

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

CAT. NO. HNI530	GTIN: 05055273203783	SIZE: 20 x 5ml
CAT. NO. HS2611	GTIN: 05055273203813	SIZE: 5 x 5ml
LOT NO. 1148UN	EXPIRY: 2020-07-28	

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.

Phosphate Inorganic 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.

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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Green
	g/dl	4.16	3.53	4.79	0.32	0.63	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	300	255	345	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	166	141	191	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	108	92	124	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bile Acids	µmol/l	27.0	21.6	32.4	2.70	5.40	Enzymatic Colorimetric
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	17.9	14.2	21.6	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.36	2.12	2.60	0.12	0.24	Arsenazo III
	mg/dl	9.46	8.50	10.4	0.48	0.96	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
Cholinesterase	U/l	6560	5248	7872	656.00	1312.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	188	155	221	16.50	33.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	13.4	10.8	16.0	1.30	2.60	Colorimetric
	µg/dl	85.2	68.7	102	8.25	16.50	
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	124	99.3	149	12.35	24.70	Enzymatic UV method (340nm)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	120	96.0	144	12.00	24.00	Creatinine PAP method
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Free T4	pmol/l	18.8	14.1	23.5	2.35	4.70	Abbott Architect
	ng/dl	1.47	1.10	1.84	0.19	0.37	
	pg/ml	14.7	11.0	18.4	1.85	3.70	Abbott Architect

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	49	42	56	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C	
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Hexokinase	
	mg/dl	109	93.0	125	8.00	16.00		
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase	
	mg/dl	113	96.0	130	8.50	17.00		
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		
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct Clearance Method	
	mg/dl	52.5	44.8	60.2	3.85	7.70		
	mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra	
	mg/dl	51.3	43.6	59.0	3.85	7.70		
	Iron	µmol/l	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		17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.	
µg/dl		100	82.2	118	8.90	17.80		
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase	
	mg/dl	13.8	11.3	16.3	1.25	2.50		
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P 37°C	
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C	
Lipase	U/l	39	31	47	4.00	8.00	Other Colorimetric 37°C	
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric	
	mg/dl	0.708	0.623	0.793	0.04	0.09		

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.87	0.76	0.97	0.05	0.10	Enzymatic
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.63	1.39	1.87	0.12	0.24	Phosphomolybdate enzymatic
	mg/dl	5.05	4.31	5.79	0.37	0.74	
	mmol/l	1.65	1.41	1.89	0.12	0.24	Phosphomolybdate UV
	mg/dl	5.12	4.37	5.87	0.38	0.75	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction end point
	g/dl	5.76	4.61	6.91	0.58	1.15	
	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction kinetic
	g/dl	5.93	4.74	7.12	0.60	1.19	
PSA Total	ng/ml =	14.4	10.8	18.0	1.80	3.60	Abbott Architect
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.15	0.92	1.38	0.11	0.23	Abbott Architect
TIBC	µmol/l	49.3	38.9	59.7	5.20	10.40	FE+UIBC(saturation with iron)
	µg/dl	276	217	335	29.50	59.00	
	µmol/l	45.1	35.6	54.6	4.75	9.50	Calculated from Transferrin
	µg/dl	252	199	305	26.50	53.00	
Triglycerides	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.0	108	7.45	14.90	
	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.0	77.5	107	7.25	14.50	

Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
UIBC	µmol/l	32.9	27.0	38.8	2.95	5.90	Direct Colorimetric
	µg/dl	184	151	217	16.50	33.00	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	
mg/dl	5.64	4.92	6.36	0.36	0.72	Uricase Peroxidase with ascorbate oxidase @ 546nm	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Green
	g/dl	4.16	3.53	4.79	0.32	0.63	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.37	2.13	2.61	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.50	8.54	10.5	0.48	0.96	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.32	3.76	4.88	0.28	0.56	Cholesterol Oxidase
	mg/dl	167	145	189	11.00	22.00	
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	
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	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Phosphate Inorganic	mmol/l	1.80	1.53	2.07	0.14	0.27	Phosphomolybdate UV
	mg/dl	5.58	4.74	6.42	0.42	0.84	
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	41.0	34.9	47.1	3.05	6.10	Bromocresol Green
	g/dl	4.10	3.49	4.71	0.31	0.61	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	16.2	12.8	19.6	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.948	0.749	1.15	0.10	0.20	
Calcium	mmol/l	2.35	2.12	2.58	0.12	0.23	Arsenazo III
	mg/dl	9.42	8.50	10.3	0.46	0.92	
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
Creatinine	µmol/l	120	96.3	144	11.85	23.70	Alkaline picrate no deproteinization
	mg/dl	1.36	1.09	1.63	0.14	0.27	
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Hexokinase
	mg/dl	114	96.4	132	8.80	17.60	
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction kinetic
	g/dl	5.82	4.65	6.99	0.59	1.17	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.21	6.12	8.30	0.55	1.09	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	204	161	247	21.50	43.00	Oxobuturate < 10 mmol/l 37°C
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	
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	204	173	235	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotrioxide substrates 37°C
	U/l	84	71	97	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.4	15.4	23.4	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.13	0.901	1.36	0.11	0.23	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	28.4	22.4	34.4	3.00	6.00	DPD (Beckman AU)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Calcium	mmol/l	2.40	2.16	2.64	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.62	8.66	10.6	0.48	0.96	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Chloride	mmol/l	93.5	86.0	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.16	3.61	4.71	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	139	183	11.00	22.00	
Cholinesterase	U/l	5157	4126	6188	515.50	1031.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	16.0	12.8	19.2	1.60	3.20	Colorimetric
	µg/dl	102	81.4	123	10.30	20.60	
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	124	98.8	149	12.60	25.20	Enzymatic UV method (340nm)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	121	97.2	145	11.90	23.80	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.37	1.10	1.64	0.14	0.27	
D-3-Hydroxybutyrate	µmol/l	115	91.9	138	11.55	23.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
D-3-Hydroxybutyrate	µmol/l	120	96.4	144	11.80	23.60	IDMS traceable
	mg/dl	1.36	1.09	1.63	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	42	35	49	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C	
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Hexokinase	
	mg/dl	112	95.3	129	8.35	16.70		
	mmol/l	6.32	5.38	7.26	0.47	0.94	Glucose oxidase	
	mg/dl	114	96.9	131	8.55	17.10		
HDL - Cholesterol	mmol/l	1.35	1.14	1.56	0.11	0.21	Direct HDL Immunoseparation	
	mg/dl	52.1	44.0	60.2	4.05	8.10		
	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	17.2	14.1	20.3	1.55	3.10	Colorimetric with ppt.
		µg/dl	96.1	78.8	113	8.65	17.30	
µmol/l		17.2	14.1	20.3	1.55	3.10	Colorimetric without ppt.	
µg/dl		96.1	78.8	113	8.65	17.30		
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.2	10.9	15.5	1.15	2.30		
LD (LDH)	U/l	191	162	220	14.50	29.00	L->P 37°C	
	U/l	418	355	481	31.50	63.00	P->L Scandinavian & Dutch 37°C	
	U/l	191	162	220	14.50	29.00	L->P IFCC 37°C	
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C	
	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C	
	U/l	46	37	55	4.50	9.00	Randox Colorimetric 37°C	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	0.98	0.86	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.682	0.600	0.764	0.04	0.08	
Magnesium	mmol/l	0.93	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
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	1.63	1.38	1.88	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.05	4.28	5.82	0.39	0.77	
Potassium	mmol/l	4.02	3.69	4.35	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction kinetic
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	49.4	39.1	59.7	5.15	10.30	FE+UIBC(saturation with iron)
	µg/dl	276	219	333	28.50	57.00	
Triglycerides	mmol/l	1.10	0.93	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
UIBC	µmol/l	33.0	27.0	39.0	3.00	6.00	Direct Colorimetric
	µg/dl	184	151	217	16.50	33.00	
Urea	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	



