

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

<b>CAT. NO.</b> HNI530	<b>GTIN:</b> 05055273203783	<b>SIZE:</b> 20 x 5ml
<b>CAT. NO.</b> HS2611	<b>GTIN:</b> 05055273203813	<b>SIZE:</b> 5 x 5ml
<b>LOT NO.</b> 1366UN	<b>EXPIRY:</b> 2023-01-28	

### **INTENDED USE**

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

### **DEVICE DESCRIPTION**

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

### **SAFETY PRECAUTIONS AND WARNINGS**

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

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

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

Health and Safety Data Sheets are available on request.

### **STORAGE AND STABILITY**

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

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

### **LIMITATIONS**

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

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

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

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.

### **PREPARATION FOR USE**

The Human Assayed Multi-sera is supplied lyophilised.

- Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.
- Refer to the Control section of the individual analyser application.
- Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

**MATERIALS PROVIDED**

Human Assayed Multi-sera - Level 2 20 x 5ml / 5 x 5ml

**MATERIALS REQUIRED BUT NOT PROVIDED**

Volumetric pipette

**ASSIGNED VALUES**

Each batch of assayed human serum is submitted to reference laboratories for assignment against international Reference Standards. Where international Reference Standards are unavailable, Reference Methods are used. Values are also collected from approx. 3000 laboratories worldwide and using a unique statistical analysis, a value is assigned.

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean  $\pm 2S.D.$  This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

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**

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

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
	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	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	163	139	187	12.00	24.00	AMP optimised to NVKC/SFBC 37°C
	U/l	164	140	188	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	105	89	121	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	23.0	18.4	27.6	2.30	4.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	18.3	14.4	22.2	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.25	1.89	0.16	0.32	

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Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.05	1.84	2.26	0.11	0.21	Arsenazo III
	mg/dl	8.22	7.37	9.07	0.43	0.85	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	106	97.5	115	4.25	8.50	ISE indirect
Cholinesterase	U/l	6719	5375	8063	672.00	1344.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC serum start (DGKC) 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	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	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	101	153	13.00	26.00	IDMS traceable
	mg/dl	1.44	1.14	1.74	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.91	5.03	6.79	0.44	0.88	Glucose oxidase
	mg/dl	106	90.6	121	7.70	15.40	
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL PPD
	mg/dl	52.1	44.4	59.8	3.85	7.70	

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct Clearance Method
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	19.0	15.5	22.5	1.75	3.50	Colorimetric with ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	19.1	15.6	22.6	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.2	127	9.90	19.80	
Lactate	mmol/l	1.57	1.28	1.86	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	210	179	241	15.50	31.00	L->P 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.01	0.88	1.14	0.06	0.13	Spectrophotometric
	mg/dl	0.701	0.614	0.788	0.04	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Arsenazo III
	mg/dl	2.31	2.04	2.58	0.14	0.27	
	mmol/l	0.94	0.82	1.05	0.06	0.11	Enzymatic
	mg/dl	2.28	2.00	2.56	0.14	0.28	
Osmolality	mOsm/kg	299	239	359	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction end point
	g/dl	5.92	4.73	7.11	0.60	1.19	
	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction kinetic
	g/dl	6.01	4.81	7.21	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.2	31.7	48.7	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	225	177	273	24.00	48.00	
	µmol/l	45.6	36.0	55.2	4.80	9.60	Calculated from Transferrin
	µg/dl	255	201	309	27.00	54.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
mg/dl	93.8	78.6	109	7.60	15.20		
UIBC	µmol/l	21.0	17.2	24.8	1.90	3.80	Direct Colorimetric
	µg/dl	117	96.1	138	10.45	20.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.34	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	
	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		
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease end point
	mg/dl	43.2	36.7	49.7	3.25	6.50	



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Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
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	

## Beckman Coulter AU Series®

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Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### 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	44.8	38.1	51.5	3.35	6.70	Bromocresol Purple
	g/dl	4.48	3.81	5.15	0.34	0.67	
Alkaline Phosphatase	U/l	281	239	323	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	197	167	227	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.6	22.2	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	30.8	24.4	37.2	3.20	6.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.80	1.43	2.17	0.19	0.37	
	µmol/l	29.3	23.1	35.5	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	





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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	29.2	23.0	35.4	3.10	6.20	DPD (Beckman AU)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.05	1.84	2.26	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.22	7.37	9.07	0.43	0.85	
	mmol/l	2.07	1.86	2.28	0.11	0.21	Arsenazo III
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	104	95.7	112	4.15	8.30	ISE indirect
Cholinesterase	U/l	5516	4413	6619	551.50	1103.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	197	161	233	18.00	36.00	Beckman CK-NAC (Extinction Coeff) 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	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	120	95.8	144	12.10	24.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	119	95.2	143	11.90	23.80	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	123	98.7	147	12.15	24.30	IDMS traceable
	mg/dl	1.39	1.12	1.66	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	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
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.15	5.22	7.08	0.47	0.93	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
	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	1.28	1.09	1.47	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.34	1.14	1.54	0.10	0.20	HDL - Ultra
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
	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	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	205	174	236	15.50	31.00	L->P 37°C
	U/l	448	381	515	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	203	172	234	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C
	U/l	44	36	52	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.94	0.82	1.05	0.06	0.11	Spectrophotometric
	mg/dl	0.649	0.571	0.727	0.04	0.08	
Magnesium	mmol/l	0.98	0.87	1.10	0.06	0.12	Xylidyl Blue
	mg/dl	2.39	2.10	2.68	0.15	0.29	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction kinetic
	g/dl	5.92	4.73	7.11	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	

## Beckman Coulter AU Series®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
UIBC	µmol/l	25.4	20.8	30.0	2.30	4.60	Direct Colorimetric
	µg/dl	142	116	168	13.00	26.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.36	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	
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease end point
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
BUN	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

## Beckman DxC600/800®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Purple
	g/dl	4.42	3.76	5.08	0.33	0.66	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	178	151	205	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Differential rate pH change
	mmol/l	13.4	10.6	16.2	1.40	2.80	Ion selective electrode
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	mmol/l	1.99	1.79	2.19	0.10	0.20	Ion selective electrode
	mg/dl	7.98	7.17	8.79	0.41	0.81	
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	105	96.7	113	4.15	8.30	ISE indirect
CK Total	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
	U/l	207	169	245	19.00	38.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

