

## 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> 1324UN	<b>EXPIRY:</b> 2022-09-28	

### 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**

® All trademarks recognised.

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

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## Abbott Alinity/ Architect c/ci Systems®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	156	133	179	11.50	23.00	AMP non-optimised 37°C
	U/l	154	131	177	11.50	23.00	Colorimetric 37°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	57	79	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	104	88	120	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bile Acids	µmol/l	27.3	21.9	32.7	2.70	5.40	Enzymatic Colorimetric
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	19.5	15.4	23.6	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.6	15.4	23.8	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.901	1.40	0.12	0.25	
Bilirubin Total	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	µmol/l	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	
Calcium	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazonium ion
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.24	2.02	2.46	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.18	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	101	93.0	109	4.00	8.00	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	
	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Dehydrogenase
mg/dl	151	131	171	10.00	20.00		
Cholinesterase	U/l	6462	5170	7754	646.00	1292.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	192	157	227	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	12.5	10.0	15.0	1.25	2.50	Colorimetric
	µg/dl	79.5	63.6	95.4	7.95	15.90	
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	137	109	165	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.23	1.87	0.16	0.32	


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Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	137	110	164	13.50	27.00	Enzymatic UV method
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	137	109	165	14.00	28.00	Jaffe rate blanked
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	136	109	163	13.50	27.00	IDMS traceable
	mg/dl	1.54	1.23	1.85	0.16	0.31	
Free T4	pmol/l	16.8	12.6	21.0	2.10	4.20	Abbott Architect
	ng/dl	1.31	0.983	1.64	0.16	0.33	
	pg/ml	13.1	9.83	16.4	1.64	3.27	Abbott Architect
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	43	57	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Glucose oxidase
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct Clearance Method
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	HDL - Ultra
	mg/dl	53.7	45.5	61.9	4.10	8.20	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	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	1.62	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	179	152	206	13.50	27.00	L->P 37°C
	U/l	179	152	206	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	0.96	0.85	1.08	0.06	0.12	Spectrophotometric
	mg/dl	0.667	0.587	0.747	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.22	3.60	4.84	0.31	0.62	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	3.99	3.67	4.31	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	

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Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction kinetic
	g/dl	5.92	4.74	7.10	0.59	1.18	
PSA Total	ng/ml =	10.0	7.51	12.5	1.25	2.49	Abbott Architect
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.05	0.84	1.26	0.11	0.21	Abbott Architect
TIBC	µmol/l	38.7	30.6	46.8	4.05	8.10	FE+UIBC(saturation with iron)
	µg/dl	216	171	261	22.50	45.00	
	µmol/l	41.8	33.1	50.5	4.35	8.70	Calculated from Transferrin
	µg/dl	234	185	283	24.50	49.00	
Total T4	nmol/l	89.3	67.0	112	11.15	22.30	Abbott Architect
	µg/dl	6.97	5.23	8.71	0.87	1.74	
	ng/ml	69.7	52.3	87.1	8.70	17.40	Abbott Architect
Triglycerides	mmol/l	1.05	0.89	1.21	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.4	107	7.25	14.50	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.8	108	7.55	15.10	
mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase	
mg/dl	92.9	77.7	108	7.60	15.20		
UIBC	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	7.24	6.16	8.32	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	

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Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	
Zinc	µmol/l	20.7	16.6	24.8	2.05	4.10	Colorimetric with deproteinisation
	µg/dl	135	108	162	13.50	27.00	



## ABX Pentra 400®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	20.5	16.2	24.8	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.20	0.948	1.45	0.13	0.25	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	104	95.6	112	4.20	8.40	ISE direct
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Creatinine	µmol/l	148	118	178	15.00	30.00	Alkaline picrate no deproteinization
	mg/dl	1.67	1.33	2.01	0.17	0.34	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.53	5.55	7.51	0.49	0.98	Hexokinase
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.36	1.15	1.57	0.11	0.21	HDL - Ultra
	mg/dl	52.5	44.4	60.6	4.05	8.10	
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P IFCC 37°C

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.5	121	8.25	16.50	
Urea	mmol/l	6.95	5.91	7.99	0.52	1.04	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	6.95	5.91	7.99	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.34	4.64	6.04	0.35	0.70	
	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	

## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	188	160	216	14.00	28.00	Diethanolamine buffer DEA 37°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	70	60	80	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	19.9	15.7	24.1	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	19.4	15.4	23.4	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.901	1.36	0.11	0.23	
	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.11	0.878	1.34	0.12	0.23	
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	

## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.37	2.09	0.18	0.36	
Calcium	µmol/l	28.9	22.8	35.0	3.05	6.10	DPD (Beckman AU)
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
		mg/dl	8.54	7.70	9.38	0.42	
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	99.5	91.5	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Dehydrogenase
	mg/dl	151	131	171	10.00	20.00	
Cholinesterase	U/l	5247	4198	6296	524.50	1049.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	142	113	171	14.50	29.00	Enzymatic UV method
	mg/dl	1.60	1.28	1.92	0.16	0.32	

## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	140	112	168	14.00	28.00	Creatinine PAP method
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.58	1.27	1.89	0.16	0.31	
µmol/l	129	104	154	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.46	1.18	1.74	0.14	0.28		
µmol/l	135	108	162	13.50	27.00	IDMS traceable	
mg/dl	1.53	1.22	1.84	0.16	0.31		
D-3-Hydroxybutyrate	mmol/l	0.30	0.26	0.35	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	53	45	61	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	21	17	25	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	GOD/02-Beckman method
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose oxidase	
mg/dl	112	95.5	129	8.25	16.50		
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL PPD
	mg/dl	52.1	44.4	59.8	3.85	7.70	

## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	51.3	43.6	59.0	3.85	7.70		
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method	
	mg/dl	51.7	44.0	59.4	3.85	7.70		
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Roche 3rd generation	
	mg/dl	52.1	44.4	59.8	3.85	7.70		
Iron	mmol/l	1.30	1.11	1.49	0.10	0.19	HDL - Ultra	
	mg/dl	50.2	42.8	57.6	3.70	7.40		
	Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	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	
Lactate	mmol/l	1.57	1.28	1.86	0.15	0.29	Colorimetric Lactate Oxidase	
	mg/dl	14.1	11.5	16.7	1.30	2.60		
LD (LDH)	U/l	179	152	206	13.50	27.00	L->P 37°C	
	U/l	387	329	445	29.00	58.00	P->L Scandinavian & Dutch 37°C	
	U/l	185	157	213	14.00	28.00	L->P IFCC 37°C	
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C	
Lithium	mmol/l	0.95	0.84	1.06	0.06	0.11	Spectrophotometric	
	mg/dl	0.659	0.580	0.738	0.04	0.08		
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue	
	mg/dl	2.22	1.95	2.49	0.14	0.27		
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate enzymatic	
	mg/dl	4.22	3.60	4.84	0.31	0.62		



## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Beckman PHOSm (365nm)
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction kinetic
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	41.3	32.6	50.0	4.35	8.70	FE+UIBC(saturation with iron)
	μg/dl	231	182	280	24.50	49.00	
	μmol/l	41.0	32.4	49.6	4.30	8.60	Direct Colorimetric
	μg/dl	229	181	277	24.00	48.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
	mmol/l	1.11	0.94	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
UIBC	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	95.6	80.2	111	7.70	15.40	
Urea	μmol/l	22.7	18.6	26.8	2.05	4.10	Direct Colorimetric
	μg/dl	127	104	150	11.50	23.00	
Urea	mmol/l	7.56	6.43	8.69	0.57	1.13	Beckman-Conductivity
	mg/dl	45.4	38.6	52.2	3.40	6.80	

## Beckman Coulter AU Series®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.45	6.34	8.56	0.56	1.11	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease hypochlorite
	mg/dl	42.8	36.4	49.2	3.20	6.40	
Uric Acid (Urate)	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	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.81	5.06	6.56	0.38	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
		mg/dl	5.73	4.97	6.49	0.38	
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



## Beckman DxC600/800®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	44.9	38.2	51.6	3.35	6.70	Bromocresol Purple
	g/dl	4.49	3.82	5.16	0.34	0.67	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	161	137	185	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.3	10.5	16.1	1.40	2.80	Differential rate pH change
Bilirubin Direct	µmol/l	14.1	11.1	17.1	1.50	3.00	Diazo with Sulphanilic Acid
	mg/dl	0.825	0.649	1.00	0.09	0.18	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.12	1.90	2.34	0.11	0.22	Arsenazo III
mg/dl	8.50	7.62	9.38	0.44	0.88		
Chloride	mmol/l	99.3	91.4	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	