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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Zinc	µmol/l	33.2	26.5	39.9	3.35	6.70	Colorimetric with deproteinisation
	µg/dl	217	173	261	22.00	44.00	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Purple
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	190	162	218	14.00	28.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer SCE 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	96	81	111	7.50	15.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Differential rate pH change
	mmol/l	12.9	10.3	15.5	1.30	2.60	Ion selective electrode
Bilirubin Direct	µmol/l	13.3	10.5	16.1	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.778	0.614	0.942	0.08	0.16	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Ion selective electrode
	mg/dl	9.26	8.34	10.2	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	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.3	87.6	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.01	3.48	4.54	0.27	0.53	Cholesterol Oxidase
	mg/dl	155	134	176	10.50	21.00	
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	194	159	229	17.50	35.00	Monothioglycerol 37°C
Creatinine	µmol/l	122	97.3	147	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	123	98.1	148	12.45	24.90	Enzymatic UV method (340nm)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.0	148	12.50	25.00	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.3	147	12.35	24.70	IDMS traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Free T4	pmol/l	20.6	15.4	25.8	2.60	5.20	Beckman Dxl800
	ng/dl	1.61	1.20	2.02	0.21	0.41	
	pg/ml	16.1	12.0	20.2	2.05	4.10	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.04	5.14	6.94	0.45	0.90	Hexokinase
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Oxygen electrode
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	5.95	5.06	6.84	0.45	0.89	Glucose oxidase
	mg/dl	107	91.2	123	7.90	15.80	
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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	16.9	13.8	20.0	1.55	3.10	Colorimetric without ppt.
	µg/dl	94.5	77.1	112	8.70	17.40	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	163	138	188	12.50	25.00	L->P 37°C
	U/l	488	415	561	36.50	73.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.687	0.605	0.769	0.04	0.08	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Osmolality	mOsm/kg	284	227	341	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.62	1.38	1.86	0.12	0.24	Phosphomolybdate enzymatic
	mg/dl	5.02	4.28	5.76	0.37	0.74	
	mmol/l	1.68	1.43	1.93	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.21	4.43	5.99	0.39	0.78	
Potassium	mmol/l	3.95	3.64	4.26	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction CX4/5/7
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
	g/l	57.5	46.0	69.0	5.75	11.50	
g/dl	5.75	4.60	6.90	0.58	1.15	Biuret reaction kinetic	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect	
Thyroid Stimulating Hormone	µU/ml =	1.35	1.08	1.62	0.14	0.27	Beckman Dxl800 Hyper TSH	
Triglycerides	mmol/l	1.16	0.98	1.35	0.09	0.19	Lipase/GPO-PAP no correction	
	mg/dl	103	86.3	120	8.35	16.70		
	mmol/l	1.17	0.99	1.35	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	104	87.3	121	8.35	16.70		
Urea	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease end point	
	mg/dl	46.0	39.1	52.9	3.45	6.90		
	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease kinetic	
	mg/dl	46.0	39.1	52.9	3.45	6.90		
	mmol/l	7.66	6.51	8.81	0.58	1.15	BUN	
	mg/dl	21.5	18.3	24.7	1.60	3.20		
	Uric Acid (Urate)	mmol/l	0.32	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
		mg/dl	5.43	4.72	6.14	0.36	0.71	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	169	143	195	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	132	111	153	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	108	91	125	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.9	13.4	20.4	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.784	1.19	0.10	0.21	
Bilirubin Total	µmol/l	30.8	24.3	37.3	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Creatinine	µmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Glucose	mmol/l	6.42	5.46	7.38	0.48	0.96	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
Protein Total	g/l	59.3	47.5	71.1	5.90	11.80	Biuret reaction end point
	g/dl	5.93	4.75	7.11	0.59	1.18	
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.2	119	8.40	16.80	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.93	5.89	7.97	0.52	1.04	Urease kinetic
	mg/dl	41.6	35.4	47.8	3.10	6.20	
	mmol/l	6.93	5.89	7.97	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.8	33.9	45.7	2.95	5.90	Bromocresol Green
	g/dl	3.98	3.39	4.57	0.30	0.59	
Alkaline Phosphatase	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	115	157	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	111	95	127	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	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	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
Bilirubin Total	µmol/l	31.7	25.0	38.4	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Cholesterol	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	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
Creatinine	µmol/l	120	95.9	144	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Glucose oxidase
	mg/dl	117	99.1	135	8.95	17.90	
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	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.7	112	7.90	15.80	
Urea	mmol/l	6.68	5.67	7.69	0.51	1.01	Urease kinetic
	mg/dl	40.1	34.1	46.1	3.00	6.00	
	mmol/l	6.68	5.68	7.68	0.50	1.00	BUN
	mg/dl	18.7	15.9	21.5	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	16	26	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin 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	
Calcium	mmol/l	2.41	2.17	2.65	0.12	0.24	Arsenazo III
	mg/dl	9.66	8.70	10.6	0.48	0.96	
Cholesterol	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
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	
	µmol/l	122	97.5	147	12.25	24.50	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	55.6	47.1	64.1	4.25	8.50	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.71	1.46	1.96	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.30	4.53	6.07	0.39	0.77	
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.9	105	7.20	14.40	
Urea	mmol/l	6.95	5.91	7.99	0.52	1.04	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	6.95	5.91	7.99	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	0.32	0.64	
	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	40.1	34.1	46.1	3.00	6.00	Turbidimetric Assays
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	127	108	146	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 25°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	103	87	119	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	84	72	96	6.00	12.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	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 Integra 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	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

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Colorimetric
	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.00	0.790	1.21	0.11	0.21	
	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.9	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	24.9	19.6	30.2	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	24.9	19.6	30.2	2.65	5.30	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.35	2.11	2.59	0.12	0.24	NM-BAPTA
	mg/dl	9.42	8.46	10.4	0.48	0.96	
Chloride	mmol/l	94.7	87.1	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.17	3.62	4.72	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	186	152	220	17.00	34.00	Creatinine phosphate substrate Start 37°C
	U/l	116	95	137	10.50	21.00	Creatinine phosphate substrate Start 30°C
	U/l	79	65	93	7.00	14.00	Creatinine phosphate substrate Start 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	115	91.9	138	11.55	23.10	Alkaline picrate with deproteinization
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	119	94.9	143	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	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	126	100	152	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	µmol/l	120	95.7	144	12.15	24.30	Jaffe rate blanked
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	115	91.7	138	11.65	23.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	

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Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.98	1.68	2.28	0.15	0.30	Direct HDL PEGME
	mg/dl	76.4	64.8	88.0	5.80	11.60	
	mmol/l	1.99	1.69	2.29	0.15	0.30	Direct HDL Roche 3rd generation
	mg/dl	76.8	65.2	88.4	5.80	11.60	
Iron	µmol/l	17.6	14.5	20.7	1.55	3.10	Colorimetric with ppt.
	µg/dl	98.4	81.1	116	8.65	17.30	
	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
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	366	311	421	27.50	55.00	P->L German methods 37°C
	U/l	264	225	303	19.50	39.00	P->L German methods 30°C
	U/l	186	158	214	14.00	28.00	P->L German methods 25°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
	U/l	144	123	165	10.50	21.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Ion selective electrode
	mg/dl	0.689	0.606	0.772	0.04	0.08	
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	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.67	1.42	1.92	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.18	4.40	5.96	0.39	0.78	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction end point
	g/dl	5.63	4.50	6.76	0.57	1.13	
	g/l	56.6	45.3	67.9	5.65	11.30	Biuret reaction kinetic
	g/dl	5.66	4.53	6.79	0.57	1.13	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.5	37.6	57.4	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.9	78.1	108	7.40	14.80	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.8	109	7.50	15.00	
UIBC	µmol/l	30.7	25.2	36.2	2.75	5.50	Direct Colorimetric
	µg/dl	172	141	203	15.50	31.00	
Urea	mmol/l	6.87	5.84	7.90	0.52	1.03	Urease kinetic
	mg/dl	41.3	35.1	47.5	3.10	6.20	
	mmol/l	6.87	5.84	7.90	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