## Beckman DxC600/800®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	125	99.8	150	12.60	25.20	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.92	5.03	6.81	0.45	0.89	Oxygen electrode
	mg/dl	107	90.6	123	8.20	16.40	
	mmol/l	5.93	5.04	6.82	0.45	0.89	Glucose oxidase
	mg/dl	107	90.8	123	8.10	16.20	
HDL - Cholesterol	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct HDL PPD
	mg/dl	52.9	44.8	61.0	4.05	8.10	
	mmol/l	1.37	1.16	1.58	0.11	0.21	HDL - Ultra
	mg/dl	52.9	44.8	61.0	4.05	8.10	
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	1.49	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	174	148	200	13.00	26.00	L->P 37°C
	U/l	175	149	201	13.00	26.00	L->P IFCC 37°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Calmagite
	mg/dl	2.34	2.06	2.62	0.14	0.28	

## Beckman DxC600/800®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction kinetic
	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	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
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	
Urea	mmol/l	7.64	6.49	8.79	0.58	1.15	Urease end point
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

## BIOSYSTEMS A15

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	4.18	3.63	4.73	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	



**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.12	6.06	8.18	0.53	1.06	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	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	270	230	310	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	210	179	241	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	173	147	199	13.00	26.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	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	
Calcium	mmol/l	2.05	1.85	2.25	0.10	0.20	Arsenazo III
	mg/dl	8.22	7.41	9.03	0.41	0.81	
Cholesterol	mmol/l	4.09	3.55	4.63	0.27	0.54	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Glucose	mmol/l	5.97	5.07	6.87	0.45	0.90	Glucose oxidase
	mg/dl	108	91.4	125	8.30	16.60	
Protein Total	g/l	56.0	44.8	67.2	5.60	11.20	Biuret reaction end point
	g/dl	5.60	4.48	6.72	0.56	1.12	
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	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

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

## COBAS INTEGRA®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Green
	g/dl	4.36	3.71	5.01	0.33	0.65	
	g/l	40.4	34.3	46.5	3.05	6.10	Turbidimetric Assays
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	149	126	172	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	116	98	134	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	95	81	109	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	76	65	87	5.50	11.00	Saccharogenic 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	0.21	
	µmol/l	16.6	13.1	20.1	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.971	0.766	1.18	0.10	0.21	

## COBAS INTEGRA®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Roche JG factored
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	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	24.4	19.3	29.5	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.00	1.80	2.20	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.02	7.21	8.83	0.41	0.81	
	mmol/l	1.99	1.79	2.19	0.10	0.20	NM-BAPTA
	mg/dl	7.98	7.17	8.79	0.41	0.81	
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
Chloride	mmol/l	105	96.5	114	4.25	8.50	ISE indirect
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	96	136	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	125	99.7	150	12.65	25.30	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	

## COBAS INTEGRA®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PEGME
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	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	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	404	344	464	30.00	60.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C

## COBAS INTEGRA®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	221	188	254	16.50	33.00	L->P IFCC 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 30°C
	U/l	112	95	129	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.96	0.85	1.08	0.06	0.12	Ion selective electrode
	mg/dl	0.669	0.588	0.750	0.04	0.08	
Magnesium	mmol/l	0.99	0.87	1.10	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.40	2.11	2.69	0.15	0.29	
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.68	4.00	5.36	0.34	0.68	
	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.68	4.00	5.36	0.34	0.68	
Potassium	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction end point
	g/dl	5.58	4.46	6.70	0.56	1.12	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	228	179	277	24.50	49.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.2	115	7.95	15.90	

## COBAS INTEGRA®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.91	5.16	6.66	0.38	0.75		
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.90	5.12	6.68	0.39	0.78		
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.93	5.16	6.70	0.39	0.77		
	Urea	mmol/l	7.04	5.98	8.10	0.53	1.06	Urease kinetic
		mg/dl	42.3	35.9	48.7	3.20	6.40	
mmol/l		7.04	5.98	8.10	0.53	1.06	BUN	
mg/dl		19.8	16.8	22.8	1.50	3.00		



## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Calcium	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	
Cholesterol	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
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	
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose oxidase
	mg/dl	113	95.9	130	8.55	17.10	
LD (LDH)	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Protein Total	g/l	57.2	45.7	68.7	5.75	11.50	Biuret reaction end point
	g/dl	5.72	4.57	6.87	0.58	1.15	
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

## HITACHI SERIES®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	114	97	131	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	187	159	215	14.00	28.00	Randox AMP 37°C
	U/l	146	124	168	11.00	22.00	Randox AMP 30°C
	U/l	119	102	136	8.50	17.00	Randox AMP 25°C
ALT (GPT)	U/l	33	26	40	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	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
Acid Phosphatase (Total)	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	21.5	17.2	25.8	2.15	4.30	5th Generation Colorimetric
Calcium	mmol/l	1.99	1.79	2.19	0.10	0.20	Cresolphthalein complexone
	mg/dl	7.98	7.17	8.79	0.41	0.81	

## HITACHI SERIES®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.00	1.80	2.20	0.10	0.20	NM-BAPTA
	mg/dl	8.02	7.21	8.83	0.41	0.81	
Cholesterol	mmol/l	3.95	3.43	4.47	0.26	0.52	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Chloride	mmol/l	101	93.0	109	4.00	8.00	ISE indirect
Creatinine	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	58	49	67	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	30	42	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
Magnesium	mmol/l	1.01	0.89	1.13	0.06	0.12	Xylidyl Blue
	mg/dl	2.45	2.16	2.74	0.15	0.29	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
Urea	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	275	234	316	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	214	182	246	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	176	150	202	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	108	92	124	8.00	16.00	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
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
Bile Acids	µmol/l	23.9	19.1	28.7	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Nitrobenzenediazonium salt
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	1.97	1.77	2.17	0.10	0.20	Arsenazo III
	mg/dl	7.90	7.09	8.71	0.41	0.81	