## Beckman DxC600/800®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	200	164	236	18.00	36.00	Monothioglycerol 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
IDMS traceable	µmol/l	136	109	163	13.50	27.00	
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.08	5.16	7.00	0.46	0.92	GOD/02-Beckman method
	mg/dl	110	93.0	127	8.50	17.00	
	mmol/l	5.98	5.09	6.87	0.45	0.89	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	
Glucose oxidase	mmol/l	6.11	5.19	7.03	0.46	0.92	
	mg/dl	110	93.5	127	8.25	16.50	
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	HDL - Ultra
mg/dl	54.8	46.7	62.9	4.05	8.10		
	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	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	152	129	175	11.50	23.00	L->P 37°C

## Beckman DxC600/800®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Calmagite
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Beckman PHOSm (365nm)
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction CX4/5/7
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction kinetic
	g/dl	5.78	4.62	6.94	0.58	1.16	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.8	32.2	49.4	4.30	8.60	Removal of excess free iron
	µg/dl	228	180	276	24.00	48.00	
	µmol/l	42.3	33.4	51.2	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	236	187	285	24.50	49.00	
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	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.1	122	8.45	16.90	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Beckman-Conductivity
	mg/dl	45.0	38.2	51.8	3.40	6.80	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.8	52.6	3.45	6.90	
	mmol/l	7.60	6.46	8.74	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	

## BIOSYSTEMS A15

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
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	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Arsenazo III
	mg/dl	8.90	7.98	9.82	0.46	0.92	
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	133	171	9.50	19.00	
Creatinine	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	

## BIOSYSTEMS A25

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Arsenazo III
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Cholinesterase	U/l	4775	3820	5730	477.50	955.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
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

## BIOSYSTEMS A25

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.36	1.15	1.57	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	52.5	44.4	60.6	4.05	8.10	
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.4	122	8.30	16.60	
Urea	mmol/l	6.97	5.92	8.02	0.53	1.05	Urease end point
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.20	6.12	8.28	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	



## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	207	176	238	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	170	144	196	13.00	26.00	Diethanolamine buffer DEA 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
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.66	1.30	2.02	0.18	0.36	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	23.3	18.4	28.2	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Arsenazo III
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Chloride	mmol/l	99.3	91.4	107	3.95	7.90	Colorimetric
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	5226	4181	6271	522.50	1045.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	146	117	175	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.65	1.32	1.98	0.17	0.33	
	µmol/l	141	113	169	14.00	28.00	Jaffe rate blanked
	mg/dl	1.59	1.28	1.90	0.16	0.31	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.12	5.20	7.04	0.46	0.92	Glucose oxidase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.21	1.02	1.40	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	46.7	39.4	54.0	3.65	7.30	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	

## Biotechnica/Wiener BT and CB Series

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	341	289	393	26.00	52.00	P->L Scandinavian & Dutch 37°C
	U/l	246	209	283	18.50	37.00	P->L Scandinavian & Dutch 30°C
	U/l	173	147	199	13.00	26.00	P->L Scandinavian & Dutch 25°C
	U/l	346	294	398	26.00	52.00	P->L German methods 37°C
	U/l	250	212	288	19.00	38.00	P->L German methods 30°C
	U/l	175	149	201	13.00	26.00	P->L German methods 25°C
	U/l	356	303	409	26.50	53.00	P->L SFBC 37°C
	U/l	257	219	295	19.00	38.00	P->L SFBC 30°C
	U/l	180	154	206	13.00	26.00	P->L SFBC 25°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
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	1.17	0.99	1.35	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	104	87.3	121	8.35	16.70	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	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	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	



### Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Green
	g/dl	4.34	3.69	4.99	0.33	0.65	
	g/l	45.6	38.7	52.5	3.45	6.90	Bromocresol Purple
	g/dl	4.56	3.87	5.25	0.35	0.69	
	g/l	42.8	36.4	49.2	3.20	6.40	Turbidimetric Assays
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	113	96	130	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	90	77	103	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	78	104	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C

## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	17.9	14.2	21.6	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	17.9	14.2	21.6	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.831	1.27	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	18.4	14.6	22.2	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	24.6	19.5	29.7	2.55	5.10	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	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	
	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	100	92.1	108	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.76	3.27	4.25	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	

## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	187	154	220	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	138	110	166	14.00	28.00	Enzymatic UV method
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	135	108	162	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.50	1.21	1.79	0.15	0.29		
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
HDL - Cholesterol	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL PEGME
	mg/dl	59.4	50.6	68.2	4.40	8.80	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 3rd generation
HDL - Cholesterol	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.4	50.6	68.2	4.40	8.80	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
Lactate	µg/dl	107	87.8	126	9.60	19.20	
	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
Lactate	mg/dl	14.9	12.2	17.6	1.35	2.70	
	U/l	194	165	223	14.50	29.00	L->P 37°C
LD (LDH)	U/l	140	119	161	10.50	21.00	L->P 30°C
	U/l	98	84	112	7.00	14.00	L->P 25°C
LD (LDH)	U/l	345	294	396	25.50	51.00	P->L German methods 37°C
	U/l	249	212	286	18.50	37.00	P->L German methods 30°C
LD (LDH)	U/l	175	149	201	13.00	26.00	P->L German methods 25°C



## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
	U/l	140	119	161	10.50	21.00	L->P IFCC 30°C
	U/l	98	84	112	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.97	0.86	1.09	0.06	0.12	Ion selective electrode
	mg/dl	0.676	0.594	0.758	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
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	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction end point
	g/dl	5.58	4.46	6.70	0.56	1.12	
	g/l	55.1	44.1	66.1	5.50	11.00	Biuret reaction kinetic
	g/dl	5.51	4.41	6.61	0.55	1.10	
Sodium	mmol/l	141	134	148	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	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.5	115	7.80	15.60	

## COBAS INTEGRA®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	102	85.7	118	8.15	16.30		
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	101	84.7	117	8.15	16.30		
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	98.2	82.3	114	7.95	15.90		
	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	101	84.7	117	8.15	16.30		
	Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease end point
		mg/dl	42.9	36.4	49.4	3.25	6.50	
mmol/l		7.02	5.97	8.07	0.53	1.05	Urease kinetic	
mg/dl		42.2	35.9	48.5	3.15	6.30		
mmol/l		7.02	5.97	8.07	0.53	1.05	BUN	
mg/dl		19.7	16.7	22.7	1.50	3.00		
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.75	5.01	6.49	0.37	0.74		
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no 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 with ascorbate oxidase @ 546nm	
	mg/dl	5.70	4.96	6.44	0.37	0.74		

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	258	219	297	19.50	39.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	14.2	11.2	17.2	1.50	3.00	Diazo with Sulphanilic Acid
	mg/dl	0.831	0.655	1.01	0.09	0.18	
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Creatinine PAP method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	HDL - Ultra
	mg/dl	48.6	41.3	55.9	3.65	7.30	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.16	1.90	2.42	0.13	0.26	
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	
Protein Total	g/l	56.8	45.4	68.2	5.70	11.40	Biuret reaction end point
	g/dl	5.68	4.54	6.82	0.57	1.14	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.6	119	8.20	16.40	
	mmol/l	1.20	1.01	1.39	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease kinetic
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	


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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	12.4	8.31	16.5	2.05	4.09	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	
Alkaline Phosphatase	U/l	176	150	202	13.00	26.00	Radox AMP 37°C
	U/l	137	117	157	10.00	20.00	Radox AMP 30°C
	U/l	112	96	128	8.00	16.00	Radox AMP 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
	U/l	33	26	40	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	19	29	2.50	5.00	Phosphate buffer DGKC 30°C
	U/l	19	15	23	2.00	4.00	Phosphate buffer DGKC 25°C
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
	U/l	87	74	100	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
	U/l	30	24	36	3.00	6.00	Phosphate buffer DGKC 37°C
	U/l	20	16	24	2.00	4.00	Phosphate buffer DGKC 30°C
	U/l	14	11	17	1.50	3.00	Phosphate buffer DGKC 25°C