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	284	241	327	21.50	43.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin 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	2.36	2.13	2.59	0.12	0.23	Arsenazo III
	mg/dl	9.46	8.54	10.4	0.46	0.92	
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	191	156	226	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	120	95.8	144	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	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	
Phosphate Inorganic	mmol/l	1.67	1.42	1.92	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.18	4.40	5.96	0.39	0.78	
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.6	117	8.20	16.40	
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	0.34	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	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	230	182	278	24.00	48.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	174	137	211	18.50	37.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	130	103	157	13.50	27.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	4.39	2.94	5.84	0.73	1.45	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.81	2.55	5.07	0.63	1.26	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	7.51	5.03	9.99	1.24	2.48	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	14.2	9.51	18.9	2.35	4.69	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	11.9	7.97	15.8	1.97	3.93	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	18.0	12.1	23.9	2.95	5.90	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	
Alkaline Phosphatase	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	73	63	83	5.00	10.00	Roche Integra AMP buffer 25°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	201	171	231	15.00	30.00	Randox AMP 37°C
	U/l	157	133	181	12.00	24.00	Randox AMP 30°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Pancreatic	U/l	77	65	89	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
	U/l	68	58	78	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	87	74	100	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	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	11.1	17.1	1.50	3.00	Enzymatic
Bile Acids	µmol/l	25.9	20.7	31.1	2.60	5.20	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	24.0	18.9	29.1	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazonium ion
	mg/dl	1.42	1.12	1.72	0.15	0.30	
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	
	mmol/l	2.38	2.14	2.62	0.12	0.24	NM-BAPTA
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Chloride	mmol/l	89.7	82.6	96.8	3.55	7.10	ISE indirect
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5329	4263	6395	533.00	1066.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	147	213	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	113	92	134	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	62	92	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Enzymatic UV method (340nm)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Creatinine PAP method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.25	0.21	0.29	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	54	46	62	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.96	1.67	2.25	0.15	0.29	Direct HDL Roche 3rd generation
	mg/dl	75.7	64.5	86.9	5.60	11.20	
Iron	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric without ppt.
	µg/dl	97.8	79.9	116	8.95	17.90	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	97	83	111	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Phosphate Inorganic	mmol/l	1.63	1.38	1.88	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.05	4.28	5.82	0.39	0.77	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.3	35.8	54.8	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	253	200	306	26.50	53.00	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease kinetic
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.42	6.31	8.53	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	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	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

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	194	165	223	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	151	129	173	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	124	105	143	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	88	75	101	6.50	13.00	I.L. 2-chloro-pNPG3 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 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	2.38	2.14	2.62	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Chloride	mmol/l	91.6	84.3	98.9	3.65	7.30	ISE indirect
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
CK Total	U/l	175	144	206	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	24	32	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
Iron	µmol/l	17.1	14.0	20.2	1.55	3.10	Colorimetric without ppt.
	µg/dl	95.6	78.3	113	8.65	17.30	
LD (LDH)	U/l	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	283	240	326	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.02	2.56	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Enzymatic
	mg/dl	2.22	1.95	2.49	0.14	0.27	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.69	1.44	1.94	0.13	0.25	Phosphomolybdate enzymatic
	mg/dl	5.24	4.46	6.02	0.39	0.78	
	mmol/l	1.66	1.41	1.91	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.15	4.37	5.93	0.39	0.78	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	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	
Urea	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
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	


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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	131	112	150	9.50	19.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.6	12.3	18.9	1.65	3.30	Ortho Vitros Microslide Systems
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Vitros Total Bil - BU
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Chloride	mmol/l	95.3	87.7	103	3.80	7.60	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	152	133	171	9.50	19.00	
Cholinesterase	U/l	5388	4311	6465	538.50	1077.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	169	139	199	15.00	30.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	117	93.5	141	11.75	23.50	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.32	1.06	1.58	0.13	0.26	


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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	119	95.6	142	11.70	23.40	Vitros IDMS Traceable
	mg/dl	1.34	1.08	1.60	0.13	0.26	
gamma-GT	U/l	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.98	5.09	6.87	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.66	1.41	1.91	0.13	0.25	Vitros Magnetic HDL
	mg/dl	64.1	54.4	73.8	4.85	9.70	
	mmol/l	1.73	1.47	1.99	0.13	0.26	Vitros 5.1 FS microtip assay
	mg/dl	66.8	56.7	76.9	5.05	10.10	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Ortho Vitros Microslide Systems
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.39	1.14	1.64	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.5	10.3	14.7	1.10	2.20	
LD (LDH)	U/l	553	470	636	41.50	83.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	295	237	353	29.00	58.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.26	1.11	1.41	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.875	0.771	0.979	0.05	0.10	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.67	1.42	1.92	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	5.18	4.40	5.96	0.39	0.78	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	144	136	152	4.00	8.00	Ortho Vitros Microslide Systems
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	1.18	1.00	1.37	0.09	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	88.1	120	7.95	15.90	
Urea	mmol/l	6.76	5.75	7.77	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	40.6	34.6	46.6	3.00	6.00	
	mmol/l	6.76	5.75	7.77	0.51	1.01	BUN
	mg/dl	19.0	16.2	21.8	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.46	4.75	6.17	0.36	0.71	

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	16	26	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	27.9	22.3	33.5	2.80	5.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	21.7	17.2	26.2	2.25	4.50	Nitrobenzenediazonium salt
	mg/dl	1.27	1.01	1.53	0.13	0.26	
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	98.1	90.2	106	3.95	7.90	ISE direct
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	123	98.5	148	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.3	147	12.35	24.70	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.4	149	12.30	24.60	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
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		
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.96	1.66	2.26	0.15	0.30	Direct HDL PEGME
	mg/dl	75.7	64.1	87.3	5.80	11.60	
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	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.67	1.42	1.92	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.18	4.40	5.96	0.39	0.78	

