

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

CAT. NO. HN1530	LOT NO. 1104UN
GTIN: 05055273203783	
CAT. NO. HS2611	
GTIN: 05055273203813	
SIZE: 20 x 5ml / 5 x 5ml	EXPIRY: 2020-02-28

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 (25 - 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 be allowed to stand for 1 hour at +15°C to +25°C before measurement.

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

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

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

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

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

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

1. 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.
2. Refer to the Control section of the individual analyser application.
3. 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

® All trademarks recognised.

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

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Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Purple
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	157	133	181	12.00	24.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Randox liquid stable pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	102	87	117	7.50	15.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bile Acids	µmol/l	27.7	22.2	33.2	2.75	5.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.48	1.17	1.79	0.16	0.31	

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Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	μmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	μmol/l	25.8	20.4	31.2	2.70	5.40	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	
Chloride	mmol/l	98.3	90.4	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.32	3.76	4.88	0.28	0.56	Cholesterol Oxidase
	mg/dl	167	145	189	11.00	22.00	
Cholinesterase	U/l	6828	5462	8194	683.00	1366.00	Colorimetric Butyrylthiocholine 37°C
	U/l	6559	5247	7871	656.00	1312.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	124	99.1	149	12.45	24.90	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	124	99.1	149	12.45	24.90	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	124	99.2	149	12.40	24.80	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
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
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	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	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct Clearance Method
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.45	1.23	1.67	0.11	0.22	HDL - Ultra
Iron	mg/dl	56.0	47.5	64.5	4.25	8.50	
	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric with ppt.
	µg/dl	100	82.2	118	8.90	17.80	
	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
Lactate	µg/dl	100	82.2	118	8.90	17.80	
	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
LD (LDH)	mg/dl	13.4	11.0	15.8	1.20	2.40	
	U/l	207	176	238	15.50	31.00	L->P 37°C
	U/l	408	347	469	30.50	61.00	P->L SFBC 37°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C

Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Spectrophotometric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.12	1.87	2.37	0.13	0.25	
	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.86	0.75	0.96	0.05	0.10	Enzymatic
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Osmolality	mOsm/kg	303	242	364	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
	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	
PSA Total	ng/ml =	14.9	11.2	18.6	1.85	3.70	Abbott Architect
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.20	0.96	1.44	0.12	0.24	Abbott Architect
TIBC	µmol/l	48.3	38.2	58.4	5.05	10.10	FE+UIBC(saturation with iron)
	µg/dl	270	214	326	28.00	56.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.0	107	7.50	15.00	

Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	76.0	105	7.15	14.30	
	mmol/l	1.03	0.87	1.19	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	7.03	5.98	8.08	0.53	1.05	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
Urea	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	24.9	19.6	30.2	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
Calcium	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	4.36	3.79	4.93	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Creatinine PAP method
	mg/dl	1.39	1.12	1.66	0.14	0.27	
Glucose	mmol/l	6.15	5.22	7.08	0.47	0.93	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
Iron	µmol/l	17.0	13.9	20.1	1.55	3.10	Colorimetric without ppt.
	µg/dl	95.0	77.7	112	8.65	17.30	
Phosphate Inorganic	mmol/l	1.49	1.26	1.72	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.62	3.91	5.33	0.36	0.71	
Protein Total	g/l	60.9	48.7	73.1	6.10	12.20	Biuret reaction end point
	g/dl	6.09	4.87	7.31	0.61	1.22	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.2	116	7.90	15.80	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.41	4.70	6.12	0.36	0.71	

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

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
ALT (GPT)	U/l	35	28	42	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
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	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.16	3.62	4.70	0.27	0.54	Agappe - CHOD-PAP
	mg/dl	161	140	182	10.50	21.00	
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	
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction kinetic
	g/dl	5.96	4.77	7.15	0.60	1.19	
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	
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	

