	40.7	32.2	49.2	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	228	180	276	24.00	48.00	
	μmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
	μg/dl	257	203	311	27.00	54.00	
	μmol/l	44.9	35.4	54.4	4.75	9.50	Calculated from Transferrin
	μg/dl	251	198	304	26.50	53.00	
Tobramycin	μmol/l	48.7	38.5	58.9	5.10	10.20	Randox Direct
	μg/ml	272	215	329	28.50	57.00	
Total T3	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	
	nmol/l	1.62	1.21	2.03	0.21	0.41	Abbott Architect
	ng/ml	1.05	0.788	1.31	0.13	0.26	
	ng/dl	105	78.8	131	13.10	26.20	Abbott Architect
	nmol/l	2.04	1.53	2.55	0.26	0.51	Siemens Centaur XP/XPT/Classic
	ng/ml	1.33	0.996	1.66	0.17	0.33	
	ng/dl	133	99.6	166	16.70	33.40	Siemens Centaur XP/XPT/Classic
	nmol/l	1.92	1.44	2.40	0.24	0.48	Roche Cobas E411
	ng/ml	1.25	0.937	1.56	0.16	0.31	
	ng/dl	125	93.7	156	15.65	31.30	Roche Cobas E411

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	1.92	1.44	2.40	0.24	0.48	Roche Cobas 6000/8000
	ng/ml	1.25	0.937	1.56	0.16	0.31	
	ng/dl	125	93.7	156	15.65	31.30	Roche Cobas 6000/8000
Total T4	nmol/l	91.6	68.7	115	11.45	22.90	Abbott Architect
	µg/dl	7.14	5.36	8.92	0.89	1.78	
	ng/ml	71.4	53.6	89.2	8.90	17.80	Abbott Architect
	nmol/l	85.2	63.9	107	10.65	21.30	Siemens Centaur XP/XPT/Classic
	µg/dl	6.65	4.98	8.32	0.84	1.67	
	ng/ml	66.5	49.8	83.2	8.35	16.70	Siemens Centaur XP/XPT/Classic
	nmol/l	83.0	62.3	104	10.35	20.70	Roche Cobas E411
	µg/dl	6.47	4.86	8.08	0.81	1.61	
	ng/ml	64.7	48.6	80.8	8.05	16.10	Roche Cobas E411
Transferrin	nmol/l	83.1	62.4	104	10.35	20.70	Roche Cobas 6000/8000
	µg/dl	6.48	4.87	8.09	0.81	1.61	
	ng/ml	64.8	48.7	80.9	8.05	16.10	Roche Cobas 6000/8000
Triglycerides	nmol/l	107	80.4	134	13.30	26.60	Microgenics DRI assay
	µg/dl	8.35	6.27	10.4	1.04	2.08	
	ng/ml	83.5	62.7	104	10.40	20.80	Microgenics DRI assay
	g/l	1.89	1.51	2.27	0.19	0.38	Immunoturbidimetric
	mg/dl	189	151	227	19.00	38.00	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.3	110	7.70	15.40	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.05	0.89	1.22	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	78.3	108	7.30	14.60	
	mmol/l	1.19	1.00	1.38	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	105	88.5	122	8.25	16.50	
UIBC	µmol/l	20.2	16.6	23.8	1.80	3.60	Direct Colorimetric
	µg/dl	113	92.8	133	10.10	20.20	
Urea	mmol/l	6.85	5.82	7.88	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease end point
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	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	7.06	6.00	8.12	0.53	1.06	Urease hypochlorite
	mg/dl	42.4	36.1	48.7	3.15	6.30	
Uric Acid (Urate)	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	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	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	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.04	6.52	0.37	0.74	
Vitamin B12	pmol/l	494	396	593	49.23	98.46	Roche Cobas E411
	pg/ml	670	537	803	66.50	133.00	
Zinc	µmol/l	21.7	17.4	26.0	2.15	4.30	Colorimetric with deproteinisation
	µg/dl	142	114	170	14.00	28.00	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		67.9	61.2	74.6	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.1	4.6	7.6	0.73	1.46	% 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		9.2	7.0	11.4	1.11	2.21	% of total Protein (Beckman Capillary)
gamma-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)