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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.85	3.54	4.16	0.16	0.31	ISE method - direct
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	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
Urea	mmol/l	7.11	6.05	8.17	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.4	49.0	3.15	6.30	
	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	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.26	6.80	0.39	0.77	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.35	0.31	0.40	0.02	0.05	
mg/dl	5.93	5.16	6.70	0.39	0.77		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	230	182	278	24.00	48.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	174	137	211	18.50	37.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	130	103	157	13.50	27.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	4.39	2.94	5.84	0.73	1.45	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.81	2.55	5.07	0.63	1.26	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	7.51	5.03	9.99	1.24	2.48	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	14.2	9.51	18.9	2.35	4.69	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	11.9	7.97	15.8	1.97	3.93	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	18.0	12.1	23.9	2.95	5.90	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
	g/l	40.5	34.5	46.5	3.00	6.00	Turbidimetric Assays
g/dl	4.05	3.45	4.65	0.30	0.60		
Alkaline Phosphatase	U/l	131	112	150	9.50	19.00	Ortho Vitros Microslide Systems 37°C
	U/l	300	255	345	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	234	199	269	17.50	35.00	Diethanolamine buffer DEA 30°C
	U/l	192	163	221	14.50	29.00	Diethanolamine buffer DEA 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	174	148	200	13.00	26.00	AMP non-optimised 37°C
	U/l	136	115	157	10.50	21.00	AMP non-optimised 30°C
	U/l	111	95	127	8.00	16.00	AMP non-optimised 25°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	33	27	39	3.00	6.00	Tris buffer SCE 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer SCE 30°C
U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	77	65	89	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	75	64	86	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	92	78	106	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	89	76	102	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	91	77	105	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	96	81	111	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	98	83	113	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	107	91	123	8.00	16.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.16	0.95	1.37	0.10	0.21	Immunoturbidimetric
	mg/dl	116	95.1	137	10.45	20.90	
Apolipoprotein B	g/l	0.61	0.50	0.72	0.05	0.11	Immunoturbidimetric
	mg/dl	60.6	49.7	71.5	5.45	10.90	
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	56	45	67	5.50	11.00	Tris buffer with P5P 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 30°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer SCE 30°C
U/l	17	14	20	1.50	3.00	Tris buffer SCE 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	13.9	11.1	16.7	1.40	2.80	Colorimetric
	mmol/l	15.6	12.3	18.9	1.65	3.30	Ortho Vitros Microslide Systems
	mmol/l	13.5	10.7	16.3	1.40	2.80	Differential rate pH change
	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
	mmol/l	13.9	11.0	16.8	1.45	2.90	Ion selective electrode
Bile Acids	µmol/l	25.4	20.3	30.5	2.55	5.10	4th Generation Colorimetric
	µmol/l	25.9	20.7	31.1	2.60	5.20	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	16.3	12.9	19.7	1.70	3.40	Vitros Total Bil - BU
	mg/dl	0.954	0.755	1.15	0.10	0.20	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.04	0.825	1.26	0.11	0.22	
	µmol/l	15.8	12.5	19.1	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.924	0.731	1.12	0.10	0.19	
Bilirubin Total	µmol/l	15.4	12.2	18.6	1.60	3.20	Modified Jendrassik
	mg/dl	0.901	0.714	1.09	0.09	0.19	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	32.1	25.4	38.8	3.35	6.70	Diazo with Dichloroaniline (DCA)
mg/dl	1.88	1.49	2.27	0.20	0.39		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid	
	mg/dl	1.59	1.26	1.92	0.17	0.33		
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.59	1.25	1.93	0.17	0.34		
	µmol/l	21.8	17.3	26.3	2.25	4.50	Nitrobenzenediazonium salt	
	mg/dl	1.28	1.01	1.55	0.14	0.27		
	µmol/l	24.6	19.5	29.7	2.55	5.10	Diazonium ion	
	mg/dl	1.44	1.14	1.74	0.15	0.30		
	µmol/l	27.6	21.8	33.4	2.90	5.80	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.61	1.28	1.94	0.17	0.33		
	µmol/l	33.0	26.1	39.9	3.45	6.90	Modified Jendrassik	
	mg/dl	1.93	1.53	2.33	0.20	0.40		
	Calcium	mmol/l	2.34	2.10	2.58	0.12	0.24	Cresolphthalein complexone
		mg/dl	9.38	8.42	10.3	0.48	0.96	
mmol/l		2.39	2.15	2.63	0.12	0.24	Ortho Vitros Microslide Systems	
mg/dl		9.58	8.62	10.5	0.48	0.96		
mmol/l		2.32	2.08	2.56	0.12	0.24	Ion selective electrode	
mg/dl		9.30	8.34	10.3	0.48	0.96		
mmol/l		2.37	2.13	2.61	0.12	0.24	Methylthymol blue	
mg/dl		9.50	8.54	10.5	0.48	0.96		
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		
mmol/l		2.38	2.14	2.62	0.12	0.24	NM-BAPTA	
mg/dl		9.54	8.58	10.5	0.48	0.96		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	Colorimetric
	mmol/l	95.3	87.7	103	3.80	7.60	Ortho Vitros Microslide Systems
	mmol/l	93.0	85.5	101	3.75	7.50	ISE indirect
	mmol/l	96.0	88.3	104	3.85	7.70	ISE direct
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	152	133	171	9.50	19.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Cholinesterase	U/l	5388	4311	6465	538.50	1077.00	Ortho Vitros Microslide Systems 37°C
	U/l	5373	4298	6448	537.50	1075.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	169	139	199	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	197	161	233	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	190	156	224	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	194	159	229	17.50	35.00	Monothioglycerol 37°C
	U/l	121	100	142	10.50	21.00	Monothioglycerol 30°C
	U/l	82	68	96	7.00	14.00	Monothioglycerol 25°C
	U/l	181	148	214	16.50	33.00	Dithioerythritol 37°C
U/l	113	93	133	10.00	20.00	Dithioerythritol 30°C	
U/l	77	63	91	7.00	14.00	Dithioerythritol 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	172	141	203	15.50	31.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	108	88	128	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	73	60	86	6.50	13.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.7	13.3	20.1	1.70	3.40	Atomic absorption
	µg/dl	106	84.6	127	10.70	21.40	
	µmol/l	17.1	13.7	20.5	1.70	3.40	Colorimetric
	µg/dl	109	87.1	131	10.95	21.90	
Cortisol	nmol/l	452	339	565	56.50	113.00	Roche Cobas E411
	µg/dl	16.3	12.2	20.4	2.05	4.10	
Creatinine	µmol/l	119	95.3	143	11.85	23.70	Alkaline picrate with deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	124	99.0	149	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.4	149	12.30	24.60	Enzymatic UV method (340nm)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.7	146	12.15	24.30	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	126	100	152	13.00	26.00	Jaffe rate blanked
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
µmol/l	119	95.6	142	11.70	23.40	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.34	1.08	1.60	0.13	0.26		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	119	95.6	142	11.70	23.40	Vitros IDMS Traceable
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	121	97.2	145	11.90	23.80	IDMS traceable
	mg/dl	1.37	1.10	1.64	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.90	1.52	2.28	0.19	0.38	Immunturbidimetric
	ng/ml	1.48	1.19	1.77	0.15	0.29	
Folate	nmol/l	47.8	36.3	59.3	5.75	11.50	Roche Cobas E411
	ng/ml	21.1	16.0	26.2	2.55	5.10	
Free T4	pmol/l	18.4	13.8	23.0	2.30	4.60	Abbott Architect
	ng/dl	1.44	1.08	1.80	0.18	0.36	
	pg/ml	14.4	10.8	18.0	1.80	3.60	Abbott Architect
	pmol/l	20.3	15.2	25.4	2.55	5.10	Siemens Centaur XP/XPT/Classic
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Siemens Centaur XP/XPT/Classic
	pmol/l	23.0	17.3	28.7	2.85	5.70	Beckman Access
	ng/dl	1.79	1.35	2.23	0.22	0.44	
	pg/ml	17.9	13.5	22.3	2.20	4.40	Beckman Access
	pmol/l	20.6	15.4	25.8	2.60	5.20	Beckman Dxl800
	ng/dl	1.61	1.20	2.02	0.21	0.41	
	pg/ml	16.1	12.0	20.2	2.05	4.10	Beckman Dxl800
	pmol/l	40.2	30.1	50.3	5.05	10.10	Vitros ECi
	ng/dl	3.14	2.35	3.93	0.40	0.79	
pg/ml	31.4	23.5	39.3	3.95	7.90	Vitros ECi	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	25.0	18.8	31.2	3.10	6.20	Roche Elecsys
	ng/dl	1.95	1.47	2.43	0.24	0.48	
	pg/ml	19.5	14.7	24.3	2.40	4.80	Roche Elecsys
	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	25.2	18.9	31.5	3.15	6.30	Roche Cobas E411
	ng/dl	1.97	1.47	2.47	0.25	0.50	
	pg/ml	19.7	14.7	24.7	2.50	5.00	Roche Cobas E411
	pmol/l	24.7	18.5	30.9	3.10	6.20	Roche Cobas 6000/8000
	ng/dl	1.93	1.44	2.42	0.25	0.49	
	pg/ml	19.3	14.4	24.2	2.45	4.90	Roche Cobas 6000/8000
	pmol/l	22.6	16.9	28.3	2.85	5.70	Biomerieux Vidas FT4N Kit
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.78	6.22	9.34	0.78	1.56	Immunoturbidimetric
	µg/ml	3.72	2.97	4.47	0.38	0.75	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	61	52	70	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	25	21	29	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	54	46	62	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	43	36	50	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	33	28	38	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	5.98	5.09	6.87	0.45	0.89	Ortho Vitros Microslide Systems	
	mg/dl	108	91.7	124	8.15	16.30		
	mmol/l	6.08	5.16	7.00	0.46	0.92	Glucose dehydrogenase	
	mg/dl	110	93.0	127	8.50	17.00		
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase	
	mg/dl	111	94.2	128	8.40	16.80		
	mmol/l	6.16	5.23	7.09	0.47	0.93	Oxygen electrode	
	mg/dl	111	94.2	128	8.40	16.80		
	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	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
		mg/dl	52.5	44.8	60.2	3.85	7.70	
mmol/l		1.66	1.41	1.91	0.13	0.25	Vitros Magnetic HDL	
mg/dl		64.1	54.4	73.8	4.85	9.70		
mmol/l		1.98	1.68	2.28	0.15	0.30	Direct HDL PEGME	
mg/dl		76.4	64.8	88.0	5.80	11.60		
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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.73	1.47	1.99	0.13	0.26	Vitros 5.1 FS microtip assay
	mg/dl	66.8	56.7	76.9	5.05	10.10	
	mmol/l	1.68	1.43	1.93	0.13	0.25	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	64.8	55.2	74.4	4.80	9.60	
	mmol/l	1.94	1.65	2.23	0.15	0.29	Direct HDL Roche 3rd generation
	mg/dl	74.9	63.7	86.1	5.60	11.20	
mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra	
mg/dl	51.3	43.6	59.0	3.85	7.70		
Immunoglobulin A	g/l	1.98	1.49	2.47	0.25	0.49	Immunoturbidimetric
	mg/dl	198	149	247	24.50	49.00	
Immunoglobulin G	g/l	6.20	5.08	7.32	0.56	1.12	Immunoturbidimetric
	mg/dl	620	508	732	56.00	112.00	
Immunoglobulin M	g/l	0.76	0.61	0.91	0.08	0.15	Immunoturbidimetric
	mg/dl	75.7	60.6	90.8	7.55	15.10	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric with ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric without ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	18.1	14.8	21.4	1.65	3.30	Ortho Vitros Microslide Systems
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Ion selective electrode
	mg/dl	13.5	11.1	15.9	1.20	2.40	
	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.39	1.14	1.64	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.5	10.3	14.7	1.10	2.20	
	mmol/l	1.59	1.30	1.88	0.15	0.29	Enzymatic Electrode
	mg/dl	14.3	11.7	16.9	1.30	2.60	
	mmol/l	1.46	1.20	1.72	0.13	0.26	UV LDH
mg/dl	13.2	10.8	15.6	1.20	2.40		
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	553	470	636	41.50	83.00	Ortho Vitros Microslide Systems 37°C
	U/l	174	148	200	13.00	26.00	L->P 37°C
	U/l	126	107	145	9.50	19.00	L->P 30°C
	U/l	88	75	101	6.50	13.00	L->P 25°C
	U/l	419	356	482	31.50	63.00	P->L Scandinavian & Dutch 37°C
	U/l	303	257	349	23.00	46.00	P->L Scandinavian & Dutch 30°C
	U/l	212	180	244	16.00	32.00	P->L Scandinavian & Dutch 25°C
	U/l	383	325	441	29.00	58.00	P->L German methods 37°C
	U/l	277	235	319	21.00	42.00	P->L German methods 30°C
	U/l	194	165	223	14.50	29.00	P->L German methods 25°C
	U/l	387	329	445	29.00	58.00	P->L SFBC 37°C
	U/l	279	238	320	20.50	41.00	P->L SFBC 30°C
	U/l	196	167	225	14.50	29.00	P->L SFBC 25°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
U/l	98	83	113	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	39	32	46	3.50	7.00	Other Colorimetric 37°C
	U/l	295	237	353	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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
	U/l	197	158	236	19.50	39.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.26	1.11	1.41	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.875	0.771	0.979	0.05	0.10	
	mmol/l	1.00	0.88	1.12	0.06	0.12	Ion selective electrode
	mg/dl	0.692	0.609	0.775	0.04	0.08	
	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.618	0.784	0.04	0.08	
Magnesium	mmol/l	1.05	0.92	1.18	0.06	0.13	Randox Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.89	0.78	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Calmagite
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.97	2.49	0.13	0.26	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.12	1.86	2.38	0.13	0.26	
mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III	
mg/dl	2.19	1.93	2.45	0.13	0.26		
mmol/l	0.87	0.76	0.97	0.05	0.11	Enzymatic	
mg/dl	2.11	1.86	2.36	0.13	0.25		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
NEFA	mmol/l	2.30	1.96	2.64	0.17	0.34	Colorimetric
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
	mOsm/kg	303	242	364	30.50	61.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.6	9.23	14.0	1.19	2.37	
Phosphate Inorganic	mmol/l	1.67	1.42	1.92	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	5.18	4.40	5.96	0.39	0.78	
	mmol/l	1.65	1.40	1.90	0.13	0.25	Phosphomolybdate enzymatic
	mg/dl	5.12	4.34	5.90	0.39	0.78	
	mmol/l	1.64	1.40	1.88	0.12	0.24	Phosphomolybdate UV
	mg/dl	5.08	4.34	5.82	0.37	0.74	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.10	3.77	4.43	0.17	0.33	Enzymatic
	mmol/l	4.02	3.69	4.35	0.17	0.33	Flame photometry
	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - direct
	mmol/l	4.04	3.71	4.37	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
	g/l	58.1	46.4	69.8	5.85	11.70	Biuret reaction kinetic
	g/dl	5.81	4.64	6.98	0.59	1.17	
PSA Total	ng/ml =	17.3	13.0	21.6	2.15	4.30	Roche Elecsys Modular E170
	ng/ml =	14.9	11.2	18.6	1.85	3.70	Beckman Access standardised to Hybritech
	ng/ml =	15.3	11.5	19.1	1.90	3.80	bioMerieux VIDAS TPSA

