

## **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> 1367UN	<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. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.2	47.8	3.15	6.30	Bromocresol Green
	g/dl	4.15	3.52	4.78	0.32	0.63	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	171	146	196	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	174	148	200	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	63	54	72	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	104	89	119	7.50	15.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.9	10.3	15.5	1.30	2.60	Enzymatic
Bile Acids	µmol/l	25.6	20.5	30.7	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	

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Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazonium ion
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	100	92.1	108	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	6576	5261	7891	657.50	1315.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	12.4	9.89	14.9	1.26	2.51	Colorimetric
	µg/dl	78.9	62.9	94.9	8.00	16.00	
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	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.10	5.18	7.02	0.46	0.92	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	mmol/l	1.30	1.10	1.50	0.10	0.20	HDL - Ultra
	mg/dl	50.2	42.5	57.9	3.85	7.70	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	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	
	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P 37°C
	U/l	201	170	232	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	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Arsenazo III
	mg/dl	2.03	1.79	2.27	0.12	0.24	
	mmol/l	0.85	0.75	0.95	0.05	0.10	Enzymatic
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Osmolality	mOsm/kg	288	231	345	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	

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Size 20 x 5ml / 5 x 5 ml Expiry 2023-01-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction kinetic
	g/dl	5.74	4.59	6.89	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	37.9	30.0	45.8	3.95	7.90	FE+UIBC(saturation with iron)
	µg/dl	212	168	256	22.00	44.00	
	µmol/l	45.7	36.1	55.3	4.80	9.60	Calculated from Transferrin
	µg/dl	255	202	308	26.50	53.00	
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	97.4	81.7	113	7.85	15.70	
UIBC	µmol/l	18.9	15.5	22.3	1.70	3.40	Direct Colorimetric
	µg/dl	106	86.6	125	9.70	19.40	
Urea	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease end point
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	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	

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	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	
	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	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
	g/l	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	299	254	344	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	38	30	46	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	85	72	98	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	83	70	96	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.3	11.4	17.2	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.7	15.5	23.9	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	



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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	30.7	24.3	37.1	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	30.5	24.1	36.9	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5264	4211	6317	526.50	1053.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	209	171	247	19.00	38.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	135	108	162	13.50	27.00	Creatinine PAP method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	124	98.9	149	12.55	25.10	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	

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Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	126	101	151	12.50	25.00	IDMS traceable	
	mg/dl	1.42	1.14	1.70	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C	
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	50	43	57	3.50	7.00	Beckman Szasz (Extinction Coeff) 37°C	
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C	
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose dehydrogenase	
	mg/dl	112	95.5	129	8.25	16.50		
	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase	
	mg/dl	112	95.7	128	8.15	16.30		
	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase	
	mg/dl	112	95.0	129	8.50	17.00		
HDL - Cholesterol	mmol/l	1.25	1.07	1.43	0.09	0.18	Direct HDL Immunoseparation	
	mg/dl	48.3	41.3	55.3	3.50	7.00		
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method	
	mg/dl	51.0	43.2	58.8	3.90	7.80		
	mmol/l	1.30	1.10	1.50	0.10	0.20	HDL - Ultra	
	mg/dl	50.2	42.5	57.9	3.85	7.70		
	Iron	µmol/l	19.7	16.1	23.3	1.80	3.60	Colorimetric with ppt.
		µg/dl	110	90.0	130	10.00	20.00	
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		

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Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.48	1.21	1.75	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	199	170	228	14.50	29.00	L->P 37°C
	U/l	436	370	502	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	194	165	223	14.50	29.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.692	0.609	0.775	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	4.00	3.68	4.32	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	
	g/l	58.7	46.9	70.5	5.90	11.80	
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.5	33.6	51.4	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.2	119	8.40	16.80	

## Beckman Coulter AU Series®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	102	85.1	119	8.45	16.90	
UIBC	µmol/l	23.9	19.6	28.2	2.15	4.30	Direct Colorimetric
	µg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease end point
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
Uric Acid (Urate)	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	
	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	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.85	5.09	6.61	0.38		0.76
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.81	5.06	6.56	0.38		0.75

## Beckman CX4/5/7/9/LX20®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Purple
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	185	157	213	14.00	28.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Differential rate pH change
Bilirubin Total	µmol/l	30.8	24.3	37.3	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Ion selective electrode
	mg/dl	8.38	7.54	9.22	0.42	0.84	
Chloride	mmol/l	99.7	91.7	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	219	180	258	19.50	39.00	Monothioglycerol 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	
	µmol/l	125	99.9	150	12.55	25.10	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	

## Beckman CX4/5/7/9/LX20®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Glucose oxidase
	mg/dl	108	91.7	124	8.15	16.30	
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	
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	169	144	194	12.50	25.00	L->P 37°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Calmagite
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	103	86.1	120	8.45	16.90	
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	

**Beckman CX4/5/7/9/LX20®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	

## Beckman DxC600/800®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	183	156	210	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Differential rate pH change
	mmol/l	12.9	10.3	15.5	1.30	2.60	Ion selective electrode
Bilirubin Total	µmol/l	30.8	24.3	37.3	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Ion selective electrode
	mg/dl	8.42	7.58	9.26	0.42	0.84	
	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	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	