## HITACHI SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	5th Generation Colorimetric
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	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.09	0.866	1.31	0.11	0.22	
	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	
Calcium	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.4	21.6	33.2	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Chloride	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	2.24	2.02	2.46	0.11	0.22	Arsenazo III
Cholesterol	mmol/l	8.98	8.10	9.86	0.44	0.88	
	mg/dl	102	94.2	110	3.90	7.80	Colorimetric
Cholinesterase	mmol/l	95.9	88.2	104	3.85	7.70	ISE indirect
	U/l	5129	4103	6155	513.00	1026.00	Colorimetric Butyrylthiocholine 37°C
CK Total	mmol/l	3.91	3.40	4.42	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Chloride	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C

## HITACHI SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.53	1.22	1.84	0.16	0.31		
	µmol/l	138	111	165	13.50	27.00	Creatinine PAP method	
	mg/dl	1.56	1.25	1.87	0.16	0.31		
	µmol/l	139	111	167	14.00	28.00	Jaffe rate blanked	
	mg/dl	1.57	1.25	1.89	0.16	0.32		
	µmol/l	138	110	166	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.56	1.24	1.88	0.16	0.32		
	gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
U/l		60	51	69	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
U/l		47	40	54	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
U/l		37	31	43	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
Glucose	mmol/l	6.10	5.18	7.02	0.46	0.92	Hexokinase	
	mg/dl	110	93.3	127	8.35	16.70		
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase	
	mg/dl	112	95.5	129	8.25	16.50		
HDL - Cholesterol	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct HDL PPD	
	mg/dl	47.9	40.9	54.9	3.50	7.00		
	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL Immunoseparation	
	mg/dl	47.5	40.1	54.9	3.70	7.40		

## HITACHI SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.13	0.96	1.30	0.08	0.17	Direct Clearance Method
	mg/dl	43.6	37.1	50.1	3.25	6.50	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
LD (LDH)	U/l	356	303	409	26.50	53.00	P->L German methods 37°C
	U/l	257	219	295	19.00	38.00	P->L German methods 30°C
	U/l	180	154	206	13.00	26.00	P->L German methods 25°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C
	U/l	135	115	155	10.00	20.00	L->P IFCC 30°C
	U/l	95	81	109	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	32	25	39	3.50	7.00	Other Colorimetric 37°C
	U/l	27	22	32	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.02	3.69	4.35	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	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.2	116	7.90	15.80	



## HITACHI SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	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	
	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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	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	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	

## ILab 600®/650®/Aries/Taurus

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
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	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	92	78	106	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	13.0	10.3	15.7	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.761	0.603	0.919	0.08	0.16	
Bilirubin Total	µmol/l	28.9	22.9	34.9	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.34	2.04	0.18	0.35	
	µmol/l	27.9	22.0	33.8	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE indirect

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Cholesterol Oxidase	
	mg/dl	149	129	169	10.00	20.00		
Cholinesterase	U/l	5544	4435	6653	554.50	1109.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC (IFCC) 37°C	
	U/l	113	93	133	10.00	20.00	CK-NAC (IFCC) 30°C	
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.55	1.24	1.86	0.16	0.31		
	µmol/l	139	111	167	14.00	28.00	Creatinine PAP method	
	mg/dl	1.57	1.25	1.89	0.16	0.32		
	µmol/l	148	118	178	15.00	30.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.67	1.33	2.01	0.17	0.34		
	gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose		mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40		
	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	1.20	1.02	1.38	0.09	0.18	Direct HDL Immunoseparation	
	mg/dl	46.3	39.4	53.2	3.45	6.90		
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME	
	mg/dl	48.3	40.9	55.7	3.70	7.40		

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	HDL - Ultra
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
LD (LDH)	U/l	359	305	413	27.00	54.00	P->L German methods 37°C
	U/l	259	220	298	19.50	39.00	P->L German methods 30°C
	U/l	182	155	209	13.50	27.00	P->L German methods 25°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.0	121	8.50	17.00	
	mmol/l	1.14	0.96	1.33	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	101	84.5	118	8.25	16.50	
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	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.33	4.64	6.02	0.35	0.69	
	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	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	126	108	144	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	104	88	120	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Nitrobenzenediazonium salt
	mg/dl	1.44	1.13	1.75	0.16	0.31	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	102	94.0	110	4.00	8.00	ISE direct
Cholesterol	mmol/l	3.80	3.31	4.29	0.25	0.49	Cholesterol Oxidase
	mg/dl	147	128	166	9.50	19.00	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	140	112	168	14.00	28.00	Enzymatic UV method
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Hexokinase
	mg/dl	112	95.1	129	8.45	16.90	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PPD
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct HDL PEGME
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	399	339	459	30.00	60.00	P->L Scandinavian & Dutch 37°C
	U/l	288	245	331	21.50	43.00	P->L Scandinavian & Dutch 30°C
	U/l	202	172	232	15.00	30.00	P->L Scandinavian & Dutch 25°C