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	12.2	9.14	15.3	1.53	3.06	Siemens Centaur XP/XPT/Classic
	ng/ml =	14.0	10.5	17.5	1.75	3.50	Abbott Architect
	ng/ml =	17.1	12.8	21.4	2.15	4.30	Cobas E411
	ng/ml =	17.1	12.8	21.4	2.15	4.30	Roche Cobas 6000/8000
Salicylate	mmol/l	0.46	0.37	0.55	0.05	0.09	Enzymatic
	mg/dl	6.30	5.04	7.56	0.63	1.26	
Sodium	mmol/l	144	136	152	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	Flame photometry
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	29.7	23.8	35.6	2.95	5.90	Immunoturbidimetric
	µg/ml	5.35	4.29	6.41	0.53	1.06	
Thyroid Stimulating Hormone	µU/ml =	1.15	0.92	1.38	0.11	0.23	Abbott Architect
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.23	0.99	1.47	0.12	0.24	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.48	1.19	1.77	0.15	0.29	bioMerieux VIDAS TSH
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Vitros ECI
	µU/ml =	1.50	1.20	1.80	0.15	0.30	Roche Elecsys
	µU/ml =	1.49	1.19	1.79	0.15	0.30	Roche Modular E170
	µU/ml =	1.48	1.19	1.77	0.15	0.29	Roche Cobas E411
	µU/ml =	1.47	1.18	1.76	0.15	0.29	Roche Cobas 6000/8000
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Beckman Dxl800 Hyper TSH
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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	45.9	36.2	55.6	4.85	9.70	Removal of excess free iron
	µg/dl	257	202	312	27.50	55.00	
	µmol/l	47.5	37.5	57.5	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	50.5	39.9	61.1	5.30	10.60	Direct Colorimetric
	µg/dl	282	223	341	29.50	59.00	
Tobramycin	µmol/l	4.87	3.90	5.84	0.49	0.97	Immunoturbidimetric
	µg/ml	2.28	1.83	2.73	0.23	0.45	
Total T3	nmol/l	2.36	1.77	2.95	0.30	0.59	Abbott Architect
	ng/ml	1.54	1.15	1.93	0.20	0.39	
	ng/dl	154	115	193	19.50	39.00	Abbott Architect
	nmol/l	2.53	1.90	3.16	0.32	0.63	Beckman Access
	ng/ml	1.65	1.24	2.06	0.21	0.41	
	ng/dl	165	124	206	20.50	41.00	Beckman Access
	nmol/l	2.83	2.12	3.54	0.36	0.71	Siemens Centaur XP/XPT/Classic
	ng/ml	1.84	1.38	2.30	0.23	0.46	
	ng/dl	184	138	230	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.57	1.92	3.22	0.33	0.65	BioMerieux Vidas
	ng/ml	1.67	1.25	2.09	0.21	0.42	
	ng/dl	167	125	209	21.00	42.00	BioMerieux Vidas
	nmol/l	2.71	2.03	3.39	0.34	0.68	Roche Cobas E411
	ng/ml	1.76	1.32	2.20	0.22	0.44	
ng/dl	176	132	220	22.00	44.00	Roche Cobas E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.73	2.05	3.41	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.78	1.33	2.23	0.23	0.45	
	ng/dl	178	133	223	22.50	45.00	Roche Cobas 6000/8000
Total T4	nmol/l	91.9	69.0	115	11.45	22.90	Abbott Architect
	µg/dl	7.17	5.38	8.96	0.90	1.79	
	ng/ml	71.7	53.8	89.6	8.95	17.90	Abbott Architect
	nmol/l	97.4	73.1	122	12.15	24.30	Siemens Centaur XP/XPT/Classic
	µg/dl	7.60	5.70	9.50	0.95	1.90	
	ng/ml	76.0	57.0	95.0	9.50	19.00	Siemens Centaur XP/XPT/Classic
	nmol/l	106	79.3	133	13.35	26.70	Beckman Access
	µg/dl	8.27	6.19	10.4	1.04	2.08	
	ng/ml	82.7	61.9	104	10.40	20.80	Beckman Access
	nmol/l	91.3	68.5	114	11.40	22.80	BioMerieux Vidas
	µg/dl	7.12	5.34	8.90	0.89	1.78	
	ng/ml	71.2	53.4	89.0	8.90	17.80	BioMerieux Vidas
	nmol/l	91.6	68.7	115	11.45	22.90	Siemens Immulite 2000/2500
	µg/dl	7.14	5.36	8.92	0.89	1.78	
	ng/ml	71.4	53.6	89.2	8.90	17.80	Siemens Immulite 2000/2500
	nmol/l	100	75.3	125	12.35	24.70	Roche Cobas E411
	µg/dl	7.80	5.87	9.73	0.97	1.93	
	ng/ml	78.0	58.7	97.3	9.65	19.30	Roche Cobas E411
nmol/l	94.7	71.0	118	11.85	23.70	Roche Cobas 6000/8000	
µg/dl	7.39	5.54	9.24	0.93	1.85		
ng/ml	73.9	55.4	92.4	9.25	18.50	Roche Cobas 6000/8000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	2.03	1.62	2.44	0.21	0.41	Immunoturbidimetric
	mg/dl	203	162	244	20.50	41.00	
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	95.6	80.4	111	7.60	15.20	
mmol/l	1.05	0.88	1.22	0.08	0.17	Lipase/Glycerol Dehydrogenase	
mg/dl	92.9	78.1	108	7.40	14.80		
UIBC	mmol/l	1.18	1.00	1.37	0.09	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	88.1	120	7.95	15.90	
	μmol/l	30.1	24.7	35.5	2.70	5.40	Direct Colorimetric
	μg/dl	168	138	198	15.00	30.00	
	μmol/l	33.0	27.1	38.9	2.95	5.90	TIBC - FE
	μg/dl	184	151	217	16.50	33.00	
Urea	mmol/l	6.76	5.75	7.77	0.51	1.01	Ortho Vitros Microslide Systems
	mg/dl	40.6	34.6	46.6	3.00	6.00	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	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	6.99	5.94	8.04	0.53	1.05	Urease hypochlorite
	mg/dl	42.0	35.7	48.3	3.15	6.30	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease Berthelot
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	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	0.33	0.28	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.46	4.75	6.17	0.36	0.71	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	
Vitamin B12	pmol/l	503	402	604	50.50	101.00	Roche Cobas E411
	pg/ml	682	545	819	68.50	137.00	
Zinc	µmol/l	34.9	27.9	41.9	3.50	7.00	Colorimetric with deproteinisation
	µg/dl	228	182	274	23.00	46.00	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		67.6	60.9	74.3	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.9	4.5	7.3	0.71	1.42	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
beta-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)
gamma-globulin		10.3	7.8	12.8	1.24	2.47	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	285	242	328	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	222	189	255	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	182	155	209	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	192	163	221	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	127	173	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	123	104	142	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	pNP Maltotriose substrates 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.10	0.866	1.33	0.12	0.23	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.61	1.27	1.95	0.17	0.34	
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	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate with deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	122	97.5	147	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	µmol/l	118	94.6	141	11.70	23.40	Enzymatic UV method (340nm)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	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
Glucose	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
	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	
Iron	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	403	342	464	30.50	61.00	P->L German methods 37°C
	U/l	291	247	335	22.00	44.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	191	162	220	14.50	29.00	L->P IFCC 37°C
	U/l	138	117	159	10.50	21.00	L->P IFCC 30°C
	U/l	97	82	112	7.50	15.00	L->P IFCC 25°C
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	1.72	1.46	1.98	0.13	0.26	Phosphomolybdate UV
	mg/dl	5.33	4.53	6.13	0.40	0.80	
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	
	g/l	61.2	48.9	73.5	6.15	12.30	Biuret reaction kinetic
	g/dl	6.12	4.89	7.35	0.62	1.23	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease hypochlorite
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	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	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.56	4.84	6.28	0.36	0.72	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	39.8	33.9	45.7	2.95	5.90	Bromocresol Green
	g/dl	3.98	3.39	4.57	0.30	0.59	
Alkaline Phosphatase	U/l	267	227	307	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	208	177	239	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	171	145	197	13.00	26.00	Diethanolamine buffer DEA 25°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.3	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	23.3	18.4	28.2	2.45	4.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Calcium	mmol/l	2.47	2.22	2.72	0.13	0.25	Arsenazo III
	mg/dl	9.90	8.90	10.9	0.50	1.00	
Cholesterol	mmol/l	4.25	3.70	4.80	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	201	164	238	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
Urea	mmol/l	7.30	6.20	8.40	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Purple
	g/dl	4.23	3.60	4.86	0.32	0.63	
	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	131	111	151	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	102	86	118	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	71	97	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	128	109	147	9.50	19.00	AMP optimised to IFCC 37°C
	U/l	100	85	115	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	82	70	94	6.00	12.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	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