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	3.98	3.47	4.49	0.26	0.51	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	107	98.5	116	4.25	8.50	ISE direct
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct HDL PEGME
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct Clearance Method
	mg/dl	46.3	39.4	53.2	3.45	6.90	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
LD (LDH)	U/l	423	359	487	32.00	64.00	P->L SFBC 37°C
	U/l	305	259	351	23.00	46.00	P->L SFBC 30°C
	U/l	214	182	246	16.00	32.00	P->L SFBC 25°C
Magnesium	mmol/l	0.98	0.87	1.10	0.06	0.12	Xylidyl Blue
	mg/dl	2.39	2.10	2.68	0.15	0.29	

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - direct
Protein Total	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction end point
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	82.9	115	8.10	16.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	
	mmol/l	0.36	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	
Urea	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	40.9	34.8	47.0	3.05	6.10	Turbidimetric Assays
	g/dl	4.09	3.48	4.70	0.31	0.61	
Alkaline Phosphatase	U/l	149	127	171	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	272	231	313	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	212	180	244	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	174	148	200	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	175	149	201	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	95	129	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	162	137	187	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	126	107	145	9.50	19.00	AMP optimised to NVKC/SFBC 30°C
	U/l	104	88	120	8.00	16.00	AMP optimised to NVKC/SFBC 25°C
	U/l	168	143	193	12.50	25.00	AMP non-optimised 37°C
	U/l	131	111	151	10.00	20.00	AMP non-optimised 30°C
	U/l	107	91	123	8.00	16.00	AMP non-optimised 25°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Colorimetric 37°C
	U/l	115	97	133	9.00	18.00	Colorimetric 30°C
	U/l	94	80	108	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer with P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	16	26	2.50	5.00	Tris buffer with P5P 25°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	32	25	39	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
	U/l	76	65	87	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	89	76	102	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	72	61	83	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	82	69	95	6.50	13.00	Saccharogenic 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	84	71	97	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.34	1.10	1.58	0.12	0.24	Immunoturbidimetric
	mg/dl	134	110	158	12.00	24.00	
Apolipoprotein B	g/l	0.59	0.48	0.69	0.05	0.11	Immunoturbidimetric
	mg/dl	58.7	48.1	69.3	5.30	10.60	
Acid Phosphatase (Total)	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	41	63	5.50	11.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
	U/l	31	25	37	3.00	6.00	Tris buffer SCE 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer SCE 30°C
Bile Acids	µmol/l	24.3	19.4	29.2	2.45	4.90	4th Generation Colorimetric
	µmol/l	21.5	17.2	25.8	2.15	4.30	5th Generation Colorimetric
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Colorimetric
	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	12.9	10.2	15.6	1.35	2.70	Differential rate pH change

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
	mmol/l	14.0	11.1	16.9	1.45	2.90	Ion selective electrode
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	17.5	13.9	21.1	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.813	1.23	0.10	0.21	
	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	16.1	12.8	19.4	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.749	1.14	0.10	0.19	
Bilirubin Total	µmol/l	13.2	10.4	16.0	1.40	2.80	Modified Jendrassik
	mg/dl	0.772	0.608	0.936	0.08	0.16	
	µmol/l	23.5	18.6	28.4	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	30.2	23.9	36.5	3.15	6.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.4	19.3	29.5	2.55	5.10	Nitrobenzenediazonium salt
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	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	
µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin/Vanadate	
mg/dl	1.70	1.35	2.05	0.18	0.35		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	31.6	25.0	38.2	3.30	6.60	Modified Jendrassik
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.01	1.81	2.21	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.06	7.25	8.87	0.41	0.81	
	mmol/l	2.08	1.87	2.29	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	8.34	7.49	9.19	0.43	0.85	
	mmol/l	1.99	1.79	2.19	0.10	0.20	Ion selective electrode
	mg/dl	7.98	7.17	8.79	0.41	0.81	
	mmol/l	2.05	1.85	2.25	0.10	0.20	Arsenazo III
	mg/dl	8.22	7.41	9.03	0.41	0.81	
	mmol/l	2.01	1.81	2.21	0.10	0.20	NM-BAPTA
	mg/dl	8.06	7.25	8.87	0.41	0.81	
mmol/l	0.96	0.86	1.05	0.05	0.10	Ionised calcium	
mg/dl	3.84	3.45	4.23	0.20	0.39		
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	134	172	9.50	19.00	
	mmol/l	4.02	3.49	4.55	0.27	0.53	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	108	99.4	117	4.30	8.60	Colorimetric
	mmol/l	105	96.7	113	4.15	8.30	Ortho Vitros Microslide Systems
	mmol/l	104	95.3	113	4.35	8.70	ISE indirect
	mmol/l	105	96.1	114	4.45	8.90	ISE direct
Cholinesterase	U/l	5692	4554	6830	569.00	1138.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	152	220	17.00	34.00	Ortho Vitros Microslide Systems 37°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	190	155	225	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	119	97	141	11.00	22.00	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	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	210	172	248	19.00	38.00	Monothioglycerol 37°C
	U/l	131	108	154	11.50	23.00	Monothioglycerol 30°C
	U/l	89	73	105	8.00	16.00	Monothioglycerol 25°C
	U/l	185	152	218	16.50	33.00	Dithioerythritol (DTE) IFCC correlated 37°C
U/l	116	95	137	10.50	21.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	79	65	93	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	17.1	13.7	20.5	1.70	3.40	Atomic absorption
	µg/dl	109	87.1	131	10.95	21.90	
	µmol/l	16.1	12.9	19.3	1.60	3.20	Colorimetric
	µg/dl	102	82.0	122	10.00	20.00	
Cortisol	nmol/l	530	398	662	66.00	132.00	Roche Cobas E411
	µg/dl	19.1	14.3	23.9	2.40	4.80	
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Alkaline picrate with deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	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	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	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	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Digoxin	nmol/l	2.06	1.65	2.47	0.21	0.41	Immunoturbidimetric
	ng/ml	1.61	1.29	1.93	0.16	0.32	
Folate	nmol/l	31.6	24.0	39.1	3.78	7.56	Roche Cobas E411
	ng/ml	13.9	10.6	17.2	1.65	3.30	
Free T4	pmol/l	15.7	11.8	19.6	1.95	3.90	Abbott Architect
	ng/dl	1.22	0.920	1.52	0.15	0.30	
	pg/ml	12.2	9.20	15.2	1.50	3.00	Abbott Architect
	pmol/l	16.5	12.4	20.6	2.05	4.10	Siemens Centaur XP/XPT/Classic
	ng/dl	1.29	0.967	1.61	0.16	0.32	
	pg/ml	12.9	9.67	16.1	1.62	3.23	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	17.3	13.0	21.6	2.15	4.30	Beckman Access
	ng/dl	1.35	1.01	1.69	0.17	0.34	
	pg/ml	13.5	10.1	16.9	1.70	3.40	Beckman Access
	pmol/l	15.3	11.5	19.1	1.90	3.80	Beckman Dxl800
	ng/dl	1.19	0.897	1.48	0.15	0.29	
	pg/ml	11.9	8.97	14.8	1.47	2.93	Beckman Dxl800
	pmol/l	20.2	15.1	25.3	2.55	5.10	Roche Cobas E411
	ng/dl	1.58	1.18	1.98	0.20	0.40	
	pg/ml	15.8	11.8	19.8	2.00	4.00	Roche Cobas E411
	pmol/l	20.3	15.2	25.4	2.55	5.10	Roche Cobas 6000/8000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas 6000/8000
Gentamicin	pmol/l	17.7	13.3	22.1	2.20	4.40	Biomerieux Vidas FT4N Kit
	ng/dl	1.38	1.04	1.72	0.17	0.34	
	pg/ml	13.8	10.4	17.2	1.70	3.40	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.72	6.18	9.26	0.77	1.54	Immunoturbidimetric
	µg/ml	3.69	2.95	4.43	0.37	0.74	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	2.00	4.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	1.50	3.00	Gamma glutamyl-4-nitroanilide 25°C



