

## 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> 1234UN	<b>EXPIRY:</b> 2020-06-28	

### INTENDED USE

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

### DEVICE DESCRIPTION

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

### SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

### STORAGE AND STABILITY

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

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

### LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

### PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

**MATERIALS PROVIDED**

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

**MATERIALS REQUIRED BUT NOT PROVIDED**

Volumetric pipette

**ASSIGNED VALUES**

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

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

If an instrument specific value is not available, refer to the Mean of all Instruments section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email [Technical.Services@randox.com](mailto:Technical.Services@randox.com).

**NOTES**

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

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## Abbott Architect c/ci Systems®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### 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	
	g/l	42.5	36.2	48.8	3.15	6.30	Bromocresol Purple
	g/dl	4.25	3.62	4.88	0.32	0.63	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	165	141	189	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	102	87	117	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	111	94	128	8.50	17.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bile Acids	µmol/l	29.0	23.2	34.8	2.90	5.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.3	14.4	22.2	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Arsenazo III
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Chloride	mmol/l	97.8	90.0	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Cholinesterase	U/l	6507	5206	7808	650.50	1301.00	Colorimetric Butyrylthiocholine 37°C
	U/l	6466	5173	7759	646.50	1293.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	13.7	11.0	16.4	1.35	2.70	Colorimetric
	µg/dl	87.1	70.0	104	8.55	17.10	
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	136	109	163	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	133	107	159	13.00	26.00	Creatinine PAP method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
	mg/dl	1.58	1.27	1.89	0.16	0.31	
Free T4	µmol/l	139	111	167	14.00	28.00	IDMS traceable
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	pmol/l	19.1	14.3	23.9	2.40	4.80	Abbott Architect
	ng/dl	1.49	1.12	1.86	0.19	0.37	
	pg/ml	14.9	11.2	18.6	1.85	3.70	Abbott Architect

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	55	47	63	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°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	6.49	5.51	7.47	0.49	0.98	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	
HDL - Cholesterol	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL PPD
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.31	1.11	1.51	0.10	0.20	HDL - Ultra
	mg/dl	50.6	42.8	58.4	3.90	7.80	
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	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P 37°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.11	0.98	1.24	0.06	0.13	Spectrophotometric
	mg/dl	0.771	0.681	0.861	0.05	0.09	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Arsenazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Enzymatic
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.58	1.34	1.82	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.90	4.15	5.65	0.38	0.75	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.9	46.4	69.4	5.75	11.50	Biuret reaction end point
	g/dl	5.79	4.64	6.94	0.58	1.15	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
PSA Total	ng/ml =	15.4	11.5	19.3	1.95	3.90	Abbott Architect
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.04	0.84	1.25	0.10	0.21	Abbott Architect
TIBC	µmol/l	46.7	36.9	56.5	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	261	206	316	27.50	55.00	
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.1	115	8.00	16.00	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	26.8	22.0	31.6	2.40	4.80	Direct Colorimetric
	µg/dl	150	123	177	13.50	27.00	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	

## ABX Pentra 400®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	36	52	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	19.2	15.2	23.2	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.34	2.11	2.57	0.12	0.23	Arsenazo III
	mg/dl	9.38	8.46	10.3	0.46	0.92	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	136	178	10.50	21.00	
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
Glucose	mmol/l	6.52	5.54	7.50	0.49	0.98	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.61	1.37	1.85	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.99	4.25	5.73	0.37	0.74	
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	



## ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.4	122	8.30	16.60	
Urea	mmol/l	7.17	6.09	8.25	0.54	1.08	Urease kinetic
	mg/dl	43.1	36.6	49.6	3.25	6.50	
	mmol/l	7.17	6.09	8.25	0.54	1.08	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	

## Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

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	
Alkaline Phosphatase	U/l	158	134	182	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	16.4	13.0	19.8	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.959	0.761	1.16	0.10	0.20	
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	2.40	2.16	2.64	0.12	0.24	Arsenazo III
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	134	172	9.50	19.00	
Creatinine	µmol/l	121	97.0	145	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
Protein Total	g/l	58.3	46.7	69.9	5.80	11.60	Biuret reaction kinetic
	g/dl	5.83	4.67	6.99	0.58	1.16	
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.8	114	7.70	15.40	



**Alfa Wassermann Alfa 600/Analyticon Biolyzer 600** ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	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	

## Beckman Coulter AU Series®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	216	170	262	23.00	46.00	Oxobutyrate < 10 mmol/l 37°C
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	
Alkaline Phosphatase	U/l	204	174	234	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	88	75	101	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.4	23.4	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.901	1.36	0.11	0.23	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.42	2.18	2.66	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.70	8.74	10.7	0.48	0.96	
	mmol/l	2.42	2.18	2.66	0.12	0.24	Arsenazo III
	mg/dl	9.70	8.74	10.7	0.48	0.96	

## Beckman Coulter AU Series®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.4	87.7	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5044	4035	6053	504.50	1009.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	16.5	13.2	19.8	1.65	3.30	Colorimetric
	µg/dl	105	84.0	126	10.50	21.00	
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	134	107	161	13.50	27.00	Enzymatic UV method (340nm)
	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	138	110	166	14.00	28.00	Jaffe rate blanked
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.31	0.26	0.36	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

## Beckman Coulter AU Series®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.36	5.41	7.31	0.48	0.95	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
	mmol/l	6.50	5.53	7.47	0.49	0.97	Glucose oxidase
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
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	1.34	1.14	1.54	0.10	0.20	HDL - Ultra
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	203	173	233	15.00	30.00	L->P 37°C
	U/l	442	376	508	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C

## Beckman Coulter AU Series®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.06	0.94	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.649	0.823	0.04	0.09	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Osmolality	mOsm/kg	288	231	345	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.58	1.35	1.81	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.90	4.19	5.61	0.36	0.71	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	μmol/l	48.4	38.3	58.5	5.05	10.10	FE+UIBC(saturation with iron)
	μg/dl	271	214	328	28.50	57.00	
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	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	85.9	120	8.55	17.10	
UIBC	μmol/l	29.8	24.5	35.1	2.65	5.30	Direct Colorimetric
	μg/dl	167	137	197	15.00	30.00	

## Beckman Coulter AU Series®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease end point
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.44	6.32	8.56	0.56	1.12	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
Uric Acid (Urate)	mmol/l	7.44	6.32	8.56	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	6.15	5.34	6.96	0.41	
mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	6.13	5.33	6.93	0.40		0.80
mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	6.03	5.24	6.82	0.40		0.79
Zinc	µmol/l	29.9	23.9	35.9	3.00	6.00	Colorimetric with deproteinisation
	µg/dl	195	156	234	19.50	39.00	



## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Green
	g/dl	4.32	3.68	4.96	0.32	0.64	
	g/l	44.9	38.1	51.7	3.40	6.80	Bromocresol Purple
	g/dl	4.49	3.81	5.17	0.34	0.68	
Alkaline Phosphatase	U/l	194	165	223	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	191	162	220	14.50	29.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	99	84	114	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Differential rate pH change
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ion selective electrode
Bilirubin Direct	µmol/l	13.5	10.6	16.4	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.790	0.620	0.960	0.09	0.17	
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	2.34	2.11	2.57	0.12	0.23	Ion selective electrode
	mg/dl	9.38	8.46	10.3	0.46	0.92	
	mmol/l	2.37	2.13	2.61	0.12	0.24	Arsenazo III
	mg/dl	9.50	8.54	10.5	0.48	0.96	

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	208	170	246	19.00	38.00	Monothioglycerol 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
Free T4	pmol/l	20.8	15.6	26.0	2.60	5.20	Beckman Dxl800
	ng/dl	1.62	1.22	2.02	0.20	0.40	
	pg/ml	16.2	12.2	20.2	2.00	4.00	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°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	6.28	5.34	7.22	0.47	0.94	Oxygen electrode
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PPD
	mg/dl	53.7	45.5	61.9	4.10	8.20	