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Colorimetric
	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bile Acids	µmol/l	26.5	21.2	31.8	2.65	5.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.8	14.1	21.5	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.825	1.26	0.11	0.22	
	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	18.1	14.3	21.9	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
Calcium	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	24.7	19.5	29.9	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Chloride	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	2.39	2.15	2.63	0.12	0.24	NM-BAPTA
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Chloride	mmol/l	88.8	81.7	95.9	3.55	7.10	ISE indirect
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Cholinesterase	U/l	5118	4094	6142	512.00	1024.00	Colorimetric Butyrylthiocholine 37°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	188	154	222	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	188	154	222	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	96	140	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	80	65	95	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method (340nm)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	126	100	152	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.42	1.13	1.71	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.26	0.22	0.30	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	24.7	18.5	30.9	3.10	6.20	Roche Cobas 6000/8000
	ng/dl	1.93	1.44	2.42	0.25	0.49	
	pg/ml	19.3	14.4	24.2	2.45	4.90	Roche Cobas 6000/8000
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose dehydrogenase
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	5.97	5.07	6.87	0.45	0.90	Glucose oxidase
	mg/dl	108	91.4	125	8.30	16.60	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.94	1.65	2.23	0.15	0.29	Direct HDL PEGME
	mg/dl	74.9	63.7	86.1	5.60	11.20	
	mmol/l	1.93	1.64	2.22	0.15	0.29	Direct HDL Roche 3rd generation
	mg/dl	74.5	63.3	85.7	5.60	11.20	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric with ppt.
	µg/dl	96.1	78.8	113	8.65	17.30	
	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric without ppt.
	µg/dl	97.8	79.9	116	8.95	17.90	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	376	320	432	28.00	56.00	P->L German methods 37°C
	U/l	271	231	311	20.00	40.00	P->L German methods 30°C
	U/l	191	162	220	14.50	29.00	P->L German methods 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	97	83	111	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	34	28	40	3.00	6.00	Roche Colorimetric 37°C
	U/l	35	28	42	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.619	0.783	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Osmolality	mOsm/kg	288	230	346	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.63	1.38	1.88	0.13	0.25	Phosphomolybdate enzymatic
	mg/dl	5.05	4.28	5.82	0.39	0.77	
	mmol/l	1.62	1.37	1.87	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.02	4.25	5.79	0.39	0.77	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
	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 =	17.1	12.8	21.4	2.15	4.30	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Thyroid Stimulating Hormone	µU/ml =	1.47	1.18	1.76	0.15	0.29	Roche Cobas 6000/8000
TIBC	µmol/l	46.5	36.7	56.3	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	260	205	315	27.50	55.00	
	µmol/l	47.7	37.7	57.7	5.00	10.00	Calculated from Transferrin
	µg/dl	267	211	323	28.00	56.00	
Total T3	nmol/l	2.73	2.05	3.41	0.34	0.68	Roche Cobas 6000/8000
	ng/ml	1.78	1.33	2.23	0.23	0.45	
	ng/dl	178	133	223	22.50	45.00	Roche Cobas 6000/8000
Total T4	nmol/l	94.7	71.0	118	11.85	23.70	Roche Cobas 6000/8000
	µg/dl	7.39	5.54	9.24	0.93	1.85	
	ng/ml	73.9	55.4	92.4	9.25	18.50	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	92.0	77.0	107	7.50	15.00	
	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	
UIBC	µmol/l	28.6	23.4	33.8	2.60	5.20	Direct Colorimetric
	µg/dl	160	131	189	14.50	29.00	
Urea	mmol/l	7.38	6.28	8.48	0.55	1.10	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
Alkaline Phosphatase	U/l	126	107	145	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	98	83	113	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	81	68	94	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	104	89	119	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	86	73	99	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Colorimetric 37°C
	U/l	24	19	29	2.50	5.00	Colorimetric 30°C
	U/l	19	15	23	2.00	4.00	Colorimetric 25°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Total	U/l	88	75	101	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Colorimetric 37°C
	U/l	23	18	28	2.50	5.00	Colorimetric 30°C
	U/l	16	13	19	1.50	3.00	Colorimetric 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	0.21	
	µmol/l	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	18.2	14.3	22.1	1.95	3.90	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	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	
Bilirubin Total	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	24.9	19.6	30.2	2.65	5.30	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	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	
Calcium	mmol/l	2.35	2.12	2.58	0.12	0.23	NM-BAPTA
	mg/dl	9.42	8.50	10.3	0.46	0.92	
Chloride	mmol/l	94.8	87.3	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	118	94.6	141	11.70	23.40	Alkaline picrate with deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	119	95.0	143	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	125	99.7	150	12.65	25.30	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	µmol/l	117	93.5	141	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	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	6.23	5.30	7.16	0.47	0.93	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	2.00	1.70	2.30	0.15	0.30	Direct HDL Roche 3rd generation
	mg/dl	77.2	65.6	88.8	5.80	11.60	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
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