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	58	49	67	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	30	42	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.6	123	8.20	16.40	
	mmol/l	6.11	5.19	7.03	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Oxygen electrode
	mg/dl	108	91.7	124	8.15	16.30	
mmol/l	6.11	5.19	7.03	0.46	0.92	Glucose oxidase	
mg/dl	110	93.5	127	8.25	16.50		
alpha-HBDH	U/l	228	180	276	24.00	48.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	172	136	208	18.00	36.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	129	102	156	13.50	27.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PPD
	mg/dl	51.7	44.0	59.4	3.85	7.70	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Vitros Magnetic HDL
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct Clearance Method
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	55.2	46.7	63.7	4.25	8.50	
mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra	
mg/dl	51.3	43.6	59.0	3.85	7.70		
mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation	
mg/dl	55.2	47.1	63.3	4.05	8.10		
Immunoglobulin A	g/l	1.76	1.32	2.20	0.22	0.44	Immunoturbidimetric
	mg/dl	176	132	220	22.00	44.00	
Immunoglobulin G	g/l	7.49	6.14	8.84	0.68	1.35	Immunoturbidimetric
	mg/dl	749	614	884	67.50	135.00	
Immunoglobulin M	g/l	0.70	0.56	0.84	0.07	0.14	Immunoturbidimetric
	mg/dl	70.2	56.2	84.2	7.00	14.00	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	19.6	16.0	23.2	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	110	89.4	131	10.30	20.60	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Ion selective electrode
	mg/dl	13.5	11.1	15.9	1.20	2.40	
	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	
	mmol/l	1.45	1.19	1.71	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.1	10.7	15.5	1.20	2.40	
	mmol/l	1.57	1.29	1.85	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.6	16.6	1.25	2.50	
mmol/l	1.46	1.20	1.72	0.13	0.26	UV LDH	
mg/dl	13.2	10.8	15.6	1.20	2.40		
LAP	U/l	19	16	22	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	606	515	697	45.50	91.00	Ortho Vitros Microslide Systems 37°C
	U/l	196	167	225	14.50	29.00	L->P 37°C
	U/l	142	121	163	10.50	21.00	L->P 30°C
	U/l	99	85	113	7.00	14.00	L->P 25°C
	U/l	451	383	519	34.00	68.00	P->L Scandinavian & Dutch 37°C
	U/l	326	277	375	24.50	49.00	P->L Scandinavian & Dutch 30°C
	U/l	229	194	264	17.50	35.00	P->L Scandinavian & Dutch 25°C
	U/l	410	349	471	30.50	61.00	P->L German methods 37°C
	U/l	296	252	340	22.00	44.00	P->L German methods 30°C
	U/l	208	177	239	15.50	31.00	P->L German methods 25°C
	U/l	416	353	479	31.50	63.00	P->L SFBC 37°C
	U/l	300	255	345	22.50	45.00	P->L SFBC 30°C
	U/l	211	179	243	16.00	32.00	P->L SFBC 25°C

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	171	137	205	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C
	U/l	43	35	51	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.23	1.09	1.37	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.854	0.757	0.951	0.05	0.10	
	mmol/l	0.99	0.87	1.11	0.06	0.12	Ion selective electrode
	mg/dl	0.687	0.605	0.769	0.04	0.08	
	mmol/l	0.99	0.87	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.684	0.601	0.767	0.04	0.08	
mmol/l	0.99	0.87	1.11	0.06	0.12	Randox Colorimetric	
mg/dl	0.690	0.607	0.773	0.04	0.08		
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Arsenazo III
	mg/dl	2.32	2.04	2.60	0.14	0.28	
	mmol/l	0.97	0.86	1.09	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.36	2.08	2.64	0.14	0.28	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Calmagite
	mg/dl	2.34	2.06	2.62	0.14	0.28	
mmol/l	0.97	0.86	1.09	0.06	0.12	Xylidyl Blue	
mg/dl	2.36	2.08	2.64	0.14	0.28		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Methylthymol blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
	mmol/l	0.98	0.86	1.10	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.38	2.09	2.67	0.15	0.29	
mmol/l	0.94	0.82	1.05	0.06	0.11	Enzymatic	
mg/dl	2.27	2.00	2.54	0.14	0.27		
NEFA	mmol/l	1.38	1.17	1.59	0.11	0.21	Colorimetric
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
	mOsm/kg	308	246	370	31.00	62.00	Freezing point depression
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	1.53	1.30	1.76	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV	
mg/dl	4.56	3.88	5.24	0.34	0.68		
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - direct
	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
	mmol/l	4.01	3.69	4.33	0.16	0.32	Enzymatic
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction kinetic
	g/dl	5.88	4.70	7.06	0.59	1.18	
PSA Total	ng/ml =	11.7	8.75	14.7	1.48	2.95	Roche Cobas Core EIA
	ng/ml =	11.5	8.62	14.4	1.44	2.88	Beckman Access standardised to Hybritech
	ng/ml =	9.83	7.38	12.3	1.23	2.45	Siemens Centaur XP/XPT/Classic
	ng/ml =	9.42	7.07	11.8	1.18	2.35	Abbott Architect
	ng/ml =	12.7	9.50	15.9	1.60	3.20	Cobas E411
	ng/ml =	12.3	9.22	15.4	1.54	3.08	Roche Cobas 6000/8000
	ng/ml =	9.58	7.19	12.0	1.20	2.39	Beckman Dxl800 standardised to WHO IRP96/670
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	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
	mmol/l	145	138	152	3.50	7.00	Enzymatic
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 =	1.06	0.85	1.27	0.10	0.21	Abbott Architect
	µU/ml =	1.62	1.30	1.94	0.16	0.32	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.36	1.08	1.64	0.14	0.28	bioMerieux VIDAS TSH
	µU/ml =	1.40	1.12	1.68	0.14	0.28	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.36	1.09	1.63	0.14	0.27	Siemens Immulite 2000/2500
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas E411
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Roche Cobas Core EIA