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	HDL - Ultra
	mg/dl	52.1	44.4	59.8	3.85	7.70	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.52	1.24	1.80	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	
LD (LDH)	U/l	175	149	201	13.00	26.00	L->P 37°C
	U/l	527	448	606	39.50	79.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Calmagite
	mg/dl	2.29	2.01	2.57	0.14	0.28	
Osmolality	mOsm/kg	281	225	337	28.00	56.00	Calculated
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction CX4/5/7
	g/dl	5.82	4.66	6.98	0.58	1.16	
	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction kinetic
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.25	1.00	1.50	0.13	0.25	Beckman Dxl800 Hyper TSH
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	108	90.3	126	8.85	17.70	

**Beckman CX4/5/7/9/LX20®/DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	7.79	6.62	8.96	0.59	1.17	Urease end point
	mg/dl	46.8	39.8	53.8	3.50	7.00	
	mmol/l	7.75	6.59	8.91	0.58	1.16	Urease kinetic
	mg/dl	46.6	39.6	53.6	3.50	7.00	
Uric Acid (Urate)	mmol/l	7.75	6.59	8.91	0.58	1.16	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

## BIOSYSTEMS A15

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.5	13.0	20.0	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
Glucose	mmol/l	6.52	5.54	7.50	0.49	0.98	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
Protein Total	g/l	56.5	45.2	67.8	5.65	11.30	Biuret reaction end point
	g/dl	5.65	4.52	6.78	0.57	1.13	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.4	122	8.30	16.60	
Urea	mmol/l	6.95	5.90	8.00	0.53	1.05	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.28	5.46	7.10	0.41	0.82	

## BIOSYSTEMS A25

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Alkaline Phosphatase	U/l	172	147	197	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	134	115	153	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	110	94	126	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
Bilirubin Direct	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	31.8	25.1	38.5	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.86	1.47	2.25	0.20	0.39	
Cholesterol	mmol/l	4.06	3.54	4.58	0.26	0.52	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Glucose	mmol/l	6.58	5.59	7.57	0.50	0.99	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	

**BIOSYSTEMS A25****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
Triglycerides	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
Urea	mmol/l	6.74	5.73	7.75	0.51	1.01	Urease kinetic
	mg/dl	40.5	34.4	46.6	3.05	6.10	
	mmol/l	6.74	5.73	7.75	0.51	1.01	BUN
	mg/dl	18.9	16.1	21.7	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.27	5.46	7.08	0.41	0.81	
	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.13	5.33	6.93	0.40	0.80	



## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	221	188	254	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	181	154	208	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	100	85	115	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer without P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	20	28	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 Direct	µmol/l	16.9	13.3	20.5	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.989	0.778	1.20	0.11	0.21	
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.43	2.18	2.68	0.13	0.25	Arsenazo III
	mg/dl	9.74	8.74	10.7	0.50	1.00	
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct Clearance Method
	mg/dl	49.8	42.5	57.1	3.65	7.30	
LD (LDH)	U/l	403	343	463	30.00	60.00	P->L SFBC 37°C
	U/l	291	248	334	21.50	43.00	P->L SFBC 30°C
	U/l	204	174	234	15.00	30.00	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	1.56	1.33	1.79	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.84	4.12	5.56	0.36	0.72	
Protein Total	g/l	60.5	48.4	72.6	6.05	12.10	Biuret reaction end point
	g/dl	6.05	4.84	7.26	0.61	1.21	
Triglycerides	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.1	111	7.75	15.50	
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.16	6.66	0.38	0.75	

## COBAS INTEGRA®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Purple
	g/dl	4.40	3.74	5.06	0.33	0.66	
	g/l	40.4	34.4	46.4	3.00	6.00	Turbidimetric Assays
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	129	109	149	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	100	85	115	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	82	70	94	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	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
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Colorimetric
	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.819	1.26	0.11	0.22	

## COBAS INTEGRA®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Direct	µmol/l	17.8	14.1	21.5	1.85	3.70	Diazo with Sulphanilic Acid	
	mg/dl	1.04	0.825	1.26	0.11	0.22		
	µmol/l	17.8	14.0	21.6	1.90	3.80	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.04	0.819	1.26	0.11	0.22		
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.53	1.21	1.85	0.16	0.32		
	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		
	µmol/l	26.1	20.6	31.6	2.75	5.50	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.53	1.21	1.85	0.16	0.32		
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazonium ion	
	mg/dl	1.54	1.22	1.86	0.16	0.32		
	Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Cresolphthalein complexone
		mg/dl	9.58	8.62	10.5	0.48	0.96	
mmol/l		2.37	2.13	2.61	0.12	0.24	NM-BAPTA	
mg/dl		9.50	8.54	10.5	0.48	0.96		
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase	
	mg/dl	156	135	177	10.50	21.00		
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C	
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C	
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C	
	U/l	201	165	237	18.00	36.00	Creatinine phosphate substrate Start 37°C	
	U/l	126	103	149	11.50	23.00	Creatinine phosphate substrate Start 30°C	
	U/l	85	70	100	7.50	15.00	Creatinine phosphate substrate Start 25°C	

## COBAS INTEGRA®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate with deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	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	
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	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	37	31	43	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	

## COBAS INTEGRA®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
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	1.44	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	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.9	12.2	17.6	1.35	2.70	
LD (LDH)	U/l	397	337	457	30.00	60.00	P->L German methods 37°C
	U/l	287	243	331	22.00	44.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
	U/l	36	29	43	3.50	7.00	
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.656	0.830	0.04	0.09	
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.29	2.01	2.57	0.14	0.28	
Phosphate Inorganic	mmol/l	1.60	1.36	1.84	0.12	0.24	Phosphomolybdate enzymatic
	mg/dl	4.96	4.22	5.70	0.37	0.74	

## COBAS INTEGRA®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
	g/l	56.5	45.2	67.8	5.65	11.30	Biuret reaction kinetic
	g/dl	5.65	4.52	6.78	0.57	1.13	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.2	36.5	55.9	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	258	204	312	27.00	54.00	
Triglycerides	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.3	121	8.35	16.70	
Urea	mmol/l	7.03	5.98	8.08	0.53	1.05	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	



## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	280	238	322	21.00	42.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.40	2.16	2.64	0.12	0.24	Arsenazo III
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	134	172	9.50	19.00	
CK Total	U/l	187	154	220	16.50	33.00	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	125	99.7	150	12.65	25.30	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Glucose oxidase
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	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	
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P IFCC 37°C

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.55	1.31	1.79	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.81	4.06	5.56	0.38	0.75	
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.1	122	8.45	16.90	
Urea	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	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	

## HITACHI SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	250	198	302	26.00	52.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	189	149	229	20.00	40.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	142	112	172	15.00	30.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	4.66	3.12	6.20	0.77	1.54	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.23	2.83	5.63	0.70	1.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	9.44	6.32	12.6	1.56	3.12	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.9	10.7	21.1	2.60	5.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.1	9.45	18.8	2.33	4.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	20.1	13.5	26.7	3.30	6.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	116	99	133	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	74	63	85	5.50	11.00	Roche Integra AMP buffer 25°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	197	167	227	15.00	30.00	Randox AMP 37°C
	U/l	153	130	176	11.50	23.00	Randox AMP 30°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C

## HITACHI SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bile Acids	µmol/l	26.9	21.5	32.3	2.70	5.40	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.4	13.7	21.1	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.801	1.24	0.11	0.22	
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	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	20.1	30.7	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.58	8.62	10.5	0.48	0.96	
	mmol/l	2.40	2.16	2.64	0.12	0.24	NM-BAPTA
	mg/dl	9.62	8.66	10.6	0.48	0.96	