## Beckman DxC600/800®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5677	4542	6812	567.50	1135.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	218	178	258	20.00	40.00	Monothioglycerol 37°C
	U/l	213	175	251	19.00	38.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	124	99.5	149	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	
mg/dl	1.41	1.13	1.69	0.14	0.28		
gamma-GT	U/l	41	34	48	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	Hexokinase
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	6.02	5.12	6.92	0.45	0.90	Oxygen electrode
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	5.99	5.09	6.89	0.45	0.90	
mg/dl	108	91.7	124	8.15	16.30		
HDL - Cholesterol	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL PPD
	mg/dl	50.6	43.2	58.0	3.70	7.40	
	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	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
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	

## Beckman DxC600/800®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	169	144	194	12.50	25.00	L->P 37°C
	U/l	532	452	612	40.00	80.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	169	143	195	13.00	26.00	L->P IFCC 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.692	0.609	0.775	0.04	0.08	
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Calmagite
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction kinetic
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.0	120	8.50	17.00	
	mmol/l	1.16	0.97	1.35	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	103	85.8	120	8.60	17.20	
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	7.72	6.56	8.88	0.58	1.16	Urease kinetic
	mg/dl	46.4	39.4	53.4	3.50	7.00	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.72	6.56	8.88	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
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	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Green
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	131	111	151	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	23.8	18.8	28.8	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Arsenazo III
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Creatinine PAP method
	mg/dl	1.39	1.12	1.66	0.14	0.27	
Glucose	mmol/l	6.02	5.11	6.93	0.46	0.91	Glucose oxidase
	mg/dl	108	92.1	124	7.95	15.90	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Protein Total	g/l	61.5	49.2	73.8	6.15	12.30	Biuret reaction end point
	g/dl	6.15	4.92	7.38	0.62	1.23	
Triglycerides	mmol/l	1.07	0.90	1.25	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	

## COBAS INTEGRA®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Green
	g/dl	4.32	3.68	4.96	0.32	0.64	
	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Purple
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	39.4	33.5	45.3	2.95	5.90	Turbidimetric Assays
	g/dl	3.94	3.35	4.53	0.30	0.59	
Alkaline Phosphatase	U/l	157	134	180	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	100	86	114	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
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	

## COBAS INTEGRA®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Roche JG factored
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	26.3	20.7	31.9	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.21	1.87	0.17	0.33	
	µmol/l	25.9	20.5	31.3	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
mg/dl	1.53	1.21	1.85	0.16	0.32		
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.13	1.91	2.35	0.11	0.22	NM-BAPTA
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	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	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	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	

## COBAS INTEGRA®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
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	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	6.02	5.12	6.92	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	6.23	5.29	7.17	0.47	0.94	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
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	1.43	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	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	
	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	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	390	332	448	29.00	58.00	P->L German methods 37°C
	U/l	282	240	324	21.00	42.00	P->L German methods 30°C
	U/l	198	168	228	15.00	30.00	P->L German methods 25°C



## COBAS INTEGRA®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5 ml 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	29	24	34	2.50	5.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.619	0.783	0.04	0.08	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.0	44.0	66.0	5.50	11.00	Biuret reaction end point
	g/dl	5.50	4.40	6.60	0.55	1.10	
	g/l	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	140	133	147	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.0	30.8	47.2	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	218	172	264	23.00	46.00	
Triglycerides	mmol/l	1.16	0.97	1.35	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.8	120	8.60	17.20	
	mmol/l	1.20	1.00	1.40	0.10	0.20	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	106	88.5	124	8.75	17.50	

## COBAS INTEGRA®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.09	6.63	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5 ml 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 Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	3.98	3.47	4.49	0.26	0.51	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	
Triglycerides	mmol/l	1.22	1.03	1.41	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	108	91.2	125	8.40	16.80	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	

## HITACHI SERIES®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	10.5	7.04	14.0	1.73	3.46	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	176	150	202	13.00	26.00	Randox AMP 37°C
	U/l	137	117	157	10.00	20.00	Randox AMP 30°C
	U/l	112	96	128	8.00	16.00	Randox AMP 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	75	64	86	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	83	70	96	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°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
Bile Acids	µmol/l	23.4	18.7	28.1	2.35	4.70	5th Generation Colorimetric
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	

## HITACHI SERIES®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.16	1.95	2.37	0.11	0.21	NM-BAPTA
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Chloride	mmol/l	95.8	88.1	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	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
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
Magnesium	mmol/l	0.87	0.77	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.4	120	8.30	16.60	

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease kinetic
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.42	6.31	8.53	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.8	33.8	45.8	3.00	6.00	Bromocresol Green
	g/dl	3.98	3.38	4.58	0.30	0.60	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	96	132	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	101	93.3	109	3.85	7.70	ISE direct
Cholesterol	mmol/l	3.88	3.38	4.38	0.25	0.50	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C



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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.49	5.52	7.46	0.49	0.97	Hexokinase
	mg/dl	117	99.5	135	8.75	17.50	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
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	
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	
LD (LDH)	U/l	418	355	481	31.50	63.00	P->L SFBC 37°C
	U/l	302	256	348	23.00	46.00	P->L SFBC 30°C
	U/l	212	180	244	16.00	32.00	P->L SFBC 25°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	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	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.5	119	8.25	16.50	