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
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	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease end point
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
Uric Acid (Urate)	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
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	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	197	156	238	20.50	41.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	149	118	180	15.50	31.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	112	88	136	12.00	24.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	12.4	8.31	16.5	2.05	4.09	1-Naphthyl Phosphate substrate Kinetic 37°C
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	
	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	
	g/l	40.4	34.3	46.5	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.04	3.43	4.65	0.31	0.61	
	g/l	43.0	36.6	49.4	3.20	6.40	Turbidimetric Assays
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Ortho Vitros Microslide Systems 37°C
	U/l	241	204	278	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	188	159	217	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	154	130	178	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	108	92	124	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	168	143	193	12.50	25.00	AMP optimised to NVKC/SFBC 37°C
	U/l	131	111	151	10.00	20.00	AMP optimised to NVKC/SFBC 30°C
U/l	107	91	123	8.00	16.00	AMP optimised to NVKC/SFBC 25°C	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	177	150	204	13.50	27.00	AMP non-optimised 37°C
	U/l	138	117	159	10.50	21.00	AMP non-optimised 30°C
	U/l	113	96	130	8.50	17.00	AMP non-optimised 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Colorimetric 37°C
	U/l	24	19	29	2.50	5.00	Colorimetric 30°C
	U/l	18	15	21	1.50	3.00	Colorimetric 25°C
	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	38	31	45	3.50	7.00	Tris buffer with P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C
	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
	U/l	32	26	38	3.00	6.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
U/l	18	15	21	1.50	3.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Immunoinhibition EPS substrate 37°C
	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	86	73	99	6.50	13.00	Saccharogenic 37°C
	U/l	85	72	98	6.50	13.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	89	76	102	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	96	82	110	7.00	14.00	Amyloclastic Methods 37°C
	U/l	93	79	107	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	104	89	119	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	90	76	104	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.08	0.89	1.27	0.10	0.19	Immunoturbidimetric
	mg/dl	108	88.6	127	9.70	19.40	
Apolipoprotein B	g/l	0.56	0.46	0.66	0.05	0.10	Immunoturbidimetric
	mg/dl	55.7	45.7	65.7	5.00	10.00	
AST (GOT)	U/l	33	26	40	3.50	7.00	Colorimetric 37°C
	U/l	22	18	26	2.00	4.00	Colorimetric 30°C
	U/l	16	12	20	2.00	4.00	Colorimetric 25°C
	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
	U/l	32	26	38	3.00	6.00	Tris buffer SCE 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	13.2	10.5	15.9	1.35	2.70	Differential rate pH change
	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	5th Generation Colorimetric
	µmol/l	28.4	22.7	34.1	2.85	5.70	4th Generation Colorimetric
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	13.7	10.8	16.6	1.45	2.90	Modified Jendrassik
	mg/dl	0.801	0.632	0.970	0.08	0.17	
	µmol/l	22.7	18.0	27.4	2.35	4.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.33	1.05	1.61	0.14	0.28	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.27	1.93	0.17	0.33	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazo with Sulphanilic Acid	
	mg/dl	1.66	1.30	2.02	0.18	0.36		
	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	24.8	19.6	30.0	2.60	5.20	Nitrobenzenediazonium salt	
	mg/dl	1.45	1.15	1.75	0.15	0.30		
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion	
	mg/dl	1.50	1.19	1.81	0.16	0.31		
	µmol/l	28.9	22.9	34.9	3.00	6.00	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.69	1.34	2.04	0.18	0.35		
	µmol/l	31.3	24.7	37.9	3.30	6.60	Modified Jendrassik	
	mg/dl	1.83	1.44	2.22	0.20	0.39		
	Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
		mg/dl	8.54	7.66	9.42	0.44	0.88	
mmol/l		2.23	2.00	2.46	0.12	0.23	Ortho Vitros Microslide Systems	
mg/dl		8.94	8.02	9.86	0.46	0.92		
mmol/l		2.13	1.92	2.34	0.11	0.21	Ion selective electrode	
mg/dl		8.54	7.70	9.38	0.42	0.84		
mmol/l		2.07	1.87	2.27	0.10	0.20	Methylthymol blue	
mg/dl		8.30	7.49	9.11	0.41	0.81		
mmol/l		2.19	1.98	2.40	0.11	0.21	Arsenazo III	
mg/dl		8.78	7.94	9.62	0.42	0.84		
mmol/l		2.16	1.94	2.38	0.11	0.22	Phosphonazo	
mg/dl		8.66	7.78	9.54	0.44	0.88		
mmol/l		2.16	1.94	2.38	0.11	0.22	NM-BAPTA	
mg/dl		8.66	7.78	9.54	0.44	0.88		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	1.06	0.95	1.17	0.05	0.11	Ionised calcium
	mg/dl	4.25	3.82	4.68	0.22	0.43	
Chloride	mmol/l	100	92.0	108	4.00	8.00	Colorimetric
	mmol/l	100	92.4	108	3.80	7.60	Ortho Vitros Microslide Systems
	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
	mmol/l	100	92.3	108	3.85	7.70	ISE direct
	mmol/l	107	98.7	115	4.15	8.30	Optical Fluorescence
Cholesterol	mmol/l	3.74	3.25	4.23	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	144	125	163	9.50	19.00	
	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Dehydrogenase
mg/dl	148	129	167	9.50	19.00		
Cholinesterase	U/l	5346	4277	6415	534.50	1069.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	185	151	219	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	201	165	237	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	193	159	227	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	68	96	7.00	14.00	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	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	201	165	237	18.00	36.00	Monothioglycerol 37°C
	U/l	126	103	149	11.50	23.00	Monothioglycerol 30°C
	U/l	85	70	100	7.50	15.00	Monothioglycerol 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	15.8	12.6	19.0	1.60	3.20	Colorimetric
	µg/dl	100	80.1	120	9.95	19.90	
Cortisol	nmol/l	554	416	692	69.00	138.00	Roche Cobas E411
	µg/dl	19.9	15.0	24.8	2.45	4.90	
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	137	109	165	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	µmol/l	138	111	165	13.50	27.00	Enzymatic UV method
	mg/dl	1.56	1.25	1.87	0.16	0.31	
	µmol/l	136	109	163	13.50	27.00	Creatinine PAP method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	140	112	168	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.55	1.24	1.86	0.16	0.31	
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		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	132	106	158	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	139	111	167	14.00	28.00	IDMS traceable
	mg/dl	1.57	1.25	1.89	0.16	0.32	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.36	1.89	2.83	0.24	0.47	Immunturbidimetric
	ng/ml	1.84	1.48	2.20	0.18	0.36	
Folate	nmol/l	32.0	24.3	39.7	3.85	7.70	Roche Cobas E411
	ng/ml	14.1	10.7	17.5	1.70	3.40	
Free T4	pmol/l	16.9	12.7	21.1	2.10	4.20	Abbott Architect
	ng/dl	1.32	0.991	1.65	0.16	0.33	
	pg/ml	13.2	9.91	16.5	1.65	3.29	Abbott Architect
	pmol/l	17.9	13.4	22.4	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Siemens Centaur XP/XPT/Classic
	pmol/l	19.2	14.4	24.0	2.40	4.80	Siemens Immulite 2000/2500
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Siemens Immulite 2000/2500
	pmol/l	19.7	14.7	24.7	2.50	5.00	Siemens Immulite 1000
	ng/dl	1.54	1.15	1.93	0.20	0.39	
	pg/ml	15.4	11.5	19.3	1.95	3.90	Siemens Immulite 1000
	pmol/l	17.1	12.8	21.4	2.15	4.30	Beckman Dxl800
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Beckman Dxl800
	pmol/l	22.1	16.6	27.6	2.75	5.50	Roche Elecsys
ng/dl	1.72	1.29	2.15	0.22	0.43		
pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Elecsys	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Free T4	pmol/l	17.1	12.8	21.4	2.15	4.30	Beckman Access
	ng/dl	1.33	0.998	1.66	0.17	0.33	
	pg/ml	13.3	9.98	16.6	1.66	3.32	Beckman Access
	pmol/l	35.6	26.7	44.5	4.45	8.90	Vitros ECI
	ng/dl	2.78	2.08	3.48	0.35	0.70	
	pg/ml	27.8	20.8	34.8	3.50	7.00	Vitros ECI
	pmol/l	21.9	16.4	27.4	2.75	5.50	Roche Cobas E411
	ng/dl	1.71	1.28	2.14	0.22	0.43	
	pg/ml	17.1	12.8	21.4	2.15	4.30	Roche Cobas E411
	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.65	1.23	2.07	0.21	0.42	
	pg/ml	16.5	12.3	20.7	2.10	4.20	Roche Cobas 6000/8000
	pmol/l	21.4	16.1	26.7	2.65	5.30	SNIBE Maglumi Analysers
	ng/dl	1.67	1.26	2.08	0.21	0.41	
	pg/ml	16.7	12.6	20.8	2.05	4.10	SNIBE Maglumi Analysers
	pmol/l	19.5	14.6	24.4	2.45	4.90	Biomerieux Vidas FT4N Kit
	ng/dl	1.52	1.14	1.90	0.19	0.38	
	pg/ml	15.2	11.4	19.0	1.90	3.80	Biomerieux Vidas FT4N Kit
Gentamicin	pmol/l	18.5	13.9	23.1	2.30	4.60	Siemens Centaur CP
	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 CP
	μmol/l	7.49	5.99	8.99	0.75	1.50	Immunoturbidimetric
	μg/ml	3.58	2.86	4.30	0.36	0.72	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	60	51	69	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	37	31	43	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.98	5.09	6.87	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Oxygen electrode
	mg/dl	109	92.8	125	8.10	16.20	
mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase	
mg/dl	110	93.5	127	8.25	16.50		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Vitros Magnetic HDL
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL PEGME
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct Clearance Method
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	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	
mmol/l	1.36	1.16	1.56	0.10	0.20	HDL - Ultra	
mg/dl	52.5	44.8	60.2	3.85	7.70		
mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL Roche 4th Generation	
mg/dl	57.9	49.4	66.4	4.25	8.50		
Immunoglobulin A	g/l	1.74	1.31	2.17	0.22	0.43	Immunoturbidimetric
	mg/dl	174	131	217	21.50	43.00	
Immunoglobulin G	g/l	6.34	5.20	7.48	0.57	1.14	Immunoturbidimetric
	mg/dl	634	520	748	57.00	114.00	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Immunoglobulin M	g/l	0.77	0.62	0.93	0.08	0.16	Immunoturbidimetric
	mg/dl	77.3	61.8	92.8	7.75	15.50	
Iron	μmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	μg/dl	102	83.9	120	9.05	18.10	
	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	
	μmol/l	18.5	15.2	21.8	1.65	3.30	Ortho Vitros Microslide Systems
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
	mmol/l	1.60	1.31	1.89	0.15	0.29	UV LDH
mg/dl	14.4	11.8	17.0	1.30	2.60		
LAP	U/l	18	15	21	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	529	450	608	39.50	79.00	Ortho Vitros Microslide Systems 37°C
	U/l	172	147	197	12.50	25.00	L->P 37°C
	U/l	124	106	142	9.00	18.00	L->P 30°C
	U/l	87	75	99	6.00	12.00	L->P 25°C
	U/l	373	317	429	28.00	56.00	P->L Scandinavian & Dutch 37°C
	U/l	269	229	309	20.00	40.00	P->L Scandinavian & Dutch 30°C
	U/l	189	161	217	14.00	28.00	P->L Scandinavian & Dutch 25°C
	U/l	361	307	415	27.00	54.00	P->L German methods 37°C
	U/l	261	222	300	19.50	39.00	P->L German methods 30°C
	U/l	183	156	210	13.50	27.00	P->L German methods 25°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	355	302	408	26.50	53.00	P->L SFBC 37°C
	U/l	256	218	294	19.00	38.00	P->L SFBC 30°C
	U/l	180	153	207	13.50	27.00	P->L SFBC 25°C
	U/l	185	157	213	14.00	28.00	L->P IFCC 37°C
	U/l	134	113	155	10.50	21.00	L->P IFCC 30°C
	U/l	94	80	108	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
	U/l	170	137	203	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	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.806	0.708	0.904	0.05	0.10	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Flame photometry
	mg/dl	0.708	0.624	0.792	0.04	0.08	
	mmol/l	0.98	0.86	1.10	0.06	0.12	Ion selective electrode
	mg/dl	0.680	0.599	0.761	0.04	0.08	
	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.675	0.594	0.756	0.04	0.08	
mmol/l	0.96	0.84	1.07	0.06	0.12	Randox Colorimetric	
mg/dl	0.664	0.584	0.744	0.04	0.08		
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Atomic absorption
	mg/dl	2.18	1.92	2.44	0.13	0.26	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Calmagite
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.94	2.46	0.13	0.26	
mmol/l	0.87	0.76	0.97	0.05	0.10	Enzymatic	
mg/dl	2.11	1.85	2.37	0.13	0.26		
NEFA	mmol/l	1.59	1.35	1.83	0.12	0.24	Colorimetric
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
	mOsm/kg	304	244	364	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.9	9.53	14.3	1.19	2.37	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.39	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	3.99	3.67	4.31	0.16	0.32	Enzymatic
	mmol/l	4.04	3.72	4.36	0.16	0.32	Flame photometry