## HITACHI SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Chloride	mmol/l	91.4	84.0	98.8	3.70	7.40	ISE indirect	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase	
	mg/dl	155	135	175	10.00	20.00		
Cholinesterase	U/l	5223	4178	6268	522.50	1045.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C	
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C	
	U/l	81	67	95	7.00	14.00	CK-NAC (IFCC) 25°C	
Creatinine	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	134	107	161	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.51	1.21	1.81	0.15	0.30		
	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		
	D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
	gamma-GT	U/l	51	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		56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
U/l		61	52	70	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
U/l		48	41	55	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
U/l		38	32	44	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH		U/l	20	15	25	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C	

## HITACHI SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.35	5.40	7.30	0.48	0.95	Hexokinase
	mg/dl	114	97.3	131	8.35	16.70	
	mmol/l	6.43	5.47	7.39	0.48	0.96	Glucose oxidase
	mg/dl	116	98.6	133	8.70	17.40	
HDL - Cholesterol	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	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
Lactate	mmol/l	1.60	1.32	1.88	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.9	16.9	1.25	2.50	
LD (LDH)	U/l	412	350	474	31.00	62.00	P->L German methods 37°C
	U/l	297	253	341	22.00	44.00	P->L German methods 30°C
	U/l	209	177	241	16.00	32.00	P->L German methods 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.95	0.84	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	

## HITACHI SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.0	34.0	52.0	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	240	190	290	25.00	50.00	
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	
Urea	mmol/l	7.51	6.39	8.63	0.56	1.12	Urease kinetic
	mg/dl	45.1	38.4	51.8	3.35	6.70	
	mmol/l	7.51	6.38	8.64	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.14	6.66	0.38	0.76	

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	183	155	211	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	121	165	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	117	99	135	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	77	105	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	29.4	23.2	35.6	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.42	2.18	2.66	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.70	8.74	10.7	0.48	0.96	
Chloride	mmol/l	94.1	86.6	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
CK Total	U/l	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



## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

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	
D-3-Hydroxybutyrate	mmol/l	0.31	0.26	0.36	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	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	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.5	38.6	52.4	3.45	6.90	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Enzymatic
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	4.21	3.87	4.55	0.17	0.34	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	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	88.0	120	8.00	16.00	
Urea	mmol/l	7.75	6.59	8.91	0.58	1.16	Urease end point
	mg/dl	46.6	39.6	53.6	3.50	7.00	
	mmol/l	7.75	6.59	8.91	0.58	1.16	BUN
Uric Acid (Urate)	mg/dl	21.8	18.5	25.1	1.65	3.30	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	


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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	54	44	64	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.44	2.20	2.68	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.78	8.82	10.7	0.48	0.96	
Chloride	mmol/l	96.2	88.5	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.88	3.38	4.38	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	150	130	170	10.00	20.00	
Cholinesterase	U/l	5336	4269	6403	533.50	1067.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	184	150	218	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Vitros IDMS Traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
Free T4	pmol/l	39.9	29.9	49.9	5.00	10.00	Vitros ECi
	ng/dl	3.11	2.33	3.89	0.39	0.78	
	pg/ml	31.1	23.3	38.9	3.90	7.80	Vitros ECi


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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	72	61	83	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros Magnetic HDL
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.8	16.3	23.3	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	603	513	693	45.00	90.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	296	238	354	29.00	58.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.29	1.13	1.45	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.896	0.785	1.01	0.06	0.11	
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.60	1.36	1.84	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	4.96	4.22	5.70	0.37	0.74	
Potassium	mmol/l	4.19	3.85	4.53	0.17	0.34	Ortho Vitros Microslide Systems
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems

**JOHNSON AND JOHNSON VITROS®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.25	1.00	1.50	0.13	0.25	Vitros ECI
TIBC	µmol/l	54.7	43.2	66.2	5.75	11.50	Ortho Vitros Microslide Systems
	µg/dl	306	241	371	32.50	65.00	
Triglycerides	mmol/l	1.26	1.06	1.46	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	93.8	130	9.10	18.20	
Urea	mmol/l	6.88	5.85	7.91	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.3	35.2	47.4	3.05	6.10	
	mmol/l	6.88	5.85	7.91	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Ortho Vitros Microslide Systems
	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. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	133	114	152	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	29.5	23.6	35.4	2.95	5.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.6	13.1	20.1	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.971	0.766	1.18	0.10	0.21	
Bilirubin Total	µmol/l	23.2	18.4	28.0	2.40	4.80	Nitrobenzenediazonium salt
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Arsenazo III
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	ISE direct
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	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	137	110	164	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	136	108	164	14.00	28.00	Creatinine PAP method
	mg/dl	1.54	1.22	1.86	0.16	0.32	
D-3-Hydroxybutyrate	mmol/l	0.32	0.27	0.37	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Hexokinase
	mg/dl	117	99.1	135	8.95	17.90	
	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	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	µmol/l	20.2	16.5	23.9	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.2	134	10.40	20.80	
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	1.58	1.34	1.82	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.90	4.15	5.65	0.38	0.75	



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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - direct
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	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.6	118	8.20	16.40	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.37	0.32	0.42	0.02	0.05	
mg/dl	6.22	5.41	7.03	0.41	0.81	Uricase Peroxidase with ascorbate oxidase @ 546nm	