Konelab 20/30/60®/Thermo Scientific Indiko Plus		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1367UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5 ml Expiry 2023-01-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.83	5.07	6.59	0.38	0.76		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	216	171	261	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	163	129	197	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	122	97	147	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.5	7.04	14.0	1.73	3.46	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	39.1	33.3	44.9	2.90	5.80	Ortho Vitros Microslide Systems
	g/dl	3.91	3.33	4.49	0.29	0.58	
	g/l	40.0	34.0	46.0	3.00	6.00	Turbidimetric Assays
g/dl	4.00	3.40	4.60	0.30	0.60		
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	277	236	318	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	216	184	248	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	177	151	203	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	174	147	201	13.50	27.00	AMP optimised to NVKC/SFBC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
U/l	111	94	128	8.50	17.00	AMP optimised to NVKC/SFBC 25°C	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	AMP non-optimised 37°C
	U/l	137	117	157	10.00	20.00	AMP non-optimised 30°C
	U/l	112	96	128	8.00	16.00	AMP non-optimised 25°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
Amylase Pancreatic	U/l	63	53	73	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
	U/l	75	64	86	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotrioxide substrates 37°C
	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	71	60	82	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	84	71	97	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Siemens - maltopenta/hexaoside 37°C
	U/l	82	69	95	6.50	13.00	Saccharogenic 37°C
	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	104	89	119	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	83	70	96	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.27	1.04	1.50	0.12	0.23	Immunoturbidimetric
	mg/dl	127	104	150	11.50	23.00	
Apolipoprotein B	g/l	0.55	0.45	0.65	0.05	0.10	Immunoturbidimetric
	mg/dl	55.4	45.4	65.4	5.00	10.00	
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer with P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer SCE 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Colorimetric
	mmol/l	14.0	11.1	16.9	1.45	2.90	Ortho Vitros Microslide Systems
	mmol/l	13.3	10.6	16.0	1.35	2.70	Differential rate pH change