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas 6000/8000
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Beckman Dxl800 Hyper TSH
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.23	0.98	1.48	0.12	0.25	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	267	211	323	28.00	56.00	
	µmol/l	42.1	33.3	50.9	4.40	8.80	Removal of excess free iron
	µg/dl	235	186	284	24.50	49.00	
	µmol/l	41.7	33.0	50.4	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	233	184	282	24.50	49.00	
	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	46.5	36.7	56.3	4.90	9.80	Calculated from Transferrin
	µg/dl	260	205	315	27.50	55.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.83	1.38	2.28	0.23	0.45	Abbott Architect
	ng/ml	1.19	0.898	1.48	0.15	0.29	
	ng/dl	119	89.8	148	14.60	29.20	Abbott Architect
	nmol/l	2.14	1.61	2.67	0.27	0.53	Siemens Centaur XP/XPT/Classic
	ng/ml	1.39	1.05	1.73	0.17	0.34	
	ng/dl	139	105	173	17.00	34.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.71	2.03	3.39	0.34	0.68	Vitros ECi
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Vitros ECi

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.26	1.70	2.82	0.28	0.56	Roche Cobas E411
	ng/ml	1.47	1.11	1.83	0.18	0.36	
	ng/dl	147	111	183	18.00	36.00	Roche Cobas E411
	nmol/l	2.07	1.56	2.58	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.35	1.02	1.68	0.17	0.33	
	ng/dl	135	102	168	16.50	33.00	Roche Cobas 6000/8000
Total T4	nmol/l	86.6	65.0	108	10.80	21.60	Abbott Architect
	µg/dl	6.75	5.07	8.43	0.84	1.68	
	ng/ml	67.5	50.7	84.3	8.40	16.80	Abbott Architect
	nmol/l	84.8	63.6	106	10.60	21.20	Siemens Centaur XP/XPT/Classic
	µg/dl	6.61	4.96	8.26	0.83	1.65	
	ng/ml	66.1	49.6	82.6	8.25	16.50	Siemens Centaur XP/XPT/Classic
	nmol/l	95.5	71.6	119	11.95	23.90	Beckman Access
	µg/dl	7.45	5.58	9.32	0.94	1.87	
	ng/ml	74.5	55.8	93.2	9.35	18.70	Beckman Access
	nmol/l	85.6	64.2	107	10.70	21.40	Roche Modular E170
	µg/dl	6.68	5.01	8.35	0.84	1.67	
	ng/ml	66.8	50.1	83.5	8.35	16.70	Roche Modular E170
	nmol/l	83.1	62.4	104	10.35	20.70	Roche Cobas E411
	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 E411
	nmol/l	82.5	61.9	103	10.30	20.60	Roche Cobas 6000/8000
	µg/dl	6.44	4.83	8.05	0.81	1.61	
	ng/ml	64.4	48.3	80.5	8.05	16.10	Roche Cobas 6000/8000



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.96	1.57	2.35	0.20	0.39	Immunoturbidimetric
	mg/dl	196	157	235	19.50	39.00	
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	
	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.1	114	8.05	16.10	
mmol/l	1.21	1.02	1.40	0.10	0.19	Ortho Vitros Microslide Systems	
mg/dl	107	90.3	124	8.35	16.70		
UIBC	µmol/l	21.8	17.9	25.7	1.95	3.90	Direct Colorimetric
	µg/dl	122	100	144	11.00	22.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	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	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.06	6.54	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	7.37	6.27	8.47	0.55	1.10	Urease end point
	mg/dl	44.3	37.7	50.9	3.30	6.60	
	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
Vitamin B12	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Vitamin B12	pmol/l	457	366	548	45.54	91.08	Roche Cobas E411
	pg/ml	619	496	742	61.50	123.00	
Zinc	µmol/l	23.8	19.0	28.6	2.40	4.80	Colorimetric with deproteinisation
	µg/dl	155	124	186	15.50	31.00	

## MINDRAY BS-200/300/400

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
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	256	218	294	19.00	38.00	Diethanolamine buffer DEA 37°C	
	U/l	199	170	228	14.50	29.00	Diethanolamine buffer DEA 30°C	
	U/l	164	139	189	12.50	25.00	Diethanolamine buffer DEA 25°C	
	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C	
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C	
	U/l	114	97	131	8.50	17.00	AMP optimised to IFCC 25°C	
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C	
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C	
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C	
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C	
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C	
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid	
	mg/dl	1.68	1.33	2.03	0.18	0.35		
	µmol/l	24.3	19.2	29.4	2.55	5.10	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.42	1.12	1.72	0.15	0.30		
	µmol/l	28.8	22.7	34.9	3.05	6.10	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.68	1.33	2.03	0.18	0.35		
	Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Arsenazo III
		mg/dl	8.34	7.49	9.19	0.43	0.85	