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	250	198	302	26.00	52.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	189	149	229	20.00	40.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	142	112	172	15.00	30.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	4.66	3.12	6.20	0.77	1.54	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	4.23	2.83	5.63	0.70	1.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	9.44	6.32	12.6	1.56	3.12	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.9	10.7	21.1	2.60	5.20	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	14.1	9.45	18.8	2.33	4.65	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	20.1	13.5	26.7	3.30	6.60	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
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	
	g/l	43.8	37.3	50.3	3.25	6.50	Bromocresol Purple
	g/dl	4.38	3.73	5.03	0.33	0.65	
	g/l	39.9	33.9	45.9	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	41.0	34.8	47.2	3.10	6.20	Turbidimetric Assays
	g/dl	4.10	3.48	4.72	0.31	0.62	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Ortho Vitros Microslide Systems 37°C
	U/l	299	254	344	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	233	198	268	17.50	35.00	Diethanolamine buffer DEA 30°C
	U/l	191	162	220	14.50	29.00	Diethanolamine buffer DEA 25°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	182	154	210	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	142	120	164	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	175	149	201	13.00	26.00	AMP non-optimised 37°C
	U/l	136	116	156	10.00	20.00	AMP non-optimised 30°C
	U/l	112	95	129	8.50	17.00	AMP non-optimised 25°C
ALT (GPT)	U/l	52	41	63	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer with P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer with P5P 25°C
	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Immunoinhibition EPS substrate 37°C
	U/l	70	60	80	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	77	65	89	6.00	12.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	102	87	117	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	76	104	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	103	88	118	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	90	77	103	6.50	13.00	Saccharogenic 37°C
	U/l	92	78	106	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	89	76	102	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	103	87	119	8.00	16.00	Siemens 2-chloro-pNPG3 37°C
	U/l	89	76	102	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Beckman Synchron AMY7 37°C
	U/l	92	78	106	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	102	87	117	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	111	94	128	8.50	17.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.10	0.90	1.30	0.10	0.20	Immunoturbidimetric
	mg/dl	110	90.2	130	9.90	19.80	
Apolipoprotein B	g/l	0.61	0.50	0.71	0.05	0.11	Immunoturbidimetric
	mg/dl	60.5	49.6	71.4	5.45	10.90	
AST (GOT)	U/l	32	26	38	3.00	6.00	Colorimetric 37°C
	U/l	22	18	26	2.00	4.00	Colorimetric 30°C
	U/l	15	12	18	1.50	3.00	Colorimetric 25°C
	U/l	54	44	64	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	41	63	5.50	11.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	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	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	33	27	39	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	16	13	19	1.50	3.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Colorimetric
	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems
	mmol/l	15.4	12.2	18.6	1.60	3.20	Differential rate pH change
	mmol/l	15.8	12.6	19.0	1.60	3.20	Enzymatic
	mmol/l	15.9	12.6	19.2	1.65	3.30	Ion selective electrode
Bile Acids	µmol/l	27.9	22.3	33.5	2.80	5.60	4th Generation Colorimetric
	µmol/l	26.9	21.5	32.3	2.70	5.40	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.4	14.6	22.2	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	16.0	12.7	19.3	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Bilirubin Total	µmol/l	15.2	12.0	18.4	1.60	3.20	Modified Jendrassik
	mg/dl	0.889	0.702	1.08	0.09	0.19	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	32.5	25.7	39.3	3.40	6.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.90	1.50	2.30	0.20	0.40	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid	
	mg/dl	1.66	1.31	2.01	0.18	0.35		
	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.64	1.29	1.99	0.18	0.35		
	µmol/l	23.4	18.5	28.3	2.45	4.90	Nitrobenzenediazonium salt	
	mg/dl	1.37	1.08	1.66	0.15	0.29		
	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	28.4	22.4	34.4	3.00	6.00	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.66	1.31	2.01	0.18	0.35		
	µmol/l	34.2	27.0	41.4	3.60	7.20	Modified Jendrassik	
	mg/dl	2.00	1.58	2.42	0.21	0.42		
	Calcium	mmol/l	2.36	2.12	2.60	0.12	0.24	Cresolphthalein complexone
		mg/dl	9.46	8.50	10.4	0.48	0.96	
mmol/l		2.44	2.20	2.68	0.12	0.24	Ortho Vitros Microslide Systems	
mg/dl		9.78	8.82	10.7	0.48	0.96		
mmol/l		2.34	2.10	2.58	0.12	0.24	Ion selective electrode	
mg/dl		9.38	8.42	10.3	0.48	0.96		
mmol/l		2.30	2.07	2.53	0.12	0.23	Methylthymol blue	
mg/dl		9.22	8.30	10.1	0.46	0.92		
mmol/l		2.40	2.16	2.64	0.12	0.24	Arsenazo III	
mg/dl		9.62	8.66	10.6	0.48	0.96		
mmol/l		2.40	2.16	2.64	0.12	0.24	NM-BAPTA	
mg/dl		9.62	8.66	10.6	0.48	0.96		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	Colorimetric
	mmol/l	96.2	88.5	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.5	87.0	102	3.75	7.50	ISE indirect
	mmol/l	97.3	89.5	105	3.90	7.80	ISE direct
Cholesterol	mmol/l	3.88	3.38	4.38	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	150	130	170	10.00	20.00	
	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5336	4269	6403	533.50	1067.00	Ortho Vitros Microslide Systems 37°C
	U/l	5397	4318	6476	539.50	1079.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	184	150	218	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	202	165	239	18.50	37.00	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	86	70	102	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	208	170	246	19.00	38.00	Monothioglycerol 37°C
	U/l	130	106	154	12.00	24.00	Monothioglycerol 30°C
	U/l	88	72	104	8.00	16.00	Monothioglycerol 25°C
	U/l	189	155	223	17.00	34.00	Dithioerythritol 37°C
U/l	118	97	139	10.50	21.00	Dithioerythritol 30°C	
U/l	80	66	94	7.00	14.00	Dithioerythritol 25°C	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	180	148	212	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	113	93	133	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	77	63	91	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.7	13.4	20.0	1.65	3.30	Atomic absorption
	µg/dl	106	85.2	127	10.40	20.80	
	µmol/l	17.8	14.2	21.4	1.80	3.60	Colorimetric
	µg/dl	113	90.3	136	11.35	22.70	
Cortisol	nmol/l	483	362	604	60.50	121.00	Roche Cobas E411
	µg/dl	17.4	13.0	21.8	2.20	4.40	
Creatinine	µmol/l	121	96.7	145	12.15	24.30	Alkaline picrate with deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	134	108	160	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.51	1.22	1.80	0.15	0.29	
	µmol/l	134	107	161	13.50	27.00	Creatinine PAP method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	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	135	108	162	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
µmol/l	131	105	157	13.00	26.00	Vitros IDMS Traceable	
mg/dl	1.48	1.19	1.77	0.15	0.29		

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	133	106	160	13.50	27.00	IDMS traceable
	mg/dl	1.50	1.20	1.80	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.32	0.27	0.36	0.02	0.05	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.04	1.63	2.45	0.21	0.41	Immunoturbidimetric
	ng/ml	1.59	1.27	1.91	0.16	0.32	
Folate	nmol/l	39.5	30.0	49.0	4.75	9.50	Roche Cobas E411
	ng/ml	17.4	13.2	21.6	2.10	4.20	
Free T4	pmol/l	18.9	14.2	23.6	2.35	4.70	Abbott Architect
	ng/dl	1.47	1.11	1.83	0.18	0.36	
	pg/ml	14.7	11.1	18.3	1.80	3.60	Abbott Architect
	pmol/l	19.6	14.7	24.5	2.45	4.90	Siemens Centaur XP/XPT/Classic
	ng/dl	1.53	1.15	1.91	0.19	0.38	
	pg/ml	15.3	11.5	19.1	1.90	3.80	Siemens Centaur XP/XPT/Classic
	pmol/l	22.2	16.6	27.8	2.80	5.60	Beckman Access
	ng/dl	1.73	1.29	2.17	0.22	0.44	
	pg/ml	17.3	12.9	21.7	2.20	4.40	Beckman Access
	pmol/l	20.8	15.6	26.0	2.60	5.20	Beckman Dxl800
	ng/dl	1.62	1.22	2.02	0.20	0.40	
	pg/ml	16.2	12.2	20.2	2.00	4.00	Beckman Dxl800
	pmol/l	39.9	29.9	49.9	5.00	10.00	Vitros ECi
	ng/dl	3.11	2.33	3.89	0.39	0.78	
	pg/ml	31.1	23.3	38.9	3.90	7.80	Vitros ECi
	pmol/l	25.1	18.9	31.3	3.10	6.20	Roche Elecsys
	ng/dl	1.96	1.47	2.45	0.25	0.49	
	pg/ml	19.6	14.7	24.5	2.45	4.90	Roche Elecsys