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
	mmol/l	14.1	11.2	17.0	1.45	2.90	Ion selective electrode
Bile Acids	µmol/l	26.6	21.3	31.9	2.65	5.30	4th Generation Colorimetric
	µmol/l	23.4	18.7	28.1	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.7	14.7	22.7	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	13.8	10.9	16.7	1.45	2.90	Modified Jendrassik
	mg/dl	0.807	0.638	0.976	0.08	0.17	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	28.2	22.2	34.2	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	28.8	22.7	34.9	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion
	mg/dl	1.58	1.25	1.91	0.17	0.33	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	33.1	26.1	40.1	3.50	7.00	Modified Jendrassik
	mg/dl	1.94	1.53	2.35	0.21	0.41	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.10	1.89	2.31	0.11	0.21	Ion selective electrode
	mg/dl	8.42	7.58	9.26	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	0.99	0.89	1.09	0.05	0.10	Ionised calcium
	mg/dl	3.96	3.57	4.35	0.20	0.39	
Chloride	mmol/l	101	92.9	109	4.05	8.10	Colorimetric
	mmol/l	98.9	91.0	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	97.8	89.9	106	3.95	7.90	ISE indirect
	mmol/l	99.3	91.4	107	3.95	7.90	ISE direct
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	130	168	9.50	19.00	
	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5560	4448	6672	556.00	1112.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	188	154	222	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	208	170	246	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	218	178	258	20.00	40.00	Monothioglycerol 37°C
	U/l	136	111	161	12.50	25.00	Monothioglycerol 30°C
	U/l	93	76	110	8.50	17.00	Monothioglycerol 25°C
	U/l	194	159	229	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	121	100	142	10.50	21.00	Dithioerythritol (DTE) IFCC correlated 30°C
U/l	82	68	96	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	16.3	13.0	19.6	1.65	3.30	Atomic absorption
	µg/dl	104	82.7	125	10.65	21.30	
	µmol/l	15.7	12.6	18.8	1.55	3.10	Colorimetric
	µg/dl	99.9	80.1	120	9.90	19.80	
Cortisol	nmol/l	537	403	671	67.00	134.00	Roche Cobas E411
	µg/dl	19.3	14.5	24.1	2.40	4.80	
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	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	105	159	13.50	27.00	Creatinine PAP method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
µmol/l	125	100	150	12.50	25.00	Vitros IDMS Traceable	
mg/dl	1.41	1.13	1.69	0.14	0.28		
µmol/l	126	101	151	12.50	25.00	IDMS traceable	
mg/dl	1.42	1.14	1.70	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.09	1.67	2.51	0.21	0.42	Immunoturbidimetric
	ng/ml	1.63	1.30	1.96	0.17	0.33	
Folate	nmol/l	32.6	24.8	40.4	3.90	7.80	Roche Cobas E411
	ng/ml	14.4	10.9	17.9	1.75	3.50	
Free T4	pmol/l	17.4	13.1	21.7	2.15	4.30	Abbott Architect
	ng/dl	1.36	1.02	1.70	0.17	0.34	
	pg/ml	13.6	10.2	17.0	1.70	3.40	Abbott Architect
	pmol/l	18.4	13.8	23.0	2.30	4.60	Siemens Centaur XP/XPT/Classic
	ng/dl	1.44	1.08	1.80	0.18	0.36	
	pg/ml	14.4	10.8	18.0	1.80	3.60	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	19.1	14.3	23.9	2.40	4.80	Beckman Access
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Beckman Access
	pmol/l	17.9	13.5	22.3	2.20	4.40	Beckman Dxl800
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Beckman Dxl800
	pmol/l	20.6	15.4	25.8	2.60	5.20	Siemens Immulite 2000/2500
	ng/dl	1.61	1.20	2.02	0.21	0.41	
	pg/ml	16.1	12.0	20.2	2.05	4.10	Siemens Immulite 2000/2500
	pmol/l	36.5	27.4	45.6	4.55	9.10	Vitros ECi
	ng/dl	2.85	2.14	3.56	0.36	0.71	
	pg/ml	28.5	21.4	35.6	3.55	7.10	Vitros ECi
	pmol/l	22.7	17.0	28.4	2.85	5.70	Roche Cobas E411
	ng/dl	1.77	1.33	2.21	0.22	0.44	
	pg/ml	17.7	13.3	22.1	2.20	4.40	Roche Cobas E411
	pmol/l	22.4	16.8	28.0	2.80	5.60	Roche Cobas 6000/8000
	ng/dl	1.75	1.31	2.19	0.22	0.44	
	pg/ml	17.5	13.1	21.9	2.20	4.40	Roche Cobas 6000/8000
pmol/l	20.7	15.5	25.9	2.60	5.20	Biomerieux Vidas FT4N Kit	
ng/dl	1.61	1.21	2.01	0.20	0.40		
pg/ml	16.1	12.1	20.1	2.00	4.00	Biomerieux Vidas FT4N Kit	
Gentamicin	μmol/l	7.99	6.39	9.59	0.80	1.60	Immunoturbidimetric
	μg/ml	3.82	3.05	4.59	0.39	0.77	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	28	36	2.00	4.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	22	28	1.50	3.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	59	50	68	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	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.9	126	8.05	16.10	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Oxygen electrode
	mg/dl	112	94.8	129	8.60	17.20	
mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase	
mg/dl	111	94.4	128	8.30	16.60		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.25	1.06	1.44	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.20	1.02	1.38	0.09	0.18	Vitros Magnetic HDL
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL PEGME
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	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	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	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	1.30	1.11	1.49	0.10	0.19	HDL - Ultra	
mg/dl	50.2	42.8	57.6	3.70	7.40		
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		
Immunoglobulin A	g/l	1.73	1.30	2.16	0.22	0.43	Immunoturbidimetric
	mg/dl	173	130	216	21.50	43.00	
Immunoglobulin G	g/l	7.12	5.84	8.40	0.64	1.28	Immunoturbidimetric
	mg/dl	712	584	840	64.00	128.00	
Immunoglobulin M	g/l	0.64	0.51	0.77	0.06	0.13	Immunoturbidimetric
	mg/dl	64.2	51.4	77.0	6.40	12.80	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
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	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.	
	µg/dl	106	86.6	125	9.70	19.40		
	µmol/l	19.2	15.8	22.6	1.70	3.40	Ortho Vitros Microslide Systems	
	µg/dl	107	88.3	126	9.35	18.70		
	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		1.50	1.23	1.77	0.14	0.27	Ortho Vitros Microslide Systems	
mg/dl		13.5	11.1	15.9	1.20	2.40		
mmol/l		1.58	1.30	1.86	0.14	0.28	Enzymatic Electrode	
mg/dl		14.2	11.7	16.7	1.25	2.50		
mmol/l		1.52	1.25	1.79	0.14	0.27	UV LDH	
mg/dl		13.7	11.3	16.1	1.20	2.40		
LAP		U/l	19	16	22	1.50	3.00	NAGEL 37°C
LD (LDH)		U/l	184	156	212	14.00	28.00	L->P 37°C
	U/l	133	113	153	10.00	20.00	L->P 30°C	
	U/l	93	79	107	7.00	14.00	L->P 25°C	
	U/l	435	369	501	33.00	66.00	P->L Scandinavian & Dutch 37°C	
	U/l	314	266	362	24.00	48.00	P->L Scandinavian & Dutch 30°C	
	U/l	221	187	255	17.00	34.00	P->L Scandinavian & Dutch 25°C	
	U/l	395	336	454	29.50	59.00	P->L German methods 37°C	
	U/l	285	243	327	21.00	42.00	P->L German methods 30°C	
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	403	343	463	30.00	60.00	P->L SFBC 37°C
	U/l	291	248	334	21.50	43.00	P->L SFBC 30°C
	U/l	204	174	234	15.00	30.00	P->L SFBC 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
	U/l	169	136	202	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.28	1.12	1.44	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.889	0.778	1.00	0.06	0.11	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Ion selective electrode
	mg/dl	0.715	0.631	0.799	0.04	0.08	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.632	0.798	0.04	0.08	
mmol/l	1.04	0.92	1.17	0.06	0.13	Randox Colorimetric	
mg/dl	0.722	0.635	0.809	0.04	0.09		
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Arsenazo III
	mg/dl	2.03	1.79	2.27	0.12	0.24	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Calmagite
mg/dl	2.10	1.84	2.36	0.13	0.26		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
mmol/l	0.85	0.75	0.95	0.05	0.10	Enzymatic	
mg/dl	2.06	1.81	2.31	0.13	0.25		
NEFA	mmol/l	1.42	1.21	1.63	0.11	0.21	Colorimetric
Osmolality	mOsm/kg	287	230	344	28.50	57.00	Calculated
	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
	mOsm/kg	298	238	358	30.00	60.00	Vapour pressure
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Colorimetric
	mg/l	13.1	10.4	15.8	1.35	2.70	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.81	5.11	0.33	0.65	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.15	3.82	4.48	0.17	0.33	Enzymatic
	mmol/l	3.98	3.67	4.29	0.16	0.31	ISE method - direct
	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.80	4.64	6.96	0.58	1.16	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction kinetic
	g/dl	5.82	4.66	6.98	0.58	1.16	
PSA Total	ng/ml =	13.1	9.83	16.4	1.64	3.27	Roche Elecsys Modular E170
	ng/ml =	12.7	9.55	15.9	1.58	3.15	Beckman Access standardised to Hybritech
	ng/ml =	11.9	8.93	14.9	1.49	2.97	bioMerieux VIDAS TPSA
	ng/ml =	10.3	7.76	12.8	1.27	2.54	Siemens Centaur XP/XPT/Classic
	ng/ml =	10.1	7.55	12.7	1.28	2.55	Abbott Architect
	ng/ml =	13.7	10.3	17.1	1.70	3.40	Cobas E411
	ng/ml =	12.9	9.71	16.1	1.60	3.19	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	0.95	0.76	1.14	0.10	0.19	Abbott Architect
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.15	0.92	1.38	0.12	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.26	1.00	1.52	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.23	0.99	1.48	0.12	0.25	bioMerieux VIDAS TSH3 Ultrasensitive