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.68	1.43	1.93	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.21	4.43	5.99	0.39	0.78	
Potassium	mmol/l	3.96	3.65	4.27	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	Enzymatic
	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	94.7	79.9	110	7.40	14.80	
Urea	mmol/l	7.04	5.98	8.10	0.53	1.06	Urease end point
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	6.92	5.88	7.96	0.52	1.04	Urease kinetic
	mg/dl	41.6	35.3	47.9	3.15	6.30	
	mmol/l	6.98	5.94	8.02	0.52	1.04	Urease hypochlorite
	mg/dl	41.9	35.7	48.1	3.10	6.20	
	mmol/l	6.92	5.88	7.96	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

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

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.3	49.3	3.25	6.50	Bromocresol Green
	g/dl	4.28	3.63	4.93	0.33	0.65	
	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	128	109	147	9.50	19.00	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	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	18.5	14.7	22.3	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.860	1.30	0.11	0.22	
	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.3	19.2	29.4	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.13	1.75	0.16	0.31	
Calcium	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	mmol/l	2.42	2.18	2.66	0.12	0.24	Cresolphthalein complexone
		mg/dl	9.70	8.74	10.7	0.48	
mmol/l	2.39	2.16	2.62	0.12	0.23	Arsenazo III	
	mg/dl	9.58	8.66	10.5	0.46		0.92
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	89.3	82.2	96.4	3.55	7.10	ISE indirect
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	141	181	10.00	20.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method (340nm)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	2.05	1.74	2.36	0.16	0.31	Direct HDL PEGME
	mg/dl	79.1	67.2	91.0	5.95	11.90	
	mmol/l	1.97	1.67	2.27	0.15	0.30	Direct HDL Roche 3rd generation
Iron	mg/dl	76.0	64.5	87.5	5.75	11.50	
	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric without ppt.
Lactate	µg/dl	97.8	79.9	116	8.95	17.90	
	mmol/l	1.53	1.25	1.81	0.14	0.28	Colorimetric Lactate Oxidase
LD (LDH)	mg/dl	13.8	11.3	16.3	1.25	2.50	
	U/l	383	325	441	29.00	58.00	P->L German methods 37°C
	U/l	277	235	319	21.00	42.00	P->L German methods 30°C
	U/l	194	165	223	14.50	29.00	P->L German methods 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	97	83	111	7.00	14.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Phosphate Inorganic	mmol/l	1.64	1.40	1.88	0.12	0.24	Phosphomolybdate UV
	mg/dl	5.08	4.34	5.82	0.37	0.74	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
Urea	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	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	

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	113	96	130	8.50	17.00	Roche Integra AMP buffer 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	72	61	83	5.50	11.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	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
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	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
Bilirubin Total	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	23.6	18.6	28.6	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.38	1.09	1.67	0.15	0.29	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Diazonium ion
	mg/dl	1.37	1.08	1.66	0.15	0.29	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