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

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	208	164	252	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
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	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	246	209	283	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	82	70	94	6.00	12.00	pNP Maltotrioxide substrates 37°C
	U/l	83	70	96	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	83	71	95	6.00	12.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	85	72	98	6.50	13.00	Beckman Olympus - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.913	1.41	0.12	0.25	
	µmol/l	20.1	15.8	24.4	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.924	1.44	0.13	0.26	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	29.9	23.6	36.2	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.75	1.38	2.12	0.19	0.37	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.36	2.13	2.59	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.46	8.54	10.4	0.46	0.92	
	mmol/l	2.37	2.13	2.61	0.12	0.24	Arsenazo III
	mg/dl	9.50	8.54	10.5	0.48	0.96	
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.34	3.77	4.91	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
Cholinesterase	U/l	5117	4093	6141	512.00	1024.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	16.9	13.5	20.3	1.70	3.40	Colorimetric
	µg/dl	107	85.9	128	10.55	21.10	
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	123	98.2	148	12.40	24.80	Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	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	
	µmol/l	118	94.3	142	11.85	23.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	122	97.8	146	12.10	24.20	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	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
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	56.0	47.9	64.1	4.05	8.10	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.42	1.21	1.63	0.11	0.21	HDL - Ultra
Iron	mg/dl	54.8	46.7	62.9	4.05	8.10	
	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric with ppt.
	µg/dl	103	84.4	122	9.30	18.60	
	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
Lactate	µg/dl	101	82.7	119	9.15	18.30	
	mmol/l	1.42	1.17	1.67	0.13	0.25	Colorimetric Lactate Oxidase
LD (LDH)	mg/dl	12.8	10.5	15.1	1.15	2.30	
	U/l	207	176	238	15.50	31.00	L->P 37°C
	U/l	456	388	524	34.00	68.00	P->L Scandinavian & Dutch 37°C

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	406	345	467	30.50	61.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox 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	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.40	3.72	5.08	0.34	0.68	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Biuret reaction end point
	g/dl	5.97	4.77	7.17	0.60	1.20	
	g/l	59.4	47.6	71.2	5.90	11.80	Biuret reaction kinetic
	g/dl	5.94	4.76	7.12	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	49.2	38.8	59.6	5.20	10.40	FE+UIBC(saturation with iron)
	µg/dl	275	217	333	29.00	58.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.12	6.06	8.18	0.53	1.06	Urease end point
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Zinc	µmol/l	30.8	24.6	37.0	3.10	6.20	Colorimetric with deproteinisation
	µg/dl	201	161	241	20.00	40.00	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Green
	g/dl	4.44	3.77	5.11	0.34	0.67	
	g/l	45.4	38.6	52.2	3.40	6.80	Bromocresol Purple
	g/dl	4.54	3.86	5.22	0.34	0.68	
Alkaline Phosphatase	U/l	172	147	197	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	172	147	197	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.6	13.1	20.1	1.75	3.50	Differential rate pH change
	mmol/l	16.3	13.0	19.6	1.65	3.30	Ion selective electrode
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Bilirubin Total	µmol/l	29.8	23.6	36.0	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Calcium	mmol/l	2.28	2.06	2.50	0.11	0.22	Ion selective electrode
	mg/dl	9.14	8.26	10.0	0.44	0.88	
	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.28	3.73	4.83	0.28	0.55	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	219	180	258	19.50	39.00	Monothioglycerol 37°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	
	μmol/l	122	97.4	147	12.30	24.60	Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	μmol/l	121	97.1	145	11.95	23.90	Jaffe rate blanked
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	μmol/l	121	96.4	146	12.30	24.60	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	42	36	48	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.03	5.12	6.94	0.46	0.91	Hexokinase
	mg/dl	109	92.3	126	8.35	16.70	
	mmol/l	5.94	5.05	6.83	0.45	0.89	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.00	
HDL - Cholesterol	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL PPD
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.55	1.32	1.78	0.12	0.23	HDL - Ultra
	mg/dl	59.8	51.0	68.6	4.40	8.80	
Iron	μmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	μg/dl	101	83.3	119	8.85	17.70	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.43	1.18	1.68	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.9	10.6	15.2	1.15	2.30	
LD (LDH)	U/l	177	151	203	13.00	26.00	L->P 37°C
	U/l	522	444	600	39.00	78.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.613	0.775	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Calmagite
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction CX4/5/7
	g/dl	5.95	4.76	7.14	0.60	1.19	
	g/l	60.8	48.7	72.9	6.05	12.10	Biuret reaction end point
	g/dl	6.08	4.87	7.29	0.61	1.21	
	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.5	119	8.25	16.50	
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	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	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	131	111	151	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	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
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	
Cholesterol	mmol/l	4.38	3.81	4.95	0.29	0.57	Cholesterol Oxidase
	mg/dl	169	147	191	11.00	22.00	
Creatinine	µmol/l	117	93.3	141	11.85	23.70	Alkaline picrate no deproteinization
	mg/dl	1.32	1.05	1.59	0.14	0.27	
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Urea	mmol/l	6.73	5.72	7.74	0.51	1.01	Urease kinetic
	mg/dl	40.4	34.4	46.4	3.00	6.00	
	mmol/l	6.73	5.72	7.74	0.51	1.01	BUN
	mg/dl	18.9	16.1	21.7	1.40	2.80	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	127	108	146	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	104	89	119	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Cholesterol	mmol/l	4.36	3.79	4.93	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose oxidase
	mg/dl	113	95.7	130	8.65	17.30	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	437	372	502	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	316	269	363	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	222	189	255	16.50	33.00	P->L Scandinavian & Dutch 25°C
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.0	109	7.40	14.80	
Urea	mmol/l	6.65	5.65	7.65	0.50	1.00	Urease kinetic
	mg/dl	40.0	34.0	46.0	3.00	6.00	
	mmol/l	6.65	5.65	7.65	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	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	

Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	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	17.9	14.1	21.7	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
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	
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Arsenazo III
	mg/dl	9.06	8.18	9.94	0.44	0.88	
Cholesterol	mmol/l	4.30	3.74	4.86	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
Creatinine	μmol/l	121	97.1	145	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	μmol/l	115	91.8	138	11.60	23.20	Creatinine PAP method
	mg/dl	1.30	1.04	1.56	0.13	0.26	
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	

Biotechnica/Weiner BT Series/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	55.2	46.7	63.7	4.25	8.50	
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	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
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	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.6	37.9	51.3	3.35	6.70	Bromocresol Green
	g/dl	4.46	3.79	5.13	0.34	0.67	
	g/l	44.3	37.6	51.0	3.35	6.70	Bromocresol Purple
	g/dl	4.43	3.76	5.10	0.34	0.67	
	g/l	39.7	33.7	45.7	3.00	6.00	Turbidimetric Assays
	g/dl	3.97	3.37	4.57	0.30	0.60	
Alkaline Phosphatase	U/l	133	113	153	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	85	72	98	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	65	55	75	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	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.4	13.8	21.0	1.80	3.60	Colorimetric
	mmol/l	16.5	13.1	19.9	1.70	3.40	Enzymatic

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	μmol/l	26.5	20.9	32.1	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.55	1.22	1.88	0.17	0.33	
	μmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	μmol/l	26.1	20.6	31.6	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	μmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.32	2.08	2.56	0.12	0.24	NM-BAPTA
	mg/dl	9.30	8.34	10.3	0.48	0.96	
Chloride	mmol/l	97.9	90.0	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.33	3.77	4.89	0.28	0.56	Cholesterol Oxidase
	mg/dl	167	146	188	10.50	21.00	
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	136	111	161	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	92	76	108	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	115	92.0	138	11.50	23.00	Alkaline picrate no deproteinization
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	μmol/l	122	98.0	146	12.00	24.00	Enzymatic UV method
	mg/dl	1.38	1.11	1.65	0.14	0.27	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	122	97.2	147	12.40	24.80	Roche Creatinine Plus
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	μmol/l	119	94.9	143	12.05	24.10	Jaffe rate blanked
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	μmol/l	122	97.9	146	12.05	24.10	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	μmol/l	118	94.1	142	11.95	23.90	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.33	1.06	1.60	0.14	0.27	
	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	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.70	1.44	1.96	0.13	0.26	Direct HDL PEGME
	mg/dl	65.6	55.6	75.6	5.00	10.00	
	mmol/l	1.69	1.44	1.94	0.13	0.25	Direct HDL Roche 3rd generation
Iron	mg/dl	65.2	55.6	74.8	4.80	9.60	
	μmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric with ppt.
	μg/dl	105	85.5	125	9.75	19.50	
	μmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	μg/dl	105	85.5	125	9.75	19.50	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lactate	mmol/l	1.52	1.25	1.79	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.3	16.1	1.20	2.40	
LD (LDH)	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	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
	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
	U/l	156	133	179	11.50	23.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	35	28	42	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Ion selective electrode
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction end point
	g/dl	5.82	4.66	6.98	0.58	1.16	
	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.1	38.0	58.2	5.05	10.10	FE+UIBC(saturation with iron)
	µg/dl	269	212	326	28.50	57.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	48.0	37.9	58.1	5.05	10.10	Direct Colorimetric
	μg/dl	268	212	324	28.00	56.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	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	1.05	0.89	1.21	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	78.4	107	7.25	14.50	
Urea	mmol/l	6.73	5.72	7.74	0.51	1.01	Urease kinetic
	mg/dl	40.4	34.4	46.4	3.00	6.00	
	mmol/l	6.73	5.72	7.74	0.51	1.01	BUN
	mg/dl	18.9	16.1	21.7	1.40	2.80	
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	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.06	6.54	0.37	0.74	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	252	214	290	19.00	38.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	μmol/l	27.8	22.0	33.6	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	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	Arsenazo III