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.27	1.02	1.52	0.13	0.25	Siemens Immulite 2000/2500
	µU/ml =	1.08	0.86	1.30	0.11	0.22	Vitros ECi
	µU/ml =	1.36	1.09	1.63	0.14	0.27	Roche Cobas E411
	µU/ml =	1.37	1.09	1.65	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.13	0.90	1.36	0.11	0.23	Beckman Dxl800 Hyper TSH
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.07	0.86	1.29	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	47.5	37.5	57.5	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	39.8	31.4	48.2	4.20	8.40	Removal of excess free iron
	µg/dl	222	176	268	23.00	46.00	
	µmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	175	269	23.50	47.00	
	µmol/l	44.7	35.3	54.1	4.70	9.40	Direct Colorimetric
	µg/dl	250	197	303	26.50	53.00	
	µmol/l	44.7	35.3	54.1	4.70	9.40	Calculated from Transferrin
µg/dl	250	197	303	26.50	53.00		
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	2.38	1.79	2.97	0.30	0.59	Abbott Architect
	ng/ml	1.55	1.17	1.93	0.19	0.38	
	ng/dl	155	117	193	19.00	38.00	Abbott Architect
	nmol/l	2.70	2.03	3.37	0.34	0.67	Siemens Centaur XP/XPT/Classic
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.53	1.90	3.16	0.32	0.63	BioMerieux Vidas
	ng/ml	1.65	1.24	2.06	0.21	0.41	
	ng/dl	165	124	206	20.50	41.00	BioMerieux Vidas
	nmol/l	2.70	2.02	3.38	0.34	0.68	Roche Cobas E411
	ng/ml	1.76	1.32	2.20	0.22	0.44	
	ng/dl	176	132	220	22.00	44.00	Roche Cobas E411
	nmol/l	2.56	1.92	3.20	0.32	0.64	Roche Cobas 6000/8000
	ng/ml	1.67	1.25	2.09	0.21	0.42	
Total T4	ng/dl	167	125	209	21.00	42.00	Roche Cobas 6000/8000
	nmol/l	98.7	74.0	123	12.35	24.70	Abbott Architect
	µg/dl	7.70	5.77	9.63	0.97	1.93	
	ng/ml	77.0	57.7	96.3	9.65	19.30	Abbott Architect
	nmol/l	87.5	65.6	109	10.95	21.90	Siemens Centaur XP/XPT/Classic
	µg/dl	6.83	5.12	8.54	0.86	1.71	
	ng/ml	68.3	51.2	85.4	8.55	17.10	Siemens Centaur XP/XPT/Classic
	nmol/l	93.5	70.1	117	11.70	23.40	Beckman Access
	µg/dl	7.29	5.47	9.11	0.91	1.82	
	ng/ml	72.9	54.7	91.1	9.10	18.20	Beckman Access
	nmol/l	90.7	68.0	113	11.35	22.70	Roche Cobas E411
	µg/dl	7.07	5.30	8.84	0.89	1.77	
	ng/ml	70.7	53.0	88.4	8.85	17.70	Roche Cobas E411
	nmol/l	90.3	67.7	113	11.30	22.60	Roche Cobas 6000/8000
µg/dl	7.04	5.28	8.80	0.88	1.76		
ng/ml	70.4	52.8	88.0	8.80	17.60	Roche Cobas 6000/8000	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	114	85.5	143	14.25	28.50	Microgenics DRI assay
	µg/dl	8.89	6.67	11.1	1.11	2.22	
	ng/ml	88.9	66.7	111	11.10	22.20	Microgenics DRI assay
Transferrin	g/l	1.93	1.54	2.32	0.20	0.39	Immunoturbidimetric
	mg/dl	193	154	232	19.50	39.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.5	119	8.25	16.50	
	mmol/l	1.15	0.97	1.34	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	102	85.4	119	8.30	16.60	
	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	103	86.0	120	8.50	17.00	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	84.1	116	7.95	15.90	
UIBC	mmol/l	1.26	1.06	1.46	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	93.8	130	9.10	18.20	
Urea	µmol/l	19.8	16.2	23.4	1.80	3.60	Direct Colorimetric
	µg/dl	111	90.6	131	10.20	20.40	
Urea	mmol/l	6.97	5.93	8.01	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.32	6.23	8.41	0.55	1.09	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.44	4.74	6.14	0.35	0.70	
	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	0.34	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	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290	
mg/dl	5.66	4.92	6.40	0.37	0.74		
Vitamin B12	pmol/l	490	392	588	49.00	98.00	Roche Cobas E411
	pg/ml	664	531	797	66.50	133.00	
Zinc	µmol/l	21.7	17.4	26.0	2.15	4.30	Colorimetric with deproteinisation
	µg/dl	142	114	170	14.00	28.00	