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
	mmol/l	3.92	3.60	4.24	0.16	0.32	Optical Fluorescence
	mmol/l	3.82	3.51	4.13	0.16	0.31	Colorimetric
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	58.5	46.8	70.2	5.85	11.70	
g/dl	5.85	4.68	7.02	0.59	1.17	Biuret reaction kinetic	
PSA Total	ng/ml =	8.40	6.30	10.5	1.05	2.10	Tosoh Series
	ng/ml =	11.9	8.91	14.9	1.50	2.99	Siemens Immulite 1000
	ng/ml =	12.3	9.20	15.4	1.55	3.10	Roche Elecsys Modular E170
	ng/ml =	11.6	8.69	14.5	1.46	2.91	Beckman Access standardised to Hybritech
	ng/ml =	12.2	9.15	15.3	1.53	3.05	bioMerieux VIDAS TPSA
	ng/ml =	10.1	7.54	12.7	1.28	2.56	Siemens Centaur XP/XPT/Classic
	ng/ml =	9.96	7.47	12.5	1.25	2.49	Abbott Architect
	ng/ml =	11.0	8.28	13.7	1.36	2.72	Ortho Vitros ECi
	ng/ml =	12.4	9.28	15.5	1.56	3.12	Cobas E411
	ng/ml =	12.4	9.30	15.5	1.55	3.10	Roche Cobas 6000/8000
	ng/ml =	11.9	8.89	14.9	1.51	3.01	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml =	12.0	9.00	15.0	1.50	3.00	Beckman DXI standardised to Hybritech
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	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	Flame photometry
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
	mmol/l	138	131	145	3.50	7.00	Optical Fluorescence
	mmol/l	141	134	148	3.50	7.00	Colorimetric
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.05	0.84	1.26	0.10	0.21	Abbott Architect
	µU/ml =	1.32	1.05	1.59	0.14	0.27	bioMerieux VIDAS TSH
	µU/ml =	1.36	1.08	1.64	0.14	0.28	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Immulite 1000
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Elecsys
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Beckman Access Fast TSH
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.18	0.94	1.42	0.12	0.24	Vitros ECi
	µU/ml =	1.41	1.13	1.69	0.14	0.28	Roche Cobas E411
	µU/ml =	1.43	1.15	1.71	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Beckman Dxl800 Hyper TSH
	µU/ml =	1.15	0.92	1.38	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.42	1.13	1.71	0.15	0.29	SNIBE Maglumi Analysers
µU/ml =	1.21	0.97	1.45	0.12	0.24	Beckman Dxl 600/800 Access (3rd IS)	
TIBC	µmol/l	46.6	36.8	56.4	4.90	9.80	Ortho Vitros Microslide Systems
	µg/dl	260	206	314	27.00	54.00	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	37.8	29.9	45.7	3.95	7.90	Removal of excess free iron
	µg/dl	211	167	255	22.00	44.00	
	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	
	µmol/l	38.5	30.4	46.6	4.05	8.10	Direct Colorimetric
	µg/dl	215	170	260	22.50	45.00	
	µmol/l	41.0	32.4	49.6	4.30	8.60	Calculated from Transferrin
	µg/dl	229	181	277	24.00	48.00	
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	2.33	1.75	2.91	0.29	0.58	Abbott Architect
	ng/ml	1.52	1.14	1.90	0.19	0.38	
	ng/dl	152	114	190	19.00	38.00	Abbott Architect
	nmol/l	2.63	1.97	3.29	0.33	0.66	BioMerieux Vidas
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	BioMerieux Vidas
	nmol/l	2.78	2.08	3.48	0.35	0.70	Siemens Centaur XP/XPT/Classic
	ng/ml	1.81	1.35	2.27	0.23	0.46	
	ng/dl	181	135	227	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.28	1.71	2.85	0.29	0.57	Siemens Immulite 2000/2500
	ng/ml	1.48	1.11	1.85	0.19	0.37	
	ng/dl	148	111	185	18.50	37.00	Siemens Immulite 2000/2500
	nmol/l	2.83	2.12	3.54	0.36	0.71	Beckman Dxl800
	ng/ml	1.84	1.38	2.30	0.23	0.46	
ng/dl	184	138	230	23.00	46.00	Beckman Dxl800	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.64	1.98	3.30	0.33	0.66	Beckman Access
	ng/ml	1.72	1.29	2.15	0.22	0.43	
	ng/dl	172	129	215	21.50	43.00	Beckman Access
	nmol/l	3.40	2.55	4.25	0.43	0.85	Vitros ECI
	ng/ml	2.21	1.66	2.76	0.28	0.55	
	ng/dl	221	166	276	27.50	55.00	Vitros ECI
	nmol/l	2.74	2.05	3.43	0.35	0.69	Roche Cobas E411
	ng/ml	1.78	1.33	2.23	0.23	0.45	
	ng/dl	178	133	223	22.50	45.00	Roche Cobas E411
	nmol/l	2.85	2.13	3.57	0.36	0.72	SNIBE Maglumi Analysers
	ng/ml	1.86	1.39	2.33	0.24	0.47	
	ng/dl	186	139	233	23.50	47.00	SNIBE Maglumi Analysers
	nmol/l	2.79	2.09	3.49	0.35	0.70	Siemens Centaur CP
	ng/ml	1.82	1.36	2.28	0.23	0.46	
ng/dl	182	136	228	23.00	46.00	Siemens Centaur CP	
Total T4	nmol/l	89.4	67.0	112	11.20	22.40	Abbott Architect
	µg/dl	6.97	5.23	8.71	0.87	1.74	
	ng/ml	69.7	52.3	87.1	8.70	17.40	Abbott Architect
	nmol/l	83.8	62.8	105	10.50	21.00	BioMerieux Vidas
	µg/dl	6.54	4.90	8.18	0.82	1.64	
	ng/ml	65.4	49.0	81.8	8.20	16.40	BioMerieux Vidas
	nmol/l	81.7	61.3	102	10.20	20.40	Siemens Centaur XP/XPT/Classic
	µg/dl	6.37	4.78	7.96	0.80	1.59	
	ng/ml	63.7	47.8	79.6	7.95	15.90	Siemens Centaur XP/XPT/Classic