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	25.1	18.8	31.4	3.15	6.30	Roche Modular E170
	ng/dl	1.96	1.47	2.45	0.25	0.49	
	pg/ml	19.6	14.7	24.5	2.45	4.90	Roche Modular E170
	pmol/l	25.0	18.7	31.3	3.15	6.30	Roche Cobas E411
	ng/dl	1.95	1.46	2.44	0.25	0.49	
	pg/ml	19.5	14.6	24.4	2.45	4.90	Roche Cobas E411
	pmol/l	24.5	18.4	30.6	3.05	6.10	Roche Cobas 6000/8000
	ng/dl	1.91	1.44	2.38	0.24	0.47	
	pg/ml	19.1	14.4	23.8	2.35	4.70	Roche Cobas 6000/8000
	pmol/l	22.3	16.7	27.9	2.80	5.60	Biomerieux Vidas FT4N Kit
ng/dl	1.74	1.30	2.18	0.22	0.44		
pg/ml	17.4	13.0	21.8	2.20	4.40	Biomerieux Vidas FT4N Kit	
Gentamicin	µmol/l	8.62	6.90	10.3	0.86	1.72	Immunoturbidimetric
	µg/ml	4.12	3.30	4.94	0.41	0.82	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	72	61	83	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	61	52	70	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	48	41	55	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	38	32	44	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Ortho Vitros Microslide Systems	
	mg/dl	111	94.6	127	8.20	16.40		
	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose dehydrogenase	
	mg/dl	114	96.6	131	8.70	17.40		
	mmol/l	6.31	5.37	7.25	0.47	0.94	Hexokinase	
	mg/dl	114	96.8	131	8.60	17.20		
	mmol/l	6.36	5.40	7.32	0.48	0.96	Oxygen electrode	
	mg/dl	115	97.3	133	8.85	17.70		
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase	
	mg/dl	114	96.8	131	8.60	17.20		
	HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL PPD
		mg/dl	53.3	45.2	61.4	4.05	8.10	
mmol/l		1.28	1.09	1.47	0.10	0.19	Direct HDL Immunoseparation	
mg/dl		49.4	42.1	56.7	3.65	7.30		
mmol/l		1.41	1.20	1.62	0.11	0.21	Vitros Magnetic HDL	
mg/dl		54.4	46.3	62.5	4.05	8.10		
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		1.03	0.88	1.18	0.08	0.15	Direct Clearance Method	
mg/dl		39.8	33.8	45.8	3.00	6.00		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra	
mg/dl	51.0	43.2	58.8	3.90	7.80		
Immunoglobulin A	g/l	1.96	1.47	2.45	0.25	0.49	Immunoturbidimetric
	mg/dl	196	147	245	24.50	49.00	
Immunoglobulin G	g/l	6.08	4.99	7.17	0.55	1.09	Immunoturbidimetric
	mg/dl	608	499	717	54.50	109.00	
Immunoglobulin M	g/l	0.77	0.61	0.92	0.08	0.15	Immunoturbidimetric
	mg/dl	76.5	61.2	91.8	7.65	15.30	
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	
	µmol/l	19.8	16.3	23.3	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Ion selective electrode
	mg/dl	14.0	11.4	16.6	1.30	2.60	
	mmol/l	1.58	1.29	1.87	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.6	16.8	1.30	2.60	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.65	1.35	1.95	0.15	0.30	Enzymatic Electrode
	mg/dl	14.9	12.2	17.6	1.35	2.70	
	mmol/l	1.51	1.24	1.78	0.14	0.27	UV LDH
mg/dl	13.6	11.2	16.0	1.20	2.40		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	603	513	693	45.00	90.00	Ortho Vitros Microslide Systems 37°C
	U/l	187	159	215	14.00	28.00	L->P 37°C
	U/l	135	115	155	10.00	20.00	L->P 30°C
	U/l	95	81	109	7.00	14.00	L->P 25°C
	U/l	444	377	511	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	321	272	370	24.50	49.00	P->L Scandinavian & Dutch 30°C
	U/l	225	191	259	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	408	347	469	30.50	61.00	P->L German methods 37°C
	U/l	295	251	339	22.00	44.00	P->L German methods 30°C
	U/l	207	176	238	15.50	31.00	P->L German methods 25°C
	U/l	401	341	461	30.00	60.00	P->L SFBC 37°C
	U/l	290	246	334	22.00	44.00	P->L SFBC 30°C
	U/l	203	173	233	15.00	30.00	P->L SFBC 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
U/l	104	89	119	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
	U/l	296	238	354	29.00	58.00	Ortho Vitros Microslide Systems 37°C



## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	50	40	60	5.00	10.00	Randox Colorimetric 37°C
	U/l	201	161	241	20.00	40.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.29	1.13	1.45	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.896	0.785	1.01	0.06	0.11	
	mmol/l	1.07	0.94	1.20	0.07	0.13	Ion selective electrode
	mg/dl	0.743	0.651	0.835	0.05	0.09	
	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.662	0.838	0.04	0.09	
Magnesium	mmol/l	1.14	1.00	1.28	0.07	0.14	Randox Colorimetric
	mg/dl	0.792	0.694	0.890	0.05	0.10	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III
	mg/dl	2.23	1.97	2.49	0.13	0.26	
	mmol/l	0.96	0.85	1.08	0.06	0.12	Ortho Vitros Microslide Systems
	mg/dl	2.34	2.06	2.62	0.14	0.28	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Calmagite
	mg/dl	2.29	2.01	2.57	0.14	0.28	
	mmol/l	0.96	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Methylthymol blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.95	0.83	1.06	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.30	2.02	2.58	0.14	0.28	
mmol/l	0.91	0.80	1.02	0.06	0.11	Enzymatic	
mg/dl	2.21	1.95	2.47	0.13	0.26		

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
NEFA	mmol/l	2.49	2.12	2.86	0.19	0.37	Colorimetric
Osmolality	mOsm/kg	288	230	346	29.00	58.00	Calculated
	mOsm/kg	304	244	364	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.07	0.10	0.01	0.02	Colorimetric
	mg/l	12.6	9.99	15.2	1.31	2.61	
Phosphate Inorganic	mmol/l	1.60	1.36	1.84	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	4.96	4.22	5.70	0.37	0.74	
	mmol/l	1.57	1.33	1.81	0.12	0.24	Phosphomolybdate enzymatic
	mg/dl	4.87	4.12	5.62	0.38	0.75	
	mmol/l	1.56	1.32	1.80	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.84	4.09	5.59	0.38	0.75	
Potassium	mmol/l	4.19	3.85	4.53	0.17	0.34	Ortho Vitros Microslide Systems
	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.04	3.72	4.36	0.16	0.32	Flame photometry
	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - direct
	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
	mmol/l	4.01	3.69	4.33	0.16	0.32	Colorimetric
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Ortho Vitros Microslide Systems
	g/dl	5.94	4.75	7.13	0.60	1.19	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
	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	
PSA Total	ng/ml =	18.4	13.8	23.0	2.30	4.60	Roche Elecsys Modular E170
	ng/ml =	15.8	11.9	19.7	1.95	3.90	Beckman Access standardised to Hybritech

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	15.9	12.0	19.8	1.95	3.90	bioMerieux VIDAS TPSA
	ng/ml =	13.4	10.0	16.8	1.70	3.40	Siemens Centaur XP/XPT/Classic
	ng/ml =	15.6	11.7	19.5	1.95	3.90	Abbott Architect
	ng/ml =	18.7	14.0	23.4	2.35	4.70	Cobas E411
	ng/ml =	18.3	13.7	22.9	2.30	4.60	Roche Cobas 6000/8000
	ng/ml =	16.0	12.0	20.0	2.00	4.00	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.48	0.38	0.58	0.05	0.10	Enzymatic
	mg/dl	6.62	5.30	7.94	0.66	1.32	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	Flame photometry
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
	mmol/l	141	134	148	3.50	7.00	Colorimetric
Theophylline	µmol/l	30.8	24.6	37.0	3.10	6.20	Immunoturbidimetric
	µg/ml	5.55	4.43	6.67	0.56	1.12	
Thyroid Stimulating Hormone	µU/ml =	1.06	0.85	1.27	0.11	0.21	Abbott Architect
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.41	1.13	1.69	0.14	0.28	bioMerieux VIDAS TSH
	µU/ml =	1.55	1.24	1.86	0.16	0.31	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.36	1.08	1.64	0.14	0.28	Siemens Immulite 1000
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Vitros ECi
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Elecsys
	µU/ml =	1.42	1.14	1.70	0.14	0.28	Roche Modular E170
	µU/ml =	1.42	1.14	1.70	0.14	0.28	Roche Cobas E411

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Beckman Dxl800 Hyper TSH
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	54.7	43.2	66.2	5.75	11.50	Ortho Vitros Microslide Systems
	µg/dl	306	241	371	32.50	65.00	
	µmol/l	44.2	34.9	53.5	4.65	9.30	Removal of excess free iron
	µg/dl	247	195	299	26.00	52.00	
	µmol/l	46.0	36.3	55.7	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	257	203	311	27.00	54.00	
	µmol/l	49.4	39.0	59.8	5.20	10.40	Direct Colorimetric
	µg/dl	276	218	334	29.00	58.00	
	µmol/l	43.6	34.5	52.7	4.55	9.10	Calculated from Transferrin
	µg/dl	244	193	295	25.50	51.00	
Tobramycin	µmol/l	4.17	3.34	5.00	0.42	0.83	Immunoturbidimetric
	µg/ml	1.95	1.56	2.34	0.20	0.39	
Total T3	nmol/l	2.35	1.76	2.94	0.30	0.59	Abbott Architect
	ng/ml	1.53	1.15	1.91	0.19	0.38	
	ng/dl	153	115	191	19.00	38.00	Abbott Architect
	nmol/l	2.51	1.88	3.14	0.32	0.63	Beckman Access
	ng/ml	1.63	1.22	2.04	0.21	0.41	
	ng/dl	163	122	204	20.50	41.00	Beckman Access
	nmol/l	2.72	2.04	3.40	0.34	0.68	Siemens Centaur XP/XPT/Classic
	ng/ml	1.77	1.33	2.21	0.22	0.44	
	ng/dl	177	133	221	22.00	44.00	Siemens Centaur XP/XPT/Classic