**MINDRAY BS-200/300/400****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	226	192	260	17.00	34.00	Diethanolamine buffer DEA 37°C
	U/l	176	150	202	13.00	26.00	Diethanolamine buffer DEA 30°C
	U/l	144	123	165	10.50	21.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	0.12	0.23	
Bilirubin Total	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	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin/Vanadate
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	

**MINDRAY BS-200/300/400**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	125	99.9	150	12.55	25.10	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
gamma-GT	mg/dl	1.49	1.20	1.78	0.15	0.29	
	U/l	45	39	51	3.00	6.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	35	31	39	2.00	4.00	Gamma glutamyl-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
Glucose	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	6.44	5.48	7.40	0.48	0.96	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
HDL - Cholesterol	mg/dl	116	98.9	133	8.55	17.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct Clearance Method
Iron	mg/dl	54.0	45.9	62.1	4.05	8.10	
	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.7	132	10.15	20.30	

**MINDRAY BS-200/300/400**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	413	351	475	31.00	62.00	P->L German methods 37°C
	U/l	298	253	343	22.50	45.00	P->L German methods 30°C
	U/l	209	178	240	15.50	31.00	P->L German methods 25°C
	U/l	398	338	458	30.00	60.00	P->L SFBC 37°C
	U/l	287	244	330	21.50	43.00	P->L SFBC 30°C
	U/l	202	171	233	15.50	31.00	P->L SFBC 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
Magnesium	mmol/l	0.98	0.86	1.10	0.06	0.12	Xyldyl Blue
	mg/dl	2.38	2.10	2.66	0.14	0.28	
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction end point
	g/dl	5.78	4.63	6.93	0.58	1.15	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
Urea	mmol/l	7.44	6.33	8.55	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.44	6.32	8.56	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
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	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	

**Ortho VITROS®**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	137	117	157	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	66	56	76	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	10.6	8.37	12.8	1.12	2.23	BuBc Vitros Slide
	mg/dl	0.620	0.490	0.750	0.07	0.13	
Bilirubin Total	µmol/l	23.3	18.4	28.2	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Bilirubin, Unconjugated Vitros BU	µmol/l	12.8	10.1	15.5	1.35	2.70	BuBc Vitros Slide
	mg/dl	0.749	0.591	0.907	0.08	0.16	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.82	3.33	4.31	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	147	129	165	9.00	18.00	
Cholinesterase	U/l	5273	4219	6327	527.00	1054.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	186	153	219	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	

**Ortho VITROS®**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.15	5.22	7.08	0.47	0.93	Ortho Vitros Microslide Systems
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros Magnetic HDL
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.8	10.5	15.1	1.15	2.30	
Lipase	U/l	167	134	200	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.33	2.05	2.61	0.14	0.28	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	46.8	37.0	56.6	4.90	9.80	Ortho Vitros Microslide Systems
	µg/dl	262	207	317	27.50	55.00	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	105	88.5	122	8.25	16.50	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.85	5.82	7.88	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	6.85	5.82	7.88	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.89	6.37	0.37	0.74	

## PRESTIGE 24i

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.1	33.2	45.0	2.95	5.90	Bromocresol Green
	g/dl	3.91	3.32	4.50	0.30	0.59	
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.7	15.5	23.9	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	118	94.5	142	11.75	23.50	Creatinine PAP method
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.0	45.9	62.1	4.05	8.10	

## PRESTIGE 24i

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.3	74.3	102	7.00	14.00	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.1	48.7	3.15	6.30	
	mmol/l	7.06	6.00	8.12	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	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	