## MINDRAY BS-200/300/400

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Cholinesterase	U/l	5655	4524	6786	565.50	1131.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
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	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.21	5.27	7.15	0.47	0.94	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.25	1.07	1.43	0.09	0.18	Direct HDL PPD
	mg/dl	48.3	41.3	55.3	3.50	7.00	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
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	
LD (LDH)	U/l	438	373	503	32.50	65.00	P->L German methods 37°C
	U/l	316	269	363	23.50	47.00	P->L German methods 30°C
	U/l	222	189	255	16.50	33.00	P->L German methods 25°C

## MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	407	346	468	30.50	61.00	P->L SFBC 37°C
	U/l	294	250	338	22.00	44.00	P->L SFBC 30°C
	U/l	206	175	237	15.50	31.00	P->L SFBC 25°C
	U/l	218	185	251	16.50	33.00	L->P IFCC 37°C
	U/l	157	134	180	11.50	23.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Triglycerides	mmol/l	1.10	0.93	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.10	5.29	6.91	0.41	0.81	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.06	5.28	6.84	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	
Urea	mmol/l	7.74	6.58	8.90	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.74	6.58	8.90	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	

## Ortho VITROS®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	39.6	33.6	45.6	3.00	6.00	Vitros DT60/DT60 II/DTSC II
	g/dl	3.96	3.36	4.56	0.30	0.60	
Alkaline Phosphatase	U/l	149	127	171	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	9.27	7.32	11.2	0.98	1.95	BuBc Vitros Slide
	mg/dl	0.542	0.428	0.656	0.06	0.11	
Bilirubin Total	µmol/l	23.5	18.6	28.4	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.0	10.3	15.7	1.35	2.70	BuBc Vitros Slide
	mg/dl	0.761	0.603	0.919	0.08	0.16	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	153	134	172	9.50	19.00	
Chloride	mmol/l	105	96.7	113	4.15	8.30	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5501	4401	6601	550.00	1100.00	Ortho Vitros Microslide Systems 37°C

## Ortho VITROS®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	186	152	220	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Creatinine	μmol/l	122	97.8	146	12.10	24.20	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	μmol/l	124	99.2	149	12.40	24.80	Vitros IDMS Traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Free T4	pmol/l	35.5	26.6	44.4	4.45	8.90	Vitros ECi
	ng/dl	2.77	2.07	3.47	0.35	0.70	
	pg/ml	27.7	20.7	34.7	3.50	7.00	Vitros ECi
gamma-GT	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.6	123	8.20	16.40	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Vitros Magnetic HDL
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
Iron	μmol/l	19.6	16.0	23.2	1.80	3.60	Ortho Vitros Microslide Systems
	μg/dl	110	89.4	131	10.30	20.60	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	606	515	697	45.50	91.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	171	137	205	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.97	0.86	1.09	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.36	2.08	2.64	0.14	0.28	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.74	4.03	5.45	0.36	0.71	

## Ortho VITROS®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	267	211	323	28.00	56.00	
Total T3	nmol/l	2.71	2.03	3.39	0.34	0.68	Vitros ECi
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Vitros ECi
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	107	90.3	124	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	



## Roche Cobas 6000 c501 e601

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	41.5	35.2	47.8	3.15	6.30	Turbidimetric Assays
	g/dl	4.15	3.52	4.78	0.32	0.63	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	113	96	130	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	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
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	22.4	17.9	26.9	2.25	4.50	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.3	10.5	16.1	1.40	2.80	Colorimetric

## Roche Cobas 6000 c501 e601

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	17.4	13.8	21.0	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	17.5	13.8	21.2	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	17.5	13.8	21.2	1.85	3.70	Roche JG factored
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Bilirubin Total	µmol/l	25.4	20.0	30.8	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.17	1.81	0.16	0.32	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.02	1.82	2.22	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.10	7.29	8.91	0.41	0.81	
	mmol/l	2.02	1.82	2.22	0.10	0.20	NM-BAPTA
Cholesterol	mg/dl	8.10	7.29	8.91	0.41	0.81	
	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase
Cholesterol	mg/dl	152	133	171	9.50	19.00	
	mmol/l	101	92.5	110	4.25	8.50	ISE indirect
Cholinesterase	U/l	5464	4372	6556	546.00	1092.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	185	152	218	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	20.3	15.2	25.4	2.55	5.10	Roche Cobas 6000/8000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	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
	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
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 25°C

## Roche Cobas 6000 c501 e601

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Glucose	mmol/l	6.15	5.22	7.08	0.47	0.93	Glucose dehydrogenase	
	mg/dl	111	94.1	128	8.45	16.90		
	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase	
	mg/dl	110	93.7	126	8.15	16.30		
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PEGME	
	mg/dl	54.4	46.3	62.5	4.05	8.10		
	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL Roche 3rd generation	
	mg/dl	54.4	46.3	62.5	4.05	8.10		
Iron	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation	
	mg/dl	55.2	47.1	63.3	4.05	8.10		
	Iron	μmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
		μg/dl	106	87.2	125	9.40	18.80	
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	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase	
	mg/dl	14.0	11.4	16.6	1.30	2.60		
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P 37°C	
	U/l	144	122	166	11.00	22.00	L->P 30°C	
	U/l	101	86	116	7.50	15.00	L->P 25°C	
	U/l	410	349	471	30.50	61.00	P->L German methods 37°C	
	U/l	296	252	340	22.00	44.00	P->L German methods 30°C	
	U/l	208	177	239	15.50	31.00	P->L German methods 25°C	
	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C	
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C	
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C	

## Roche Cobas 6000 c501 e601

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.612	0.776	0.04	0.08	
Magnesium	mmol/l	0.97	0.85	1.09	0.06	0.12	Xylidyl Blue
	mg/dl	2.36	2.08	2.64	0.14	0.28	
	mmol/l	0.97	0.85	1.08	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Osmolality	mOsm/kg	297	237	357	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction kinetic
	g/dl	6.01	4.81	7.21	0.60	1.20	
PSA Total	ng/ml =	12.3	9.22	15.4	1.54	3.08	Roche Cobas 6000/8000
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.54	1.23	1.85	0.16	0.31	Roche Cobas 6000/8000
TIBC	μmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	228	179	277	24.50	49.00	
	μmol/l	49.1	38.8	59.4	5.15	10.30	Calculated from Transferrin
	μg/dl	274	217	331	28.50	57.00	