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.58	1.93	3.23	0.33	0.65	BioMerieux Vidas
	ng/ml	1.68	1.26	2.10	0.21	0.42	
	ng/dl	168	126	210	21.00	42.00	BioMerieux Vidas
	nmol/l	2.83	2.12	3.54	0.36	0.71	Roche Cobas E411
	ng/ml	1.84	1.38	2.30	0.23	0.46	
	ng/dl	184	138	230	23.00	46.00	Roche Cobas E411
	nmol/l	2.84	2.13	3.55	0.36	0.71	Roche Cobas 6000/8000
	ng/ml	1.85	1.39	2.31	0.23	0.46	
	ng/dl	185	139	231	23.00	46.00	Roche Cobas 6000/8000
Total T4	nmol/l	94.7	71.0	118	11.85	23.70	Abbott Architect
	µg/dl	7.39	5.54	9.24	0.93	1.85	
	ng/ml	73.9	55.4	92.4	9.25	18.50	Abbott Architect
	nmol/l	92.2	69.1	115	11.55	23.10	Siemens Centaur XP/XPT/Classic
	µg/dl	7.19	5.39	8.99	0.90	1.80	
	ng/ml	71.9	53.9	89.9	9.00	18.00	Siemens Centaur XP/XPT/Classic
	nmol/l	92.8	69.6	116	11.60	23.20	Beckman Access
	µg/dl	7.24	5.43	9.05	0.91	1.81	
	ng/ml	72.4	54.3	90.5	9.05	18.10	Beckman Access
	nmol/l	88.3	66.3	110	11.00	22.00	BioMerieux Vidas
	µg/dl	6.89	5.17	8.61	0.86	1.72	
	ng/ml	68.9	51.7	86.1	8.60	17.20	BioMerieux Vidas
	nmol/l	97.6	73.2	122	12.20	24.40	Siemens Immulite 2000/2500
	µg/dl	7.61	5.71	9.51	0.95	1.90	
	ng/ml	76.1	57.1	95.1	9.50	19.00	Siemens Immulite 2000/2500

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	99.2	74.4	124	12.40	24.80	Roche Cobas E411
	µg/dl	7.74	5.80	9.68	0.97	1.94	
	ng/ml	77.4	58.0	96.8	9.70	19.40	Roche Cobas E411
	nmol/l	99.0	74.2	124	12.40	24.80	Roche Cobas 6000/8000
	µg/dl	7.72	5.79	9.65	0.97	1.93	
	ng/ml	77.2	57.9	96.5	9.65	19.30	Roche Cobas 6000/8000
Transferrin	g/l	1.93	1.54	2.32	0.20	0.39	Immunoturbidimetric
	mg/dl	193	154	232	19.50	39.00	
Triglycerides	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	100	84.3	116	7.85	15.70	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	86.9	121	8.55	17.10	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	104	87.1	121	8.45	16.90	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	83.9	116	8.05	16.10	
UIBC	µmol/l	26.5	21.7	31.3	2.40	4.80	Direct Colorimetric
	µg/dl	148	121	175	13.50	27.00	
Urea	mmol/l	6.88	5.85	7.91	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.3	35.2	47.4	3.05	6.10	
	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic	
	mg/dl	44.1	37.4	50.8	3.35	6.70		
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease hypochlorite	
	mg/dl	44.0	37.4	50.6	3.30	6.60		
	mmol/l	6.88	5.85	7.91	0.52	1.03	Urease Berthelot	
	mg/dl	41.3	35.2	47.4	3.05	6.10		
	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	0.30	0.39	0.02	0.05	Ortho Vitros Microslide Systems
		mg/dl	5.75	4.99	6.51	0.38	0.76	
mmol/l		0.34	0.30	0.39	0.02	0.04	Uricase catalase 340nm	
mg/dl		5.76	5.02	6.50	0.37	0.74		
mmol/l		0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
mg/dl		5.95	5.17	6.73	0.39	0.78		
mmol/l		0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		5.88	5.12	6.64	0.38	0.76		
mmol/l		0.35	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290	
mg/dl		5.80	5.06	6.54	0.37	0.74		
Vitamin B12	pmol/l	527	422	632	52.50	105.00	Roche Cobas E411	
	pg/ml	714	572	856	71.00	142.00		
Zinc	µmol/l	32.4	25.9	38.9	3.25	6.50	Atomic absorption	
	µg/dl	212	169	255	21.50	43.00		

**MEAN OF ALL INSTRUMENTS**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Zinc	µmol/l	32.9	26.3	39.5	3.30	6.60	Colorimetric with deproteinisation
	µg/dl	215	172	258	21.50	43.00	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.2	61.4	75.0	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
alpha-2-globulin		4.8	3.7	6.0	0.58	1.15	% of total Protein (Beckman Capillary)
beta-globulin		11.0	8.4	13.6	1.32	2.64	% of total Protein (Beckman Capillary)
gamma-globulin		10.0	7.6	12.4	1.20	2.40	% of total Protein (Beckman Capillary)

## MINDRAY BS-200/300/400

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	278	236	320	21.00	42.00	Diethanolamine buffer DEA 37°C
	U/l	217	184	250	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	178	151	205	13.50	27.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	92	78	106	7.00	14.00	pNP Maltotriose substrates 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	2.42	2.17	2.67	0.13	0.25	Arsenazo III
	mg/dl	9.70	8.70	10.7	0.50	1.00	
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	

## MINDRAY BS-200/300/400

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	95.6	142	11.70	23.40	Alkaline picrate with deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	123	98.4	148	12.30	24.60	Enzymatic UV method (340nm)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	µmol/l	122	97.8	146	12.10	24.20	Agappe - Jaffe Kinetic
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.48	5.51	7.45	0.49	0.97	Hexokinase
	mg/dl	117	99.3	135	8.85	17.70	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PPD
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	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		

## MINDRAY BS-200/300/400

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
LD (LDH)	U/l	428	364	492	32.00	64.00	P->L German methods 37°C
	U/l	309	263	355	23.00	46.00	P->L German methods 30°C
	U/l	217	185	249	16.00	32.00	P->L German methods 25°C
	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
	U/l	146	123	169	11.50	23.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	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	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.04	5.98	8.10	0.53	1.06	Urease hypochlorite
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	



**MINDRAY BS-200/300/400**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	

## PRESTIGE 24i

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	49.8	42.1	57.5	3.85	7.70	
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.4	120	8.30	16.60	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	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	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

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	43.3	36.8	49.8	3.25	6.50	Bromocresol Purple
	g/dl	4.33	3.68	4.98	0.33	0.65	
	g/l	41.5	35.3	47.7	3.10	6.20	Turbidimetric Assays
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	132	112	152	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	103	87	119	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Colorimetric