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	40.5	34.4	46.6	3.05	6.10	Turbidimetric Assays
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	131	112	150	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	83	70	96	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	82	70	94	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	82	70	94	6.00	12.00	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	12.7	10.1	15.3	1.30	2.60	Colorimetric
	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	24.4	19.6	29.2	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.7	14.7	22.7	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	25.9	20.4	31.4	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.19	1.85	0.17	0.33	
Calcium	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	97.4	89.6	105	3.90	7.80	ISE indirect
	mg/dl	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase
Cholesterol	mmol/l	148	129	167	9.50	19.00	
	mg/dl	5365	4292	6438	536.50	1073.00	Colorimetric Butyrylthiocholine 37°C
Cholinesterase	U/l						

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	192	157	227	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
D-3-Hydroxybutyrate	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	IDMS traceable
	mg/dl	1.53	1.22	1.84	0.16	0.31	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	21.3	16.0	26.6	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Roche Cobas 6000/8000
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl-3-carboxy-4-nitroanilide 25°C

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	11	15	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL PEGME
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	91.1	131	9.95	19.90	
	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	1.51	1.23	1.79	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.1	16.1	1.25	2.50	
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P 37°C
	U/l	143	121	165	11.00	22.00	L->P 30°C
	U/l	100	85	115	7.50	15.00	L->P 25°C

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	145	123	167	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	27	21	33	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	0.97	0.86	1.09	0.06	0.12	Xylylid Blue
	mg/dl	2.36	2.08	2.64	0.14	0.28	
	mmol/l	0.97	0.85	1.09	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.35	2.07	2.63	0.14	0.28	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
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	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	57.8	46.3	69.3	5.75	11.50	Biuret reaction kinetic
	g/dl	5.78	4.63	6.93	0.58	1.15	

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	12.5	9.36	15.6	1.57	3.14	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.45	1.16	1.74	0.15	0.29	Roche Cobas 6000/8000
TIBC	μmol/l	39.6	31.2	48.0	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	221	174	268	23.50	47.00	
	μmol/l	48.4	38.3	58.5	5.05	10.10	Calculated from Transferrin
	μg/dl	271	214	328	28.50	57.00	
Total T3	nmol/l	1.92	1.44	2.40	0.24	0.48	Roche Cobas 6000/8000
	ng/ml	1.25	0.937	1.56	0.16	0.31	
	ng/dl	125	93.7	156	15.65	31.30	Roche Cobas 6000/8000
Total T4	nmol/l	83.1	62.4	104	10.35	20.70	Roche Cobas 6000/8000
	μg/dl	6.48	4.87	8.09	0.81	1.61	
	ng/ml	64.8	48.7	80.9	8.05	16.10	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	1.08	0.90	1.26	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
UIBC	μmol/l	19.8	16.3	23.3	1.75	3.50	Direct Colorimetric
	μg/dl	111	91.1	131	9.95	19.90	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease end point
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.20	6.12	8.28	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

## Roche Cobas 6000 c501 e601

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.96	6.46	0.38	0.75	
	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	5.70	4.96	6.44	0.37	0.74	

## Roche Cobas C111®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
Alkaline Phosphatase	U/l	133	113	153	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	85	72	98	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	133	113	153	10.00	20.00	Colorimetric 37°C
	U/l	104	88	120	8.00	16.00	Colorimetric 30°C
	U/l	85	72	98	6.50	13.00	Colorimetric 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pnPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	

## Roche Cobas C111®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.4	19.2	29.6	2.60	5.20	Diazonium ion
	mg/dl	1.43	1.12	1.74	0.16	0.31	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	101	93.3	109	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	121	96.8	145	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Hexokinase
	mg/dl	117	99.1	135	8.95	17.90	
HDL - Cholesterol	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	

## Roche Cobas C111®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.01	0.89	1.13	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.45	2.17	2.73	0.14	0.28	
Phosphate Inorganic	mmol/l	1.48	1.25	1.71	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.59	3.88	5.30	0.36	0.71	
	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	3.68	4.34	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.1	47.2	71.0	5.95	11.90	Biuret reaction end point
	g/dl	5.91	4.72	7.10	0.60	1.19	
Sodium	mmol/l	139	132	146	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	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.17	6.10	8.24	0.54	1.07	Urease kinetic
	mg/dl	43.1	36.7	49.5	3.20	6.40	
	mmol/l	7.17	6.09	8.25	0.54	1.08	BUN
	mg/dl	20.1	17.1	23.1	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	5.93	5.16	6.70	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	5.17	6.69	0.38	0.76	