## Roche Cobas 6000 c501 e601

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T3	nmol/l	2.07	1.56	2.58	0.26	0.51	Roche Cobas 6000/8000
	ng/ml	1.35	1.02	1.68	0.17	0.33	
	ng/dl	135	102	168	16.50	33.00	Roche Cobas 6000/8000
Total T4	nmol/l	82.5	61.9	103	10.30	20.60	Roche Cobas 6000/8000
	µg/dl	6.44	4.83	8.05	0.81	1.61	
	ng/ml	64.4	48.3	80.5	8.05	16.10	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.2	116	7.90	15.80	
Triglycerides	mmol/l	1.13	0.95	1.32	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	100	83.6	116	8.20	16.40	
	µmol/l	21.2	17.4	25.0	1.90	3.80	Direct Colorimetric
	µg/dl	119	97.3	141	10.85	21.70	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.96	6.46	0.38	0.75	
Uric Acid (Urate)	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	
	mmol/l	7.09	6.02	8.16	0.54	1.07	Urease end point
	mg/dl	42.6	36.2	49.0	3.20	6.40	
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.6	49.4	3.20	6.40	

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

## Roche Cobas C111®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.8	36.3	49.3	3.25	6.50	Bromocresol Green
	g/dl	4.28	3.63	4.93	0.33	0.65	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	94	80	108	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.4	9.83	15.0	1.29	2.57	Enzymatic
Bilirubin Direct	µmol/l	16.6	13.1	20.1	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.971	0.766	1.18	0.10	0.21	
	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.17	1.81	0.16	0.32	



## Roche Cobas C111®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazonium ion
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	1.95	1.75	2.15	0.10	0.20	Cresolphthalein complexone
	mg/dl	7.82	7.01	8.63	0.41	0.81	
	mmol/l	1.99	1.80	2.18	0.10	0.19	NM-BAPTA
	mg/dl	7.98	7.21	8.75	0.39	0.77	
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
Chloride	mmol/l	104	95.5	113	4.25	8.50	ISE indirect
CK Total	U/l	179	147	211	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	112	92	132	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°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	124	99.5	149	12.25	24.50	Roche Creatinine Plus
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	46	40	52	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	32	40	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	25	31	1.50	3.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	

## Roche Cobas C111®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	222	189	255	16.50	33.00	L->P IFCC 37°C
	U/l	160	136	184	12.00	24.00	L->P IFCC 30°C
	U/l	113	96	130	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.98	0.86	1.10	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.38	2.09	2.67	0.15	0.29	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
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
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	82.9	115	8.10	16.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	

## Roche Cobas C311®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Purple
	g/dl	4.37	3.71	5.03	0.33	0.66	
Alkaline Phosphatase	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	112	96	128	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	92	79	105	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	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
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.9	10.3	15.5	1.30	2.60	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	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	µmol/l	17.5	13.9	21.1	1.80	3.60	Roche JG factored
mg/dl	1.02	0.813	1.23	0.10	0.21		

## Roche Cobas C311®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid	
	mg/dl	1.53	1.21	1.85	0.16	0.32		
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.50	1.18	1.82	0.16	0.32		
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion	
	mg/dl	1.48	1.17	1.79	0.16	0.31		
Calcium	mmol/l	2.02	1.81	2.23	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.10	7.25	8.95	0.43	0.85		
	mmol/l	2.02	1.82	2.22	0.10	0.20	NM-BAPTA	
	mg/dl	8.10	7.29	8.91	0.41	0.81		
	Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
		mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	101	92.9	109	4.05	8.10	ISE indirect	
CK Total	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C	
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C	
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	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	132	105	159	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.49	1.19	1.79	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	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.45	1.15	1.75	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®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	407	346	468	30.50	61.00	P->L German methods 37°C
	U/l	294	250	338	22.00	44.00	P->L German methods 30°C
	U/l	206	175	237	15.50	31.00	P->L German methods 25°C
	U/l	215	183	247	16.00	32.00	L->P IFCC 37°C
	U/l	155	132	178	11.50	23.00	L->P IFCC 30°C
	U/l	109	93	125	8.00	16.00	L->P IFCC 25°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.35	2.07	2.63	0.14	0.28	

## Roche Cobas C311®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.2	32.5	49.9	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	230	182	278	24.00	48.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
UIBC	µmol/l	22.6	18.5	26.7	2.05	4.10	Direct Colorimetric
	µg/dl	126	103	149	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.06	6.54	0.37	0.74	
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	

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	



## Roche Cobas c701 / c702 / c711

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	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	137	116	158	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	107	90	124	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	88	74	102	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	108	92	124	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	89	75	103	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	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
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	21.7	17.4	26.0	2.15	4.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic

## Roche Cobas c701 / c702 / c711

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Roche JG factored
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	15.1	12.0	18.2	1.55	3.10	Oxidation to Biliverdin/Vanadate
	mg/dl	0.883	0.702	1.06	0.09	0.18	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	µmol/l	24.1	19.0	29.2	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.41	1.11	1.71	0.15	0.30	
	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	
Cholesterol	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	mmol/l	2.02	1.82	2.22	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.10	7.29	8.91	0.41	0.81	
Cholesterol	mmol/l	2.02	1.82	2.22	0.10	0.20	NM-BAPTA
	mg/dl	8.10	7.29	8.91	0.41	0.81	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase
Cholesterol	mg/dl	154	134	174	10.00	20.00	
	mmol/l	102	94.2	110	3.90	7.80	ISE indirect
Chloride	mmol/l	102	94.2	110	3.90	7.80	ISE indirect
Cholinesterase	U/l	5561	4448	6674	556.50	1113.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	152	220	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
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	128	102	154	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.45	1.15	1.75	0.15	0.30		
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.50	1.20	1.80	0.15	0.30		
	gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase	
	mg/dl	110	93.7	126	8.15	16.30		
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation	
	mg/dl	55.2	47.1	63.3	4.05	8.10		
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.	
	µg/dl	105	86.1	124	9.45	18.90		
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.7	11.3	16.1	1.20	2.40		
LD (LDH)	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C	
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C	
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C	
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C	
Lithium	mmol/l	0.98	0.87	1.10	0.06	0.12	Spectrophotometric	
	mg/dl	0.683	0.601	0.765	0.04	0.08		