## Roche Cobas 6000 c501 e601

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bile Acids	µmol/l	27.4	21.9	32.9	2.75	5.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.0	14.3	21.7	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.837	1.26	0.11	0.21	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	18.2	14.3	22.1	1.95	3.90	Roche JG factored
Bilirubin Total	µmol/l	25.8	20.3	31.3	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.9	20.4	31.4	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
Calcium	mmol/l	2.41	2.17	2.65	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.66	8.70	10.6	0.48	0.96	
	mmol/l	2.40	2.16	2.64	0.12	0.24	NM-BAPTA
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Chloride	mmol/l	90.9	83.6	98.2	3.65	7.30	ISE indirect
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	5171	4137	6205	517.00	1034.00	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 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	199	164	234	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
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	138	111	165	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.56	1.25	1.87	0.16	0.31	
	µmol/l	138	110	166	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	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	135	108	162	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	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
Free T4	pmol/l	24.5	18.4	30.6	3.05	6.10	Roche Cobas 6000/8000
	ng/dl	1.91	1.44	2.38	0.24	0.47	
	pg/ml	19.1	14.4	23.8	2.35	4.70	Roche Cobas 6000/8000
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Hexokinase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	49.8	42.1	57.5	3.85	7.70	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PEGME
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	405	344	466	30.50	61.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
	U/l	34	27	41	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.04	2.58	0.14	0.27	
	mmol/l	0.96	0.84	1.07	0.06	0.12	Chlorphosphonazo III
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.77	4.06	5.48	0.36	0.71	
Potassium	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction CX4/5/7
	g/dl	5.83	4.66	7.00	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	58.3	46.7	69.9	5.80	11.60	Biuret reaction kinetic
	g/dl	5.83	4.67	6.99	0.58	1.16	
PSA Total	ng/ml =	18.3	13.7	22.9	2.30	4.60	Roche Cobas 6000/8000
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Cobas 6000/8000



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
TIBC	μmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	248	196	300	26.00	52.00	
	μmol/l	44.9	35.5	54.3	4.70	9.40	Calculated from Transferrin
	μg/dl	251	198	304	26.50	53.00	
Total T3	nmol/l	2.84	2.13	3.55	0.36	0.71	Roche Cobas 6000/8000
	ng/ml	1.85	1.39	2.31	0.23	0.46	
	ng/dl	185	139	231	23.00	46.00	Roche Cobas 6000/8000
Total T4	nmol/l	99.0	74.2	124	12.40	24.80	Roche Cobas 6000/8000
	μg/dl	7.72	5.79	9.65	0.97	1.93	
	ng/ml	77.2	57.9	96.5	9.65	19.30	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.9	121	8.55	17.10	
	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.7	118	8.15	16.30	
UIBC	μmol/l	25.3	20.7	29.9	2.30	4.60	Direct Colorimetric
	μg/dl	141	116	166	12.50	25.00	
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	0.35	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	

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.07	6.63	0.39	0.78	

## Roche Cobas C111®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	126	108	144	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	98	84	112	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.9	13.4	20.4	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.989	0.784	1.19	0.10	0.21	
	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	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	

## Roche Cobas C111®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.36	2.13	2.59	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.46	8.54	10.4	0.46	0.92	
	mmol/l	2.34	2.11	2.57	0.12	0.23	Arsenazo III
	mg/dl	9.38	8.46	10.3	0.46	0.92	
mmol/l	2.41	2.17	2.65	0.12	0.24	NM-BAPTA	
mg/dl	9.66	8.70	10.6	0.48	0.96		
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.5	148	12.25	24.50	Alkaline picrate with deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	119	95.2	143	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	136	108	164	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.54	1.22	1.86	0.16	0.32	
µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.41	1.13	1.69	0.14	0.28		
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## Roche Cobas C111®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	55.2	46.7	63.7	4.25	8.50	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
LD (LDH)	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
	U/l	156	132	180	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Arsenazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.02	2.56	0.14	0.27	
	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.28	2.01	2.55	0.14	0.27	
Phosphate Inorganic	mmol/l	1.68	1.43	1.93	0.13	0.25	Phosphomolybdate enzymatic
	mg/dl	5.21	4.43	5.99	0.39	0.78	
	mmol/l	1.59	1.36	1.82	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.93	4.22	5.64	0.36	0.71	

## Roche Cobas C111®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.08	3.76	4.40	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	
Sodium	mmol/l	138	131	145	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	84.0	116	8.00	16.00	
	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	
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease end point
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease hypochlorite
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

## Roche Cobas C311®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	43.3	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	130	111	149	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	71	95	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Roche liquid stable pNPG7 37°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	15.7	12.5	18.9	1.60	3.20	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	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	
	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	

## Roche Cobas C311®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.0	20.6	31.4	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.21	1.83	0.16	0.31	
Calcium	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	mmol/l	2.43	2.19	2.67	0.12	0.24	Cresolphthalein complexone
		mg/dl	9.74	8.78	10.7	0.48	
mmol/l	2.41	2.16	2.66	0.13	0.25	Arsenazo III	
	mg/dl	9.66	8.66	10.7	0.50		1.00
mmol/l	2.42	2.18	2.66	0.12	0.24	NM-BAPTA	
	mg/dl	9.70	8.74	10.7	0.48		0.96
Chloride	mmol/l	91.6	84.3	98.9	3.65	7.30	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Cholinesterase	U/l	5186	4149	6223	518.50	1037.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
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	140	112	168	14.00	28.00	Enzymatic UV method (340nm)
	mg/dl	1.58	1.27	1.89	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	



## Roche Cobas C311®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	144	116	172	14.00	28.00	Jaffe rate blanked
	mg/dl	1.63	1.31	1.95	0.16	0.32	
	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	
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	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	37	31	43	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
	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	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	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	404	344	464	30.00	60.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C

## Roche Cobas C311®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.95	0.84	1.07	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.31	2.03	2.59	0.14	0.28	
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Potassium	mmol/l	4.21	3.88	4.54	0.17	0.33	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	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.9	121	8.55	17.10	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	100	84.0	116	8.00	16.00	
	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	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

## Roche Cobas c701 / c702 / c711

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	73	62	84	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.7	12.4	19.0	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	24.4	19.2	29.6	2.60	5.20	Diazonium ion
	mg/dl	1.43	1.12	1.74	0.16	0.31	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.36	2.12	2.60	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.46	8.50	10.4	0.48	0.96	
	mmol/l	2.36	2.13	2.59	0.12	0.23	NM-BAPTA
	mg/dl	9.46	8.54	10.4	0.46	0.92	
Chloride	mmol/l	91.0	83.7	98.3	3.65	7.30	ISE indirect
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	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	141	113	169	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.59	1.28	1.90	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	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	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	51.7	44.0	59.4	3.85	7.70	

## Roche Cobas c701 / c702 / c711

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.10	0.97	1.23	0.07	0.13	Spectrophotometric
	mg/dl	0.764	0.672	0.856	0.05	0.09	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	45.0	35.5	54.5	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	252	198	306	27.00	54.00	
	µmol/l	44.3	35.0	53.6	4.65	9.30	Calculated from Transferrin
	µg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.7	118	8.15	16.30	
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	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	5.70	4.96	6.44	0.37	0.74	
	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	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	

## RX SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	333	283	383	25.00	50.00	Diethanolamine buffer DEA 37°C
	U/l	197	167	227	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	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	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bile Acids	µmol/l	26.9	21.5	32.3	2.70	5.40	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	16.1	12.8	19.4	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.749	1.14	0.10	0.19	
Bilirubin Total	µmol/l	32.1	25.3	38.9	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.48	2.28	0.20	0.40	
	µmol/l	30.0	23.7	36.3	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Calcium	mmol/l	2.49	2.24	2.74	0.13	0.25	Arsenazo III
	mg/dl	9.98	8.98	11.0	0.50	1.00	
Chloride	mmol/l	94.0	86.5	102	3.75	7.50	ISE direct



## RX SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	223	183	263	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	138	110	166	14.00	28.00	Enzymatic UV method (340nm)
	mg/dl	1.56	1.24	1.88	0.16	0.32	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.58	5.60	7.56	0.49	0.98	Hexokinase
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	6.55	5.57	7.53	0.49	0.98	Glucose oxidase
	mg/dl	118	100	136	9.00	18.00	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.52	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	424	361	487	31.50	63.00	P->L German methods 37°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	50	40	60	5.00	10.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.14	1.00	1.28	0.07	0.14	Colorimetric
	mg/dl	0.792	0.694	0.890	0.05	0.10	
Magnesium	mmol/l	0.98	0.87	1.10	0.06	0.12	Xylidyl Blue
	mg/dl	2.39	2.10	2.68	0.15	0.29	
Phosphate Inorganic	mmol/l	1.58	1.34	1.82	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.90	4.15	5.65	0.38	0.75	