**Roche Cobas C111®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**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 @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

## Roche Cobas C311®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### 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	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	130	111	149	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	71	95	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	84	71	97	6.50	13.00	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
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	

## Roche Cobas C311®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.9	20.4	31.4	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.14	1.92	2.36	0.11	0.22	NM-BAPTA
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## Roche Cobas C311®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	54	45	63	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	35	51	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.36	5.41	7.31	0.48	0.95	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
	mmol/l	6.45	5.49	7.41	0.48	0.96	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL Roche 4th Generation
	mg/dl	63.3	53.7	72.9	4.80	9.60	
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	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	383	326	440	28.50	57.00	P->L German methods 37°C
	U/l	277	235	319	21.00	42.00	P->L German methods 30°C
	U/l	194	165	223	14.50	29.00	P->L German methods 25°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
	U/l	147	126	168	10.50	21.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
	mmol/l	0.98	0.86	1.09	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.37	2.08	2.66	0.15	0.29	

## Roche Cobas C311®

Lot. No. 1389UN Cat. No. HN1530 / HS2611

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
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	79.6	110	7.55	15.10	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
UIBC	µmol/l	21.5	17.6	25.4	1.95	3.90	Direct Colorimetric
	µg/dl	120	98.4	142	10.80	21.60	
Urea	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease kinetic
	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
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

## Roche Cobas c701 / c702 / c711

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Purple
	g/dl	4.24	3.60	4.88	0.32	0.64	
	g/l	41.6	35.4	47.8	3.10	6.20	Turbidimetric Assays
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	123	104	142	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	96	81	111	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	79	66	92	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 37°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 30°C
	U/l	78	66	90	6.00	12.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	83	70	96	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

## Roche Cobas c701 / c702 / c711

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Enzymatic
Bile Acids	µmol/l	23.2	18.5	27.9	2.35	4.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.3	14.4	22.2	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	18.2	14.4	22.0	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	µmol/l	14.5	11.5	17.5	1.50	3.00	Oxidation to Biliverdin/Vanadate
	mg/dl	0.848	0.673	1.02	0.09	0.18	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Calcium	µmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	NM-BAPTA
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.82	3.32	4.32	0.25	0.50	Cholesterol Oxidase
	mg/dl	147	128	166	9.50	19.00	
Cholinesterase	U/l	5360	4288	6432	536.00	1072.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C

## Roche Cobas c701 / c702 / c711

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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
gamma-GT	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	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	145	123	167	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C

## Roche Cobas c701 / c702 / c711

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.07	0.13	Spectrophotometric
	mg/dl	0.736	0.644	0.828	0.05	0.09	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylylid Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
	mmol/l	0.99	0.87	1.11	0.06	0.12	Chlorophosphonazo III
	mg/dl	2.40	2.11	2.69	0.15	0.29	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.08	3.76	4.40	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.9	32.3	49.5	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	229	181	277	24.00	48.00	
	μmol/l	44.0	34.7	53.3	4.65	9.30	Calculated from Transferrin
	μg/dl	246	194	298	26.00	52.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
UIBC	μmol/l	21.8	17.9	25.7	1.95	3.90	Direct Colorimetric
	μg/dl	122	100	144	11.00	22.00	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.1	48.7	3.15	6.30	

## Roche Cobas c701 / c702 / c711

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

#### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	257	218	296	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Randox Liquid Ethyldene pNPG7 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Randox Liquid Ethyldene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	16.3	12.9	19.7	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	29.9	23.6	36.2	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.38	2.12	0.19	0.37	
	µmol/l	29.6	23.3	35.9	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Arsenazo III
	mg/dl	8.90	7.98	9.82	0.46	0.92	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	ISE direct