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.97	0.85	1.09	0.06	0.12	Xylidyl Blue
	mg/dl	2.36	2.08	2.64	0.14	0.28	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.42	2.13	2.71	0.15	0.29	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	41.1	32.5	49.7	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	230	182	278	24.00	48.00	
	μmol/l	47.0	37.1	56.9	4.95	9.90	Calculated from Transferrin
	μg/dl	263	207	319	28.00	56.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
UIBC	μmol/l	21.8	17.9	25.7	1.95	3.90	Direct Colorimetric
	μg/dl	122	100	144	11.00	22.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	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	

**Roche Cobas c701 / c702 / c711**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.92	6.36	0.36	0.72	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

## RX SERIES®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	288	245	331	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	21.5	17.2	25.8	2.15	4.30	5th Generation Colorimetric
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	16.0	12.7	19.3	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.936	0.743	1.13	0.10	0.19	
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	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Arsenazo III
	mg/dl	8.50	7.62	9.38	0.44	0.88	
Cholesterol	mmol/l	4.24	3.69	4.79	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	142	186	11.00	22.00	

## RX SERIES®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	103	94.4	112	4.30	8.60	ISE direct
CK Total	U/l	220	180	260	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	221	181	261	20.00	40.00	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	132	105	159	13.50	27.00	Enzymatic UV method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.57	5.58	7.56	0.50	0.99	Hexokinase
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	6.29	5.35	7.23	0.47	0.94	Glucose oxidase
	mg/dl	113	96.4	130	8.30	16.60	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	429	365	493	32.00	64.00	P->L German methods 37°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Colorimetric
	mg/dl	0.690	0.607	0.773	0.04	0.08	
Magnesium	mmol/l	1.00	0.88	1.12	0.06	0.12	Xylidyl Blue
	mg/dl	2.43	2.14	2.72	0.15	0.29	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	

## RX SERIES®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - direct
	mmol/l	4.01	3.69	4.33	0.16	0.32	Enzymatic
Protein Total	g/l	61.2	48.9	73.5	6.15	12.30	Biuret reaction end point
	g/dl	6.12	4.89	7.35	0.62	1.23	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - direct
	mmol/l	145	138	152	3.50	7.00	Enzymatic
TIBC	µmol/l	49.6	39.2	60.0	5.20	10.40	Direct Colorimetric
	µg/dl	277	219	335	29.00	58.00	
Triglycerides	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
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	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	
Urea	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	



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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Purple
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	16.1	12.7	19.5	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.743	1.14	0.10	0.20	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	1.98	1.78	2.18	0.10	0.20	Cresolphthalein complexone
	mg/dl	7.94	7.13	8.75	0.41	0.81	
	mmol/l	2.04	1.83	2.25	0.11	0.21	Arsenazo III
Cholesterol	mmol/l	4.02	3.49	4.55	0.27	0.53	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	106	97.1	115	4.45	8.90	ISE indirect
Cholinesterase	U/l	6342	5074	7610	634.00	1268.00	Colorimetric Butyrylthiocholine 37°C



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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	123	98.2	148	12.40	24.80	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	1.40	1.12	1.68	0.14	0.28		
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.91	5.02	6.80	0.45	0.89	Hexokinase
	mg/dl	106	90.5	122	7.75	15.50	
	mmol/l	5.96	5.07	6.85	0.45	0.89	Glucose oxidase
	mg/dl	107	91.4	123	7.80	15.60	
HDL - Cholesterol	mmol/l	1.12	0.95	1.29	0.09	0.17	Direct Clearance Method
	mg/dl	43.2	36.6	49.8	3.30	6.60	
Iron	µmol/l	18.8	15.5	22.1	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.6	123	9.20	18.40	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	405	344	466	30.50	61.00	P->L German methods 37°C
	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.686	0.603	0.769	0.04	0.08	



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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	μmol/l	45.9	36.3	55.5	4.80	9.60	FE+UIBC(saturation with iron)
	μg/dl	257	203	311	27.00	54.00	
	μmol/l	47.7	37.7	57.7	5.00	10.00	Direct Colorimetric
	μg/dl	267	211	323	28.00	56.00	
	μmol/l	43.9	34.7	53.1	4.60	9.20	Calculated from Transferrin
	μg/dl	245	194	296	25.50	51.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.7	117	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.06	5.28	6.84	0.39	0.78	
Urea	mmol/l	7.50	6.37	8.63	0.57	1.13	Urease kinetic
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.50	6.38	8.62	0.56	1.12	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### 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	157	134	180	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
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	1.96	1.77	2.15	0.10	0.19	Cresolphthalein complexone
	mg/dl	7.86	7.09	8.63	0.39	0.77	
Cholesterol	mmol/l	3.69	3.21	4.17	0.24	0.48	Cholesterol Oxidase
	mg/dl	142	124	160	9.00	18.00	
	mmol/l	3.68	3.20	4.16	0.24	0.48	Dimension-Siemens reagents
	mg/dl	142	124	160	9.00	18.00	
Chloride	mmol/l	101	93.2	109	3.90	7.80	ISE indirect
CK Total	U/l	180	148	212	16.00	32.00	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 EXL®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	60	51	69	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL PEGME
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	UV LDH
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	125	101	149	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Methylthymol blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	145	138	152	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	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
Uric Acid (Urate)	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	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	


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

Lot. No. 1366UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Purple
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	156	132	180	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	157	134	180	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer with P5P 37°C
	U/l	39	31	47	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Calcium	mmol/l	1.97	1.77	2.17	0.10	0.20	Cresolphthalein complexone
	mg/dl	7.90	7.09	8.71	0.41	0.81	
Cholesterol	mmol/l	3.67	3.19	4.15	0.24	0.48	Dimension-Siemens reagents
	mg/dl	142	123	161	9.50	19.00	
Chloride	mmol/l	101	92.9	109	4.05	8.10	ISE indirect
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	56	74	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PPD
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.19	1.02	1.36	0.09	0.17	Direct HDL PEGME
	mg/dl	45.9	39.4	52.4	3.25	6.50	
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	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	132	106	158	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.95	0.84	1.06	0.06	0.11	Methylthymol blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.68	4.00	5.36	0.34	0.68	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.1	108	7.40	14.80	



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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.06	0.90	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	79.2	108	7.30	14.60	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.73	4.99	6.47	0.37	0.74	
Urea	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease end point
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	