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.6	61.8	75.4	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		4.7	3.6	5.8	0.57	1.13	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.5	4.9	8.1	0.78	1.56	% of total Protein (Beckman Capillary)
beta-globulin		10.3	7.8	12.8	1.24	2.47	% of total Protein (Beckman Capillary)
gamma-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)

## MINDRAY BS-200/300/400

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	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	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Cholesterol	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C

## MINDRAY BS-200/300/400

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	156	125	187	15.50	31.00	Jaffe rate blanked
	mg/dl	1.76	1.41	2.11	0.18	0.35	
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL PPD
	mg/dl	47.1	40.1	54.1	3.50	7.00	
	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct Clearance Method
	mg/dl	47.9	40.9	54.9	3.50	7.00	
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 German methods 37°C
	U/l	305	259	351	23.00	46.00	P->L German methods 30°C
	U/l	214	182	246	16.00	32.00	P->L German methods 25°C
	U/l	406	345	467	30.50	61.00	P->L SFBC 37°C
	U/l	293	249	337	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	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.02	2.56	0.14	0.27	

## MINDRAY BS-200/300/400

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.4	118	8.30	16.60	
Urea	mmol/l	7.63	6.49	8.77	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.68	4.94	6.42	0.37	0.74		



## Ortho VITROS®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.1	33.3	44.9	2.90	5.80	Ortho Vitros Microslide Systems
	g/dl	3.91	3.33	4.49	0.29	0.58	
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	10.3	8.14	12.5	1.08	2.16	BuBc Vitros Slide
	mg/dl	0.603	0.476	0.730	0.06	0.13	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.8	10.9	16.7	1.45	2.90	BuBc Vitros Slide
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	130	168	9.50	19.00	
Cholinesterase	U/l	5343	4275	6411	534.00	1068.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	188	154	222	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	

## Ortho VITROS®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	36.5	27.4	45.6	4.55	9.10	Vitros ECi
	ng/dl	2.85	2.14	3.56	0.36	0.71	
	pg/ml	28.5	21.4	35.6	3.55	7.10	Vitros ECi
gamma-GT	U/l	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Vitros Magnetic HDL
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	107	88.3	126	9.35	18.70	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.5	11.1	15.9	1.20	2.40	
Lipase	U/l	169	136	202	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.08	0.86	1.30	0.11	0.22	Vitros ECi

## Ortho VITROS®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	47.5	37.5	57.5	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.26	1.06	1.46	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	93.8	130	9.10	18.20	
Urea	mmol/l	6.97	5.93	8.01	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.97	5.92	8.02	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.51	4.79	6.23	0.36	0.72	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Purple
	g/dl	4.24	3.61	4.87	0.32	0.63	
	g/l	40.3	34.3	46.3	3.00	6.00	Turbidimetric Assays
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	63	54	72	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	83	71	95	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	84	72	96	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	83	71	95	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Colorimetric
	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic

## Roche Cobas 6000 c501 e601

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	24.7	19.8	29.6	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Roche JG factored
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	26.9	21.3	32.5	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	94.6	87.0	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.84	3.34	4.34	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Cholinesterase	U/l	5374	4299	6449	537.50	1075.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	135	108	162	13.50	27.00	Enzymatic UV method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	μmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	22.4	16.8	28.0	2.80	5.60	Roche Cobas 6000/8000
	ng/dl	1.75	1.31	2.19	0.22	0.44	
	pg/ml	17.5	13.1	21.9	2.20	4.40	Roche Cobas 6000/8000
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	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. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	6.09	5.17	7.01	0.46	0.92	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	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	
Lactate	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	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	396	337	455	29.50	59.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction kinetic
	g/dl	5.91	4.73	7.09	0.59	1.18	
PSA Total	ng/ml =	12.9	9.71	16.1	1.60	3.19	Roche Cobas 6000/8000
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.37	1.09	1.65	0.14	0.28	Roche Cobas 6000/8000
TIBC	μmol/l	38.3	30.2	46.4	4.05	8.10	FE+UIBC(saturation with iron)
	μg/dl	214	169	259	22.50	45.00	
	μmol/l	46.8	37.0	56.6	4.90	9.80	Calculated from Transferrin
	μg/dl	262	207	317	27.50	55.00	
Total T3	nmol/l	2.56	1.92	3.20	0.32	0.64	Roche Cobas 6000/8000
	ng/ml	1.67	1.25	2.09	0.21	0.42	
	ng/dl	167	125	209	21.00	42.00	
Total T4	nmol/l	90.3	67.7	113	11.30	22.60	Roche Cobas 6000/8000
	μg/dl	7.04	5.28	8.80	0.88	1.76	
	ng/ml	70.4	52.8	88.0	8.80	17.60	



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.6	118	8.20	16.40	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	86.8	121	8.60	17.20	
UIBC	µmol/l	19.0	15.6	22.4	1.70	3.40	Direct Colorimetric
	µg/dl	106	87.2	125	9.40	18.80	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease end point
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
Uric Acid (Urate)	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.56	4.84	6.28	0.36	0.72	

## Roche Cobas C111®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5 ml 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 Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	155	131	179	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	121	102	140	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	113	96	130	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	93	79	107	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	17.4	13.7	21.1	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.801	1.24	0.11	0.22	
	µmol/l	17.0	13.5	20.5	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.790	1.20	0.10	0.21	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	

## Roche Cobas C111®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	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	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	129	169	10.00	20.00	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	

## Roche Cobas C111®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
LD (LDH)	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.91	0.80	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.97	1.35	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.8	120	8.60	17.20	
	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.4	119	8.30	16.60	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	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. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	

## Roche Cobas C311®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5 ml 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 Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Purple
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	117	100	134	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.8	22.6	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.866	1.31	0.11	0.22	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Roche JG factored
mg/dl	1.08	0.848	1.31	0.12	0.23		

## Roche Cobas C311®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
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		
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.59	1.25	1.93	0.17	0.34		
	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazonium ion	
	mg/dl	1.58	1.25	1.91	0.17	0.33		
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.54	7.70	9.38	0.42	0.84		
	mmol/l	2.16	1.95	2.37	0.11	0.21	NM-BAPTA	
	mg/dl	8.66	7.82	9.50	0.42	0.84		
	mmol/l	95.3	87.7	103	3.80	7.60		ISE indirect
	mmol/l	95.3	87.7	103	3.80	7.60		ISE indirect
Cholesterol	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase	
	mg/dl	150	130	170	10.00	20.00		
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	136	109	163	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.54	1.23	1.85	0.16	0.31		
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.51	1.21	1.81	0.15	0.30		
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.48	1.19	1.77	0.15	0.29		
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	

## Roche Cobas C311®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Hexokinase
	mg/dl	111	94.8	127	8.10	16.20	
	mmol/l	6.18	5.26	7.10	0.46	0.92	Glucose oxidase
	mg/dl	111	94.8	127	8.10	16.20	
HDL - Cholesterol	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	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	54.8	46.3	63.3	4.25	8.50	
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	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	284	242	326	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
	U/l	150	128	172	11.00	22.00	L->P IFCC 30°C
	U/l	105	90	120	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	



## Roche Cobas C311®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.31	3.69	4.93	0.31	0.62	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.2	30.9	47.5	4.15	8.30	FE+UIBC(saturation with iron)
	μg/dl	219	173	265	23.00	46.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.6	121	8.70	17.40	
	mmol/l	1.17	0.99	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.2	121	8.40	16.80	
UIBC	μmol/l	20.9	17.1	24.7	1.90	3.80	Direct Colorimetric
	μg/dl	117	95.6	138	10.70	21.40	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
	g/l	44.7	38.0	51.4	3.35	6.70	Turbidimetric Assays
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	96	82	110	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.7	18.9	28.5	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Roche JG factored
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	16.0	12.6	19.4	1.70	3.40	Oxidation to Biliverdin/Vanadate
Bilirubin Total	mg/dl	0.936	0.737	1.14	0.10	0.20	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazonium ion
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21
mg/dl		8.58	7.74	9.42	0.42	0.84	
mmol/l		2.16	1.95	2.37	0.11	0.21	NM-BAPTA
Calcium	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	96.2	88.5	104	3.85	7.70	ISE indirect
Chloride	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Cholesterol	mmol/l	5444	4355	6533	544.50	1089.00	Colorimetric Butyrylthiocholine 37°C
Cholinesterase	U/l	198	163	233	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	124	102	146	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	136	109	163	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.54	1.23	1.85	0.16	0.31		
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.46	1.16	1.76	0.15	0.30		
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.48	1.19	1.77	0.15	0.29		
	gamma-GT	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	34	28	40	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		27	22	32	2.50	5.00	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	6.17	5.24	7.10	0.47	0.93	Hexokinase	
	mg/dl	111	94.4	128	8.30	16.60		
HDL - Cholesterol	mmol/l	1.42	1.20	1.64	0.11	0.22	Direct HDL Roche 4th Generation	
	mg/dl	54.8	46.3	63.3	4.25	8.50		
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.	
	µg/dl	104	85.5	123	9.25	18.50		
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	205	174	236	15.50	31.00	L->P IFCC 37°C	
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C	
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Spectrophotometric
	mg/dl	0.743	0.653	0.833	0.05	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.3	31.9	48.7	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	225	178	272	23.50	47.00	
	μmol/l	43.6	34.4	52.8	4.60	9.20	Calculated from Transferrin
	μg/dl	244	192	296	26.00	52.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.16	0.98	1.35	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	103	86.3	120	8.35	16.70	
UIBC	μmol/l	19.9	16.3	23.5	1.80	3.60	Direct Colorimetric
	μg/dl	111	91.1	131	9.95	19.90	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.82	6.24	0.36	0.71	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.51	4.80	6.22	0.36	0.71	