	mg/dl	9.54	8.58	10.5	0.48	0.96	
Cholesterol	mmol/l	4.33	3.77	4.89	0.28	0.56	Cholesterol Oxidase
	mg/dl	167	146	188	10.50	21.00	
Creatinine	μmol/l	119	95.6	142	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	μmol/l	121	96.9	145	12.05	24.10	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose oxidase
	mg/dl	112	95.0	129	8.50	17.00	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
Urea	mmol/l	7.01	5.95	8.07	0.53	1.06	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	242	191	293	25.50	51.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	183	144	222	19.50	39.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	137	108	166	14.50	29.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	3.71	2.49	4.93	0.61	1.22	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.50	2.35	4.65	0.58	1.15	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	13.9	9.31	18.5	2.30	4.59	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	17.4	11.7	23.1	2.85	5.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	13.9	9.31	18.5	2.30	4.59	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
Alkaline Phosphatase	U/l	123	105	141	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	79	67	91	6.00	12.00	Roche Integra AMP buffer 25°C
	U/l	174	148	200	13.00	26.00	Randox AMP 37°C
	U/l	136	115	157	10.50	21.00	Randox AMP 30°C
	U/l	111	95	127	8.00	16.00	Randox AMP 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Randox liquid stable pNPG7 37°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
Bicarbonate	mmol/l	16.3	13.0	19.6	1.65	3.30	Enzymatic
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.9	14.1	21.7	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.35	2.11	2.59	0.12	0.24	Arsenazo III
	mg/dl	9.42	8.46	10.4	0.48	0.96	
	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	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.29	3.73	4.85	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
Cholinesterase	U/l	5364	4291	6437	536.50	1073.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	122	97.2	147	12.40	24.80	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	Roche Creatinine Plus
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	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	
	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	19	15	23	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	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.31	5.36	7.26	0.48	0.95	Glucose oxidase
	mg/dl	114	96.6	131	8.70	17.40	
HDL - Cholesterol	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME
	mg/dl	62.1	52.9	71.3	4.60	9.20	
	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.3	11.0	15.6	1.15	2.30	
LD (LDH)	U/l	408	347	469	30.50	61.00	P->L German methods 37°C
	U/l	295	251	339	22.00	44.00	P->L German methods 30°C
	U/l	207	176	238	15.50	31.00	P->L German methods 25°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.648	0.824	0.04	0.09	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.9	37.9	57.9	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	268	212	324	28.00	56.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.94	6.38	0.36	0.72	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	83	70	96	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.3	19.5	29.1	2.40	4.80	Enzymatic Colorimetric
Bilirubin Total	µmol/l	30.0	23.7	36.3	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
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	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.27	3.71	4.83	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	143	187	11.00	22.00	
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
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	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	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	6.34	5.39	7.29	0.48	0.95	Hexokinase
	mg/dl	114	97.1	131	8.45	16.90	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.2	42.5	57.9	3.85	7.70	
Magnesium	mmol/l	0.95	0.83	1.06	0.06	0.11	Enzymatic
	mg/dl	2.30	2.02	2.58	0.14	0.28	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.3	48.2	72.4	6.05	12.10	Biuret reaction end point
	g/dl	6.03	4.82	7.24	0.61	1.21	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
Urea	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease end point
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Ortho Vitros Microslide Systems 37°C
	U/l	144	122	166	11.00	22.00	Vitros DT60/DT60 II/DTSC II 37°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	17.8	14.1	21.5	1.85	3.70	Ortho Vitros Microslide Systems
Bilirubin Direct	µmol/l	11.9	9.40	14.4	1.25	2.50	Vitros conjugated from BUBC
	mg/dl	0.696	0.550	0.842	0.07	0.15	
Bilirubin Total	µmol/l	25.7	20.3	31.1	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.40	2.16	2.64	0.12	0.24	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.62	8.66	10.6	0.48	0.96	
Chloride	mmol/l	97.4	89.6	105	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	97.1	89.4	105	3.85	7.70	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	161	140	182	10.50	21.00	