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	88.2	66.2	110	11.00	22.00	Roche Elecsys
	µg/dl	6.88	5.16	8.60	0.86	1.72	
	ng/ml	68.8	51.6	86.0	8.60	17.20	Roche Elecsys
	nmol/l	90.3	67.7	113	11.30	22.60	Tosoh Series
	µg/dl	7.04	5.28	8.80	0.88	1.76	
	ng/ml	70.4	52.8	88.0	8.80	17.60	Tosoh Series
	nmol/l	79.6	59.7	99.5	9.95	19.90	Vitros ECi
	µg/dl	6.21	4.66	7.76	0.78	1.55	
	ng/ml	62.1	46.6	77.6	7.75	15.50	Vitros ECi
	nmol/l	87.2	65.4	109	10.90	21.80	Roche Cobas E411
	µg/dl	6.80	5.10	8.50	0.85	1.70	
	ng/ml	68.0	51.0	85.0	8.50	17.00	Roche Cobas E411
	nmol/l	85.4	64.1	107	10.65	21.30	Roche Cobas 6000/8000
	µg/dl	6.66	5.00	8.32	0.83	1.66	
	ng/ml	66.6	50.0	83.2	8.30	16.60	Roche Cobas 6000/8000
nmol/l	94.5	70.9	118	11.80	23.60	SNIBE Maglumi Analysers	
µg/dl	7.37	5.53	9.21	0.92	1.84		
ng/ml	73.7	55.3	92.1	9.20	18.40	SNIBE Maglumi Analysers	
Transferrin	g/l	1.77	1.42	2.12	0.18	0.35	Immunoturbidimetric
	mg/dl	177	142	212	17.50	35.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.2	115	7.95	15.90	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	97.4	82.1	113	7.65	15.30	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	82.9	115	8.10	16.20	
mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems	
mg/dl	110	92.0	128	9.00	18.00		
UIBC	µmol/l	20.3	16.7	23.9	1.80	3.60	Direct Colorimetric
	µg/dl	113	93.4	133	9.80	19.60	
Urea	mmol/l	6.82	5.80	7.84	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	7.30	6.20	8.40	0.55	1.10	Urease end point
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.22	8.40	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.4	50.4	3.25	6.50	
	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease hypochlorite
	mg/dl	43.9	37.3	50.5	3.30	6.60	
mmol/l	7.31	6.21	8.41	0.55	1.10	BUN	
mg/dl	20.5	17.4	23.6	1.55	3.10		
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.48	4.75	6.21	0.37	0.73	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Reduction methods
	mg/dl	6.01	5.22	6.80	0.40	0.79	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

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	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Vitamin B12	pmol/l	483	387	580	48.20	96.39	Roche Cobas E411
	pg/ml	655	524	786	65.50	131.00	
Zinc	μmol/l	21.1	16.9	25.3	2.10	4.20	Colorimetric with deproteinisation
	μg/dl	138	110	166	14.00	28.00	

**MEAN OF ALL INSTRUMENTS (Elec.)**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		69.2	62.3	76.1	3.45	6.90	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.6	4.3	6.9	0.67	1.34	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.7	5.1	8.3	0.81	1.61	% of total Protein (Beckman Capillary)
beta-globulin		8.6	6.5	10.7	1.03	2.06	% 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. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	111	95	127	8.00	16.00	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
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Total	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	28.3	22.3	34.3	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.30	2.02	0.18	0.36	
	µmol/l	28.4	22.5	34.3	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.66	1.32	2.00	0.17	0.34	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	

## MINDRAY BS-200/300/400

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	140	112	168	14.00	28.00	Alkaline picrate with deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	Jaffe rate blanked
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92
mg/dl		111	94.1	128	8.45	16.90	
mmol/l		6.16	5.24	7.08	0.46	0.92	Glucose oxidase
mg/dl		111	94.4	128	8.30	16.60	



## MINDRAY BS-200/300/400

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct Clearance Method
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.37	1.16	1.58	0.11	0.21	HDL - Ultra
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	374	318	430	28.00	56.00	P->L Scandinavian & Dutch 37°C
	U/l	270	230	310	20.00	40.00	P->L Scandinavian & Dutch 30°C
	U/l	190	161	219	14.50	29.00	P->L Scandinavian & Dutch 25°C
	U/l	353	300	406	26.50	53.00	P->L German methods 37°C
	U/l	255	217	293	19.00	38.00	P->L German methods 30°C
	U/l	179	152	206	13.50	27.00	P->L German methods 25°C
	U/l	188	160	216	14.00	28.00	L->P IFCC 37°C
	U/l	136	116	156	10.00	20.00	L->P IFCC 30°C
	U/l	95	81	109	7.00	14.00	L->P IFCC 25°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
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	

## MINDRAY BS-200/300/400

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	101	84.5	118	8.25	16.50		
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction	
	mg/dl	96.5	81.2	112	7.65	15.30		
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/Glycerol Dehydrogenase	
	mg/dl	102	85.3	119	8.35	16.70		
	Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease end point
		mg/dl	43.0	36.6	49.4	3.20	6.40	
	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	7.18	6.10	8.26	0.54	1.08	Urease hypochlorite	
	mg/dl	43.2	36.7	49.7	3.25	6.50		
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN	
	mg/dl	20.8	17.7	23.9	1.55	3.10		
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.71	4.97	6.45	0.37	0.74		
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.68	4.94	6.42	0.37	0.74		
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.58	4.86	6.30	0.36	0.72		

## Ortho VITROS®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	146	124	168	11.00	22.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	11.9	9.40	14.4	1.25	2.50	BuBc Vitros Slide
	mg/dl	0.696	0.550	0.842	0.07	0.15	
Bilirubin Total	µmol/l	22.7	18.0	27.4	2.35	4.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Bilirubin, Unconjugated Vitros BU	µmol/l	11.1	8.77	13.4	1.17	2.33	BuBc Vitros Slide
	mg/dl	0.649	0.513	0.785	0.07	0.14	
Calcium	mmol/l	2.23	2.00	2.46	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.94	8.02	9.86	0.46	0.92	
Chloride	mmol/l	100	92.4	108	3.80	7.60	Ortho Vitros Microslide Systems
	mg/dl	3.74	3.25	4.23	0.25	0.49	
Cholesterol	mmol/l	3.74	3.25	4.23	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	144	125	163	9.50	19.00	
Cholinesterase	U/l	5146	4117	6175	514.50	1029.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	185	151	219	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.48	1.19	1.77	0.15	0.29	

## Ortho VITROS®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	132	106	158	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
Free T4	pmol/l	35.6	26.7	44.5	4.45	8.90	Vitros ECi
	ng/dl	2.78	2.08	3.48	0.35	0.70	
	pg/ml	27.8	20.8	34.8	3.50	7.00	Vitros ECi
gamma-GT	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.98	5.09	6.87	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Vitros Magnetic HDL
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.30	1.11	1.49	0.10	0.19	
mg/dl	50.2	42.8	57.6	3.70	7.40		
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Ortho Vitros Microslide Systems
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	529	450	608	39.50	79.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	170	137	203	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.16	1.90	2.42	0.13	0.26	

## Ortho VITROS®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Vitros DT60/DT60 II
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
PSA Total	ng/ml =	11.9	8.89	14.9	1.51	3.01	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	141	134	148	3.50	7.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.18	0.94	1.42	0.12	0.24	Vitros ECi
TIBC	µmol/l	46.6	36.8	56.4	4.90	9.80	Ortho Vitros Microslide Systems
	µg/dl	260	206	314	27.00	54.00	
Total T3	nmol/l	3.40	2.55	4.25	0.43	0.85	Vitros ECi
	ng/ml	2.21	1.66	2.76	0.28	0.55	
	ng/dl	221	166	276	27.50	55.00	Vitros ECi
Total T4	nmol/l	79.6	59.7	99.5	9.95	19.90	Vitros ECi
	µg/dl	6.21	4.66	7.76	0.78	1.55	
	ng/ml	62.1	46.6	77.6	7.75	15.50	Vitros ECi
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
Urea	mmol/l	6.82	5.80	7.84	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.82	5.80	7.84	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	

**Ortho VITROS®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.48	4.75	6.21	0.37	0.73	

## PRESTIGE 24i

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
Alkaline Phosphatase	U/l	252	214	290	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	196	167	225	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	161	137	185	12.00	24.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	30.4	24.0	36.8	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	225	185	265	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	141	116	166	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	96	79	113	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	

## PRESTIGE 24i

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	
Iron	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	
LD (LDH)	U/l	374	318	430	28.00	56.00	P->L German methods 37°C
	U/l	270	230	310	20.00	40.00	P->L German methods 30°C
	U/l	190	161	219	14.50	29.00	P->L German methods 25°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
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	
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	



**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	
	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	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	