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.30	3.74	4.86	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
CK Total	U/l	220	180	260	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	236	194	278	21.00	42.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.73	5.72	7.74	0.51	1.01	Hexokinase
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	6.72	5.71	7.73	0.51	1.01	Glucose oxidase
	mg/dl	121	103	139	9.00	18.00	
Iron	µmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric without ppt.
	µg/dl	115	94.5	136	10.25	20.50	
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	398	338	458	30.00	60.00	P->L German methods 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	1.01	0.89	1.13	0.06	0.12	Xylylid Blue
	mg/dl	2.45	2.16	2.74	0.15	0.29	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	Enzymatic
	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - direct
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	
Sodium	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
TIBC	µmol/l	48.7	38.5	58.9	5.10	10.20	Direct Colorimetric
	µg/dl	272	215	329	28.50	57.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.1	109	7.35	14.70	
Urea	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.28	6.19	8.37	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.01	5.22	6.80	0.40	0.79	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bile Acids	µmol/l	27.0	21.6	32.4	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	101	93.3	109	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**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
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	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	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	
	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	1.23	1.04	1.42	0.10	0.19	Direct Clearance Method
	mg/dl	47.5	40.1	54.9	3.70	7.40	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.39	1.14	1.64	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.5	10.3	14.7	1.10	2.20	
LD (LDH)	U/l	385	327	443	29.00	58.00	P->L German methods 37°C
	U/l	207	176	238	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.655	0.831	0.04	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

Range							
Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.4	45.2	67.6	5.60	11.20	Biuret reaction end point
	g/dl	5.64	4.52	6.76	0.56	1.12	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	198	302	26.00	52.00	
	µmol/l	45.9	36.2	55.6	4.85	9.70	Direct Colorimetric
	µg/dl	257	202	312	27.50	55.00	
	µmol/l	42.8	33.8	51.8	4.50	9.00	Calculated from Transferrin
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Urea	mmol/l	7.58	6.44	8.72	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.7	52.5	3.45	6.90	
	mmol/l	7.58	6.44	8.72	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	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	

## SIEMENS DIMENSION EXL®

### ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

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	143	121	165	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	144	123	165	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	57	46	68	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
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	
Calcium	mmol/l	2.05	1.85	2.25	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.22	7.41	9.03	0.41	0.81	
Chloride	mmol/l	99.5	91.5	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.76	3.27	4.25	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
	mmol/l	3.66	3.19	4.13	0.24	0.47	Dimension-Siemens reagents
	mg/dl	141	123	159	9.00	18.00	
CK Total	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	134	107	161	13.50	27.00	IDMS traceable
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	58	50	66	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	53	71	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PEGME
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	
LD (LDH)	U/l	191	163	219	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	121	97	145	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Methylthymol blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	38.4	30.4	46.4	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	215	170	260	22.50	45.00	
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	
	mmol/l	1.00	0.84	1.16	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	88.5	74.4	103	7.05	14.10	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	88.5	74.7	102	6.90	13.80	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.78	5.04	6.52	0.37	0.74	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Purple
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	142	121	163	10.50	21.00	Siemens Dimension AMP buffer 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	12.4	9.80	15.0	1.30	2.60	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.725	0.573	0.877	0.08	0.15	
Bilirubin Total	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.04	1.84	2.24	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.18	7.37	8.99	0.41	0.81	
Chloride	mmol/l	97.9	90.1	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.71	3.23	4.19	0.24	0.48	Dimension-Siemens reagents
	mg/dl	143	125	161	9.00	18.00	
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	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	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	62	52	72	5.00	10.00	Siemens Dimension (non IFCC) 37°C
	U/l	49	41	57	4.00	8.00	Siemens Dimension (non IFCC) 30°C
	U/l	38	32	44	3.00	6.00	Siemens Dimension (non IFCC) 25°C
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Hexokinase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PEGME
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
LD (LDH)	U/l	190	161	219	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Methylthymol blue
	mg/dl	2.28	2.01	2.55	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	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.96	3.65	4.27	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	

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

Lot. No. 1389UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-03-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.0	104	7.20	14.40	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.7	106	7.25	14.50	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease end point
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
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	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	