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Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.31	3.75	4.87	0.28	0.56	Vitros DT60/DT60 II
	mg/dl	166	145	187	10.50	21.00	
Cholinesterase	U/l	5306	4245	6367	530.50	1061.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	192	158	226	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	186	152	220	17.00	34.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	121	96.5	146	12.25	24.50	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Free T4	pmol/l	38.8	29.1	48.5	4.85	9.70	Vitros ECI
	ng/dl	3.03	2.27	3.79	0.38	0.76	
	pg/ml	30.3	22.7	37.9	3.80	7.60	Vitros ECI
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	63	53	73	5.00	10.00	Vitros DT60/DT60 II/DTSC II 37°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.6	123	8.20	16.40	
	mmol/l	5.96	5.07	6.85	0.45	0.89	Vitros DT60/DT60 II
	mg/dl	107	91.4	123	7.80	15.60	
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Vitros Magnetic HDL
	mg/dl	61.0	51.7	70.3	4.65	9.30	
	mmol/l	1.56	1.32	1.80	0.12	0.24	Vitros 5.1 FS microtip assay
	mg/dl	60.2	51.0	69.4	4.60	9.20	
	mmol/l	1.59	1.35	1.83	0.12	0.24	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	61.4	52.1	70.7	4.65	9.30	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	108	88.3	128	9.85	19.70	
	µmol/l	20.4	16.8	24.0	1.80	3.60	Vitros DT60/DT60 II/DTSC II
	µg/dl	114	93.9	134	10.05	20.10	
Lactate	mmol/l	1.38	1.13	1.63	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.4	10.2	14.6	1.10	2.20	
LD (LDH)	U/l	607	516	698	45.50	91.00	Ortho Vitros Microslide Systems 37°C
	U/l	619	526	712	46.50	93.00	Vitros DT60/DT60 II/DTSC II 37°C
Lipase	U/l	241	193	289	24.00	48.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.20	1.06	1.34	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.833	0.736	0.930	0.05	0.10	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.87	0.76	0.97	0.05	0.10	Vitros DT60/DT60 II
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	3.93	3.61	4.25	0.16	0.32	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	59.6	47.6	71.6	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.96	4.76	7.16	0.60	1.20	
PSA Total	ng/ml =	16.8	12.6	21.0	2.10	4.20	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.33	1.06	1.60	0.14	0.27	Vitros ECi

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	4.12	3.09	5.15	0.52	1.03	Vitros ECI
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	Vitros ECI
Total T4	nmol/l	79.8	59.9	99.7	9.95	19.90	Vitros ECI