## RX SERIES®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	295	251	339	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	75	64	86	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	20.3	16.1	24.5	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	31.1	24.6	37.6	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.82	1.44	2.20	0.19	0.38	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	94.7	87.1	102	3.80	7.60	ISE direct
Cholesterol	mmol/l	4.36	3.79	4.93	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	

## RX SERIES®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	207	169	245	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	229	188	270	20.50	41.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.51	5.53	7.49	0.49	0.98	Hexokinase
	mg/dl	117	99.7	134	8.65	17.30	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.49	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	417	354	480	31.50	63.00	P->L German methods 37°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	



## RX SERIES®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	Enzymatic
	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - direct
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	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	µmol/l	50.9	40.2	61.6	5.35	10.70	Direct Colorimetric
	µg/dl	285	225	345	30.00	60.00	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.9	120	8.55	17.10	
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.90	5.12	6.68	0.39	0.78		

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
	mmol/l	2.14	1.92	2.36	0.11	0.22	Arsenazo III
mg/dl	8.58	7.70	9.46	0.44	0.88		
Chloride	mmol/l	99.4	91.5	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.88	3.38	4.38	0.25	0.50	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	



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

Lot. No. 1367UN    Cat. No. HN1530 / HS2611

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

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5897	4717	7077	590.00	1180.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.96	5.07	6.85	0.45	0.89	Hexokinase
	mg/dl	107	91.4	123	7.80	15.60	
	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	1.07	0.91	1.23	0.08	0.16	Direct Clearance Method
	mg/dl	41.3	35.1	47.5	3.10	6.20	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	
Lactate	mmol/l	1.39	1.14	1.64	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.5	10.3	14.7	1.10	2.20	
LD (LDH)	U/l	391	332	450	29.50	59.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.654	0.832	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.8	45.5	68.1	5.65	11.30	Biuret reaction end point
	g/dl	5.68	4.55	6.81	0.57	1.13	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.1	34.9	53.3	4.60	9.20	FE+UIBC(saturation with iron)
	μg/dl	247	195	299	26.00	52.00	
	μmol/l	46.0	36.3	55.7	4.85	9.70	Direct Colorimetric
	μg/dl	257	203	311	27.00	54.00	
	μmol/l	42.8	33.8	51.8	4.50	9.00	Calculated from Transferrin
	μg/dl	239	189	289	25.00	50.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	88.0	120	8.00	16.00	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Purple
	g/dl	4.22	3.58	4.86	0.32	0.64	
Alkaline Phosphatase	U/l	164	139	189	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	164	139	189	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.55	3.09	4.01	0.23	0.46	Cholesterol Oxidase
	mg/dl	137	119	155	9.00	18.00	
	mmol/l	3.58	3.12	4.04	0.23	0.46	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
CK Total	U/l	191	156	226	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
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	6.23	5.29	7.17	0.47	0.94	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
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	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	UV LDH
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	129	103	155	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	37.2	29.4	45.0	3.90	7.80	FE+UIBC(saturation with iron)
	µg/dl	208	164	252	22.00	44.00	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
Urea	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
Uric Acid (Urate)	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.66	4.92	6.40	0.37	0.74	


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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5 ml 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 Purple
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	166	141	191	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	53	43	63	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Total	µmol/l	28.8	22.7	34.9	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.54	3.08	4.00	0.23	0.46	Dimension-Siemens reagents
	mg/dl	137	119	155	9.00	18.00	
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	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	



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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
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	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL PPD
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Direct HDL PEGME
	mg/dl	45.2	38.3	52.1	3.45	6.90	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
LD (LDH)	U/l	197	167	227	15.00	30.00	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	0.85	0.75	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.07	1.82	2.32	0.13	0.25	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.43	3.78	5.08	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.97	3.65	4.29	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	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.7	113	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.4	114	7.90	15.80	

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
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	7.39	6.29	8.49	0.55	1.10	Urease kinetic
	mg/dl	44.4	37.8	51.0	3.30	6.60	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.89	6.37	0.37	0.74	

## URIT 8000 Series

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

Lot. No. 1367UN Cat. No. HN1530 / HS2611

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

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
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	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Urea	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	