## Roche Cobas 6000 c501 e601

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Green
	g/dl	4.34	3.69	4.99	0.33	0.65	
	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Purple
	g/dl	4.32	3.68	4.96	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Turbidimetric Assays
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	142	120	164	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	93	129	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	89	76	102	6.50	13.00	AMP optimised to IFCC 25°C
	U/l	143	121	165	11.00	22.00	Colorimetric 37°C
	U/l	111	94	128	8.50	17.00	Colorimetric 30°C
	U/l	91	77	105	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	32	25	39	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	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	58	80	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Enzymatic
Bile Acids	µmol/l	24.1	19.3	28.9	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.8	14.9	22.7	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.872	1.33	0.11	0.23	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.17	1.81	0.16	0.32	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	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	95.7	88.0	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.75	3.27	4.23	0.24	0.48	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
Cholinesterase	U/l	5201	4161	6241	520.00	1040.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC serum start (DGKC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC serum start (DGKC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC serum start (DGKC) 25°C
	U/l	187	153	221	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	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	143	114	172	14.50	29.00	Enzymatic UV method
	mg/dl	1.62	1.29	1.95	0.17	0.33	
	µmol/l	141	113	169	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.59	1.28	1.90	0.16	0.31	
	µmol/l	135	108	162	13.50	27.00	Jaffe rate blanked
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	137	109	165	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.55	1.23	1.87	0.16	0.32	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	IDMS traceable
	mg/dl	1.55	1.24	1.86	0.16	0.31	
Free T4	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.65	1.23	2.07	0.21	0.42	
	pg/ml	16.5	12.3	20.7	2.10	4.20	Roche Cobas 6000/8000
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PEGME
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	57.1	48.6	65.6	4.25	8.50	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	191	162	220	14.50	29.00	L->P 37°C
	U/l	138	117	159	10.50	21.00	L->P 30°C
	U/l	97	82	112	7.50	15.00	L->P 25°C
	U/l	353	300	406	26.50	53.00	P->L German methods 37°C
	U/l	255	217	293	19.00	38.00	P->L German methods 30°C
	U/l	179	152	206	13.50	27.00	P->L German methods 25°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C
	U/l	135	115	155	10.00	20.00	L->P IFCC 30°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.15	0.06	0.13	Ion selective electrode
	mg/dl	0.708	0.621	0.795	0.04	0.09	
	mmol/l	0.98	0.86	1.09	0.06	0.12	Spectrophotometric
	mg/dl	0.677	0.596	0.758	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Atomic absorption
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	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	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Osmolality	mOsm/kg	290	232	348	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	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	
	g/l	59.3	47.4	71.2	5.95	11.90	
	g/dl	5.93	4.74	7.12	0.60	1.19	
PSA Total	ng/ml =	12.4	9.31	15.5	1.55	3.09	Roche Cobas 6000/8000
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.43	1.15	1.71	0.14	0.28	Roche Cobas 6000/8000
TIBC	µmol/l	37.9	29.9	45.9	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	212	167	257	22.50	45.00	
	µmol/l	43.2	34.1	52.3	4.55	9.10	Calculated from Transferrin
	µg/dl	241	191	291	25.00	50.00	
Total T3	nmol/l	2.62	1.97	3.27	0.33	0.65	Roche Cobas 6000/8000
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	
Total T4	nmol/l	85.4	64.1	107	10.65	21.30	Roche Cobas 6000/8000
	µg/dl	6.66	5.00	8.32	0.83	1.66	
	ng/ml	66.6	50.0	83.2	8.30	16.60	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.12	0.95	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.6	115	7.75	15.50	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	102	85.5	119	8.25	16.50	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.3	114	7.95	15.90	
UIBC	μmol/l	19.4	15.9	22.9	1.75	3.50	Direct Colorimetric
	μg/dl	108	88.9	127	9.55	19.10	
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease end point
	mg/dl	43.0	36.6	49.4	3.20	6.40	
	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	



## Roche Cobas C111®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### 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	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	25	39	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	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	92	78	106	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	15.9	12.6	19.2	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.930	0.737	1.12	0.10	0.19	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	
µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Dichloroaniline (DCA)	
mg/dl	1.01	0.796	1.22	0.11	0.21		
Bilirubin Total	µmol/l	23.4	18.5	28.3	2.45	4.90	Diazo with Sulphanilic Acid
	mg/dl	1.37	1.08	1.66	0.15	0.29	

## Roche Cobas C111®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.17	1.96	2.38	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.70	7.86	9.54	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	102	94.3	110	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	142	114	170	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	

## Roche Cobas C111®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
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	1.53	1.30	1.76	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
LD (LDH)	U/l	186	158	214	14.00	28.00	L->P IFCC 37°C
	U/l	134	114	154	10.00	20.00	L->P IFCC 30°C
	U/l	94	80	108	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	

## Roche Cobas C111®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.1	116	7.95	15.90	
	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.18	0.99	1.37	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.4	121	8.30	16.60	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
	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	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	4.99	6.51	0.38	0.76	

## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Green
	g/dl	4.33	3.68	4.98	0.33	0.65	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	110	93	127	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	144	122	166	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	112	95	129	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	92	78	106	7.00	14.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	90	77	103	6.50	13.00	Immunoinhibition EPS substrate 37°C
	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C

## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	18.8	14.9	22.7	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.10	0.872	1.33	0.11	0.23	
Bilirubin Total	µmol/l	18.9	14.9	22.9	2.00	4.00	Roche JG factored
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	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	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	
	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	
Chloride	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.80	3.30	4.30	0.25	0.50	Cholesterol Oxidase
	mg/dl	147	127	167	10.00	20.00	
Cholinesterase	U/l	5001	4000	6002	500.50	1001.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC substrate start (DGKC) 25°C

## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C	
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C	
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C	
	U/l	194	159	229	17.50	35.00	Creatinine phosphate substrate Start 37°C	
	U/l	121	100	142	10.50	21.00	Creatinine phosphate substrate Start 30°C	
	U/l	82	68	96	7.00	14.00	Creatinine phosphate substrate Start 25°C	
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.55	1.24	1.86	0.16	0.31		
	µmol/l	142	114	170	14.00	28.00	Roche Creatinine Plus	
	mg/dl	1.60	1.29	1.91	0.16	0.31		
	µmol/l	139	111	167	14.00	28.00	Jaffe rate blanked	
	mg/dl	1.57	1.25	1.89	0.16	0.32		
Creatinine	µmol/l	138	111	165	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.56	1.25	1.87	0.16	0.31		
	µmol/l	138	111	165	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.56	1.25	1.87	0.16	0.31		
	gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		52	45	59	3.50	7.00	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	28	36	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase	
	mg/dl	111	94.2	128	8.40	16.80		

## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PEGME
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	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	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.3	121	9.35	18.70	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.64	1.34	1.94	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.8	12.1	17.5	1.35	2.70	
LD (LDH)	U/l	352	299	405	26.50	53.00	P->L German methods 37°C
	U/l	254	216	292	19.00	38.00	P->L German methods 30°C
	U/l	178	152	204	13.00	26.00	P->L German methods 25°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 37°C
	U/l	135	115	155	10.00	20.00	L->P IFCC 30°C
	U/l	95	81	109	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Atomic absorption
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	



## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.40	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	4.06	3.74	4.38	0.16	0.32	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	58.7	46.9	70.5	5.90	11.80	Biuret reaction kinetic
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.3	31.0	47.6	4.15	8.30	FE+UIBC(saturation with iron)
	μg/dl	220	173	267	23.50	47.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.0	116	8.00	16.00	
	mmol/l	1.12	0.95	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.6	115	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	103	86.4	120	8.30	16.60	
UIBC	μmol/l	20.5	16.8	24.2	1.85	3.70	Direct Colorimetric
	μg/dl	115	93.9	136	10.55	21.10	

## Roche Cobas C311®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	7.08	6.01	8.15	0.54	1.07	Urease end point
	mg/dl	42.6	36.1	49.1	3.25	6.50	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	

## Roche Cobas c701 / c702 / c711

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Green
	g/dl	4.37	3.71	5.03	0.33	0.66	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	106	90	122	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	87	74	100	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.7	10.8	16.6	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	24.9	19.6	30.2	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.6	19.5	29.7	2.55	5.10	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	5244	4195	6293	524.50	1049.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	96	136	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	144	115	173	14.50	29.00	Roche Creatinine Plus
	mg/dl	1.63	1.30	1.96	0.17	0.33	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	138	110	166	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.56	1.24	1.88	0.16	0.32	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	45	59	3.50	7.00	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	28	36	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	1.29	1.10	1.48	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	58.7	49.8	67.6	4.45	8.90	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	188	160	216	14.00	28.00	L->P IFCC 37°C
	U/l	136	116	156	10.00	20.00	L->P IFCC 30°C
	U/l	95	81	109	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	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	1.37	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	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	37.6	29.7	45.5	3.95	7.90	FE+UIBC(saturation with iron)
	µg/dl	210	166	254	22.00	44.00	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.15	0.96	1.34	0.09	0.19	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	102	85.3	119	8.35	16.70	
UIBC	µmol/l	19.6	16.1	23.1	1.75	3.50	Direct Colorimetric
	µg/dl	110	90.0	130	10.00	20.00	
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.13	6.06	8.20	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.46	4.75	6.17	0.36	0.71	
	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	5.49	4.79	6.19	0.35	0.70	