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	2.37	2.14	2.60	0.12	0.23	NM-BAPTA
	mg/dl	9.50	8.58	10.4	0.46	0.92	
Chloride	mmol/l	89.2	82.1	96.3	3.55	7.10	ISE indirect
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	179	146	212	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	131	104	158	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.87	1.59	2.15	0.14	0.28	Direct HDL Roche 3rd generation
	mg/dl	72.2	61.4	83.0	5.40	10.80	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	16.8	13.8	19.8	1.50	3.00	Colorimetric without ppt.
	µg/dl	93.9	77.1	111	8.40	16.80	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	193	164	222	14.50	29.00	L->P IFCC 37°C
	U/l	139	118	160	10.50	21.00	L->P IFCC 30°C
	U/l	98	83	113	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Spectrophotometric
	mg/dl	0.701	0.619	0.783	0.04	0.08	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Phosphate Inorganic	mmol/l	1.60	1.36	1.84	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.96	4.22	5.70	0.37	0.74	
Potassium	mmol/l	4.10	3.77	4.43	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	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.0	37.1	56.9	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	263	207	319	28.00	56.00	
	µmol/l	45.1	35.6	54.6	4.75	9.50	Calculated from Transferrin
	µg/dl	252	199	305	26.50	53.00	
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	
Urea	mmol/l	6.93	5.89	7.97	0.52	1.04	Urease kinetic
	mg/dl	41.6	35.4	47.8	3.10	6.20	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.93	5.89	7.97	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.49	4.79	6.19	0.35	0.70	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	340	289	391	25.50	51.00	Diethanolamine buffer DEA 37°C
	U/l	201	171	231	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	77	65	89	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	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bile Acids	µmol/l	25.9	20.7	31.1	2.60	5.20	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	15.9	12.6	19.2	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.930	0.737	1.12	0.10	0.19	
Bilirubin Total	µmol/l	30.7	24.3	37.1	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.46	2.21	2.71	0.13	0.25	Arsenazo III
	mg/dl	9.86	8.86	10.9	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. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	188	155	221	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	123	98.4	148	12.30	24.60	Enzymatic UV method (340nm)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.38	5.43	7.33	0.48	0.95	Hexokinase
	mg/dl	115	97.8	132	8.60	17.20	
	mmol/l	6.43	5.47	7.39	0.48	0.96	Glucose oxidase
	mg/dl	116	98.6	133	8.70	17.40	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	391	332	450	29.50	59.00	P->L German methods 37°C
	U/l	191	162	220	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	49	39	59	5.00	10.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
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	1.69	1.44	1.94	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.24	4.46	6.02	0.39	0.78	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	Enzymatic
	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - direct
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	146	139	153	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
TIBC	µmol/l	56.3	44.5	68.1	5.90	11.80	Direct Colorimetric
	µg/dl	315	249	381	33.00	66.00	
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	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.78	5.02	6.54	0.38	0.76		

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	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	293	249	337	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	165	140	190	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.8	12.6	19.0	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	15.0	11.9	18.1	1.55	3.10	Oxidation to Biliverdin/Vanadate
	mg/dl	0.878	0.696	1.06	0.09	0.18	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Calcium	mmol/l	2.40	2.16	2.64	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.62	8.66	10.6	0.48	0.96	
	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	95.7	88.0	103	3.85	7.70	ISE indirect

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.19	3.64	4.74	0.28	0.55	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	122	97.8	146	12.10	24.20	Enzymatic UV method (340nm)
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	124	98.9	149	12.55	25.10	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.06	5.15	6.97	0.46	0.91	Hexokinase
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	0.94	0.80	1.08	0.07	0.14	Direct Clearance Method
	mg/dl	36.1	30.7	41.5	2.70	5.40	
Iron	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.32	1.08	1.56	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	11.9	9.73	14.1	1.09	2.17	
LD (LDH)	U/l	378	321	435	28.50	57.00	P->L German methods 37°C
	U/l	197	167	227	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	43	34	52	4.50	9.00	Other Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.684	0.602	0.766	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.65	1.40	1.90	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.12	4.34	5.90	0.39	0.78	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	52.5	41.5	63.5	5.50	11.00	Direct Colorimetric
	μg/dl	293	232	354	30.50	61.00	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	83.9	116	8.05	16.10	
Urea	mmol/l	7.46	6.35	8.57	0.56	1.11	Urease kinetic
	mg/dl	44.8	38.2	51.4	3.30	6.60	
	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	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	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	Siemens Dimension AMP buffer 37°C
	U/l	156	132	180	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	40	32	48	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	12.0	9.52	14.5	1.24	2.48	Diazo with Sulphanilic Acid
	mg/dl	0.702	0.557	0.847	0.07	0.15	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Chloride	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	
	mmol/l	3.75	3.26	4.24	0.25	0.49	Dimension-Siemens reagents
	mg/dl	145	126	164	9.50	19.00	
CK Total	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	172	141	203	15.50	31.00	Dithioerythritol (DTE) IFCC correlated 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	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	63	54	72	4.50	9.00	Siemens Dimension (non IFCC) 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	
HDL - Cholesterol	mmol/l	2.05	1.75	2.35	0.15	0.30	Direct HDL PPD
	mg/dl	79.1	67.6	90.6	5.75	11.50	
	mmol/l	1.96	1.67	2.25	0.15	0.29	Direct HDL PEGME
	mg/dl	75.7	64.5	86.9	5.60	11.20	
Iron	µmol/l	16.9	13.9	19.9	1.50	3.00	Colorimetric with ppt.
	µg/dl	94.5	77.7	111	8.40	16.80	
	µmol/l	16.9	13.9	19.9	1.50	3.00	Colorimetric without ppt.
	µg/dl	94.5	77.7	111	8.40	16.80	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	UV LDH
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	181	154	208	13.50	27.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	182	155	209	13.50	27.00	L->P IFCC 37°C
Lipase	U/l	152	122	182	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.68	1.43	1.93	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.21	4.43	5.99	0.39	0.78	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Protein Total	g/l	59.8	47.9	71.7	5.95	11.90	Biuret reaction end point	
	g/dl	5.98	4.79	7.17	0.60	1.19		
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect	
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction	
	mg/dl	90.3	76.0	105	7.15	14.30		
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction	
	mg/dl	89.4	75.0	104	7.20	14.40		
Urea	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/Glycerol Dehydrogenase	
	mg/dl	89.4	75.3	104	7.05	14.10		
	Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
		mg/dl	42.5	36.1	48.9	3.20	6.40	
Uric Acid (Urate)	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN	
	mg/dl	19.8	16.8	22.8	1.50	3.00		
	Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
		mg/dl	5.63	4.91	6.35	0.36	0.72	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290	
	mg/dl	5.64	4.91	6.37	0.37	0.73		

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

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	
	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Purple
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	156	132	180	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	174	148	200	13.00	26.00	Randox AMP 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	12.1	9.58	14.6	1.26	2.52	Diazo with Sulphanilic Acid
	mg/dl	0.708	0.560	0.856	0.07	0.15	
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Chloride	mmol/l	94.1	86.6	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	


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

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.70	3.22	4.18	0.24	0.48	Dimension-Siemens reagents
	mg/dl	143	124	162	9.50	19.00	
CK Total	U/l	182	150	214	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	181	149	213	16.00	32.00	Dithioerythritol 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	122	97.7	146	12.15	24.30	Enzymatic UV method (340nm)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	
mg/dl	1.46	1.16	1.76	0.15	0.30		
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	63	54	72	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	2.01	1.71	2.31	0.15	0.30	Direct HDL PPD
	mg/dl	77.6	66.0	89.2	5.80	11.60	
	mmol/l	2.02	1.72	2.32	0.15	0.30	Direct HDL PEGME
	mg/dl	78.0	66.4	89.6	5.80	11.60	
	mmol/l	1.88	1.60	2.16	0.14	0.28	Direct Clearance Method
	mg/dl	72.6	61.8	83.4	5.40	10.80	
Iron	µmol/l	16.6	13.6	19.6	1.50	3.00	Colorimetric with ppt.
	µg/dl	92.8	76.0	110	8.40	16.80	
	µmol/l	16.8	13.8	19.8	1.50	3.00	Colorimetric without ppt.
	µg/dl	93.9	77.1	111	8.40	16.80	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	185	157	213	14.00	28.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	185	157	213	14.00	28.00	L->P IFCC 37°C
Lipase	U/l	149	119	179	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Methylthymol blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.70	1.44	1.96	0.13	0.26	Phosphomolybdate enzymatic
	mg/dl	5.27	4.46	6.08	0.41	0.81	
	mmol/l	1.70	1.45	1.95	0.13	0.25	Phosphomolybdate UV
	mg/dl	5.27	4.50	6.04	0.39	0.77	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.4	48.4	72.4	6.00	12.00	Biuret reaction end point
	g/dl	6.04	4.84	7.24	0.60	1.20	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.1	34.0	52.2	4.55	9.10	Removal of excess free iron
	µg/dl	241	190	292	25.50	51.00	
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.7	106	7.25	14.50	
	mmol/l	1.04	0.88	1.20	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	92.0	77.7	106	7.15	14.30	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.9	108	7.50	15.00	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease end point
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	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	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1148UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-07-28

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	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	