## RX SERIES®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.14	3.81	4.47	0.17	0.33	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	145	138	152	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - direct
TIBC	µmol/l	55.1	43.5	66.7	5.80	11.60	Direct Colorimetric
	µg/dl	308	243	373	32.50	65.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.5	119	8.25	16.50	
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	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	6.10	5.31	6.89	0.40	0.79		

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Purple
	g/dl	4.34	3.69	4.99	0.33	0.65	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.5	14.6	22.4	1.95	3.90	Enzymatic
Bile Acids	µmol/l	29.3	23.5	35.1	2.90	5.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	15.5	12.3	18.7	1.60	3.20	Oxidation to Biliverdin/Vanadate
	mg/dl	0.907	0.720	1.09	0.09	0.19	
Bilirubin Total	µmol/l	28.3	22.3	34.3	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.66	1.30	2.02	0.18	0.36	
Calcium	mmol/l	2.37	2.14	2.60	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.50	8.58	10.4	0.46	0.92	
	mmol/l	2.40	2.16	2.64	0.12	0.24	Arsenazo III
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Chloride	mmol/l	97.2	89.5	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.06	3.54	4.58	0.26	0.52	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	132	105	159	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.49	1.19	1.79	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	132	105	159	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.06	0.91	1.22	0.08	0.16	Direct Clearance Method
	mg/dl	40.9	34.9	46.9	3.00	6.00	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.41	1.16	1.66	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.5	14.9	1.10	2.20	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	407	346	468	30.50	61.00	P->L German methods 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	43	35	51	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.654	0.832	0.04	0.09	

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.56	1.32	1.80	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.84	4.09	5.59	0.38	0.75	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	51.2	40.4	62.0	5.40	10.80	Direct Colorimetric
	µg/dl	286	226	346	30.00	60.00	
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
	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	7.55	6.42	8.68	0.57	1.13	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.55	6.42	8.68	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### 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	156	133	179	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	159	136	182	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	36	52	4.00	8.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	102	87	117	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	11.8	9.34	14.3	1.23	2.46	Diazo with Sulphanilic Acid
	mg/dl	0.690	0.546	0.834	0.07	0.14	
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	2.27	2.05	2.49	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.10	8.22	9.98	0.44	0.88	
Chloride	mmol/l	95.8	88.1	104	3.85	7.70	ISE indirect
Cholesterol	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	185	152	218	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	180	148	212	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C

## SIEMENS DIMENSION EXL®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	129	103	155	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	µmol/l	138	110	166	14.00	28.00	IDMS traceable
	mg/dl	1.56	1.24	1.88	0.16	0.32	
Glucose	U/l	63	53	73	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	75	64	86	5.50	11.00	Siemens Dimension (non IFCC) 37°C
HDL - Cholesterol	mmol/l	6.36	5.41	7.31	0.48	0.95	Hexokinase
	mg/dl	115	97.5	133	8.75	17.50	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PPD
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL PEGME
	mg/dl	57.1	48.6	65.6	4.25	8.50	
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	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	UV LDH
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	198	168	228	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	192	164	220	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	150	120	180	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.07	0.13	Spectrophotometric
	mg/dl	0.757	0.666	0.848	0.05	0.09	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	4.05	3.73	4.37	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	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Siemens Dimension Exl LOCI
TIBC	µmol/l	41.5	32.8	50.2	4.35	8.70	Removal of excess free iron
	µg/dl	232	183	281	24.50	49.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.7	112	7.90	15.80	
Urea	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 no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.78	5.04	6.52	0.37	0.74	



## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	177	150	204	13.50	27.00	Randox AMP 37°C
ALT (GPT)	U/l	46	37	55	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
Amylase Total	U/l	103	88	118	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.0	14.3	21.7	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	12.1	9.54	14.7	1.28	2.56	Diazo with Sulphanilic Acid
	mg/dl	0.708	0.558	0.858	0.08	0.15	
Bilirubin Total	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Chloride	mmol/l	95.6	88.0	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5064	4051	6077	506.50	1013.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	190	155	225	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	188	154	222	17.00	34.00	Dithioerythritol 37°C
Creatinine	µmol/l	138	111	165	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.25	1.87	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method (340nm)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	65	56	74	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	74	63	85	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Hexokinase
	mg/dl	116	98.2	134	8.90	17.80	
	mmol/l	6.44	5.48	7.40	0.48	0.96	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct HDL PEGME
	mg/dl	57.5	48.6	66.4	4.45	8.90	
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	83.3	119	8.85	17.70	
	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	

## SIEMENS DIMENSION RxL/Max/Xpand®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
	mmol/l	1.47	1.21	1.73	0.13	0.26	UV LDH
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	202	172	232	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	197	168	226	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	150	120	180	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.15	1.01	1.29	0.07	0.14	Spectrophotometric
	mg/dl	0.799	0.701	0.897	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.57	1.34	1.80	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.87	4.15	5.59	0.36	0.72	
	mmol/l	1.62	1.38	1.86	0.12	0.24	Phosphomolybdate UV
mg/dl	5.02	4.28	5.76	0.37	0.74		
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.9	33.1	50.7	4.40	8.80	Removal of excess free iron
	µg/dl	234	185	283	24.50	49.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
mg/dl	98.2	82.6	114	7.80	15.60		

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	97.4	81.5	113	7.95	15.90	
Urea	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	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
Uric Acid (Urate)	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	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase catalase 340nm
		mg/dl	5.75	4.99	6.51	0.38	
mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.91	5.14	6.68	0.39		0.77
mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290	
	mg/dl	5.86	5.11	6.61	0.38		0.75
mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.70	4.96	6.44	0.37		0.74

## SIEMENS DIMENSION Vista®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Purple
	g/dl	4.43	3.77	5.09	0.33	0.66	
Alkaline Phosphatase	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	171	145	197	13.00	26.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	42	34	50	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	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	12.6	9.95	15.3	1.33	2.65	Diazo with Sulphanilic Acid
	mg/dl	0.737	0.582	0.892	0.08	0.16	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Calcium	mmol/l	2.35	2.12	2.58	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.42	8.50	10.3	0.46	0.92	
Chloride	mmol/l	98.4	90.5	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.79	3.30	4.28	0.25	0.49	Dimension-Siemens reagents
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	9617	7694	11540	961.50	1923.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°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	
gamma-GT	U/l	68	58	78	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

## SIEMENS DIMENSION Vista®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.13	5.21	7.05	0.46	0.92	Hexokinase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL PEGME
	mg/dl	58.3	49.4	67.2	4.45	8.90	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct Colorimetric
	mg/dl	59.1	50.2	68.0	4.45	8.90	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.66	1.36	1.96	0.15	0.30	UV LDH
	mg/dl	15.0	12.3	17.7	1.35	2.70	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	178	143	213	17.50	35.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.10	0.97	1.23	0.07	0.13	Spectrophotometric
	mg/dl	0.764	0.672	0.856	0.05	0.09	
Magnesium	mmol/l	0.98	0.86	1.10	0.06	0.12	Methylthymol blue
	mg/dl	2.38	2.09	2.67	0.15	0.29	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	109	91.2	127	8.90	17.80	
	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GK UV no correction
	mg/dl	105	88.5	122	8.25	16.50	

**SIEMENS DIMENSION Vista®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.44	6.32	8.56	0.56	1.12	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.44	6.32	8.56	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase 293nm UV
	mg/dl	5.80	5.04	6.56	0.38	0.76	

## VITALAB FLEXOR®

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

Lot. No. 1234UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Calcium	mmol/l	2.44	2.20	2.68	0.12	0.24	Arsenazo III
	mg/dl	9.78	8.82	10.7	0.48	0.96	
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
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	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.3	116	7.85	15.70	
Urea	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	