## RX SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### 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	308	262	354	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.4	21.1	31.7	2.65	5.30	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	15.7	12.4	19.0	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	31.6	25.0	38.2	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE direct

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1324UN Cat. No. HN1530/HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	221	181	261	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	234	192	276	21.00	42.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	141	113	169	14.00	28.00	Enzymatic UV method
	mg/dl	1.59	1.28	1.90	0.16	0.31	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.57	5.58	7.56	0.50	0.99	Hexokinase
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	368	313	423	27.50	55.00	P->L German methods 37°C
	U/l	186	158	214	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.96	0.84	1.07	0.06	0.12	Colorimetric
	mg/dl	0.664	0.584	0.744	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	



## RX SERIES®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	Enzymatic
	mmol/l	4.21	3.87	4.55	0.17	0.34	ISE method - direct
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
TIBC	µmol/l	48.5	38.3	58.7	5.10	10.20	Direct Colorimetric
	µg/dl	271	214	328	28.50	57.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.2	116	7.90	15.80	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	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	


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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	147	125	169	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.2	11.3	17.1	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	18.2	14.3	22.1	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	30.7	24.2	37.2	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	

## SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE indirect
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Cholinesterase	U/l	6291	5033	7549	629.00	1258.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	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	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.89	5.00	6.78	0.45	0.89	Hexokinase
	mg/dl	106	90.1	122	7.95	15.90	
	mmol/l	6.02	5.12	6.92	0.45	0.90	Glucose oxidase
	mg/dl	108	92.3	124	7.85	15.70	
HDL - Cholesterol	mmol/l	1.09	0.93	1.25	0.08	0.16	Direct HDL PPD
	mg/dl	42.1	35.9	48.3	3.10	6.20	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.2	38.3	52.1	3.45	6.90	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct Clearance Method
	mg/dl	44.4	37.8	51.0	3.30	6.60	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric with ppt.
	µg/dl	102	83.3	121	9.35	18.70	
	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	185	157	213	14.00	28.00	L->P 37°C
	U/l	349	297	401	26.00	52.00	P->L German methods 37°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.690	0.606	0.774	0.04	0.08	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
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	4.04	3.72	4.36	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	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.2	34.1	52.3	4.55	9.10	Removal of excess free iron
	µg/dl	241	191	291	25.00	50.00	

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400				ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)			
Lot. No. 1324UN Cat. No. HN1530/HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2022-09-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	45.1	35.6	54.6	4.75	9.50	FE+UIBC(saturation with iron)
	μg/dl	252	199	305	26.50	53.00	
	μmol/l	44.4	35.1	53.7	4.65	9.30	Direct Colorimetric
	μg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.16	0.98	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.3	120	8.35	16.70	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.7	117	8.15	16.30	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
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	5.75	4.99	6.51	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Green
	g/dl	4.42	3.76	5.08	0.33	0.66	
	g/l	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
Alkaline Phosphatase	U/l	152	129	175	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.8	11.8	17.8	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	13.1	10.4	15.8	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.608	0.924	0.08	0.16	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.07	1.87	2.27	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.30	7.49	9.11	0.41	0.81	
Chloride	mmol/l	98.3	90.5	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.45	3.01	3.89	0.22	0.44	Cholesterol Oxidase
	mg/dl	133	116	150	8.50	17.00	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.46	3.01	3.91	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	116	152	9.00	18.00	
Cholinesterase	U/l	9202	7362	10000	920.00	1840.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	186	152	220	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	142	113	171	14.50	29.00	Jaffe rate blanked
	mg/dl	1.60	1.28	1.92	0.16	0.32	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.11	5.20	7.02	0.46	0.91	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Oxygen electrode
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PPD
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL PEGME
	mg/dl	53.3	45.2	61.4	4.05	8.10	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric with ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
	µmol/l	17.6	14.5	20.7	1.55	3.10	Colorimetric without ppt.
	µg/dl	98.4	81.1	116	8.65	17.30	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	UV LDH
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	181	154	208	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	177	150	204	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	133	107	159	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.2	48.2	72.2	6.00	12.00	Biuret reaction end point
	g/dl	6.02	4.82	7.22	0.60	1.20	
PSA Total	ng/ml =	12.2	9.18	15.2	1.51	3.02	Siemens Dimension
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.19	0.95	1.43	0.12	0.24	
TIBC	µmol/l	36.9	29.2	44.6	3.85	7.70	FE+UIBC(saturation with iron)
	µg/dl	206	163	249	21.50	43.00	
	µmol/l	37.0	29.3	44.7	3.85	7.70	Direct Colorimetric
	µg/dl	207	164	250	21.50	43.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.8	109	7.50	15.00	



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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.2	111	7.70	15.40	
Urea	mmol/l	7.41	6.29	8.53	0.56	1.12	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	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 catalase 340nm
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	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	
	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	

## SIEMENS DIMENSION RxL/Max/Xpand®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
	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	152	129	175	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	152	129	175	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	47	37	57	5.00	10.00	Tris buffer with P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.3	12.2	18.4	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	13.1	10.4	15.8	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.608	0.924	0.08	0.16	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.30	7.45	9.15	0.43	0.85	
	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	


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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.43	2.98	3.88	0.23	0.45	Cholesterol Oxidase
	mg/dl	132	115	149	8.50	17.00	
	mmol/l	3.48	3.03	3.93	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	117	151	8.50	17.00	
Cholinesterase	U/l	9187	7350	10000	918.50	1837.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	185	151	219	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	143	114	172	14.50	29.00	Alkaline picrate with deproteinization
	mg/dl	1.62	1.29	1.95	0.17	0.33	
	µmol/l	143	114	172	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.62	1.29	1.95	0.17	0.33	
	µmol/l	140	112	168	14.00	28.00	Enzymatic UV method
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	139	111	167	14.00	28.00	Creatinine PAP method
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	µmol/l	141	113	169	14.00	28.00	IDMS traceable
	mg/dl	1.59	1.28	1.90	0.16	0.31	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	55	75	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	5.87	4.99	6.75	0.44	0.88	Glucose oxidase
	mg/dl	106	89.9	122	8.05	16.10	
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PPD
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.35	1.14	1.56	0.11	0.21	Direct HDL PEGME
	mg/dl	52.1	44.0	60.2	4.05	8.10	
mmol/l	1.35	1.14	1.56	0.11	0.21	Direct Clearance Method	
mg/dl	52.1	44.0	60.2	4.05	8.10		
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric with ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	UV LDH
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	179	152	206	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	178	151	205	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	132	106	158	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.03	0.90	1.16	0.06	0.13	Spectrophotometric
	mg/dl	0.715	0.626	0.804	0.04	0.09	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.8	47.9	71.7	5.95	11.90	Biuret reaction end point
	g/dl	5.98	4.79	7.17	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	37.5	29.6	45.4	3.95	7.90	Removal of excess free iron
	μg/dl	210	165	255	22.50	45.00	
	μmol/l	37.7	29.8	45.6	3.95	7.90	FE+UIBC(saturation with iron)
	μg/dl	211	167	255	22.00	44.00	
	μmol/l	36.9	29.2	44.6	3.85	7.70	Direct Colorimetric
	μg/dl	206	163	249	21.50	43.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease end point
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.30	6.20	8.40	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	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	
	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	

## SIEMENS DIMENSION Vista®

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

Lot. No. 1324UN Cat. No. HN1530/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-09-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	47	37	57	5.00	10.00	Tris buffer with P5P 37°C
	U/l	47	37	57	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	13.7	10.8	16.6	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.801	0.632	0.970	0.08	0.17	
Bilirubin Total	µmol/l	27.9	22.0	33.8	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	102	94.0	110	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.42	2.98	3.86	0.22	0.44	Cholesterol Oxidase
	mg/dl	132	115	149	8.50	17.00	
	mmol/l	3.57	3.11	4.03	0.23	0.46	Dimension-Siemens reagents
	mg/dl	138	120	156	9.00	18.00	
CK Total	U/l	186	152	220	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	141	113	169	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.59	1.28	1.90	0.16	0.31	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.73	1.42	2.04	0.16	0.31	UV LDH
	mg/dl	15.6	12.8	18.4	1.40	2.80	
LD (LDH)	U/l	183	156	210	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	148	119	177	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Methylthymol blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
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	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.71	4.97	6.45	0.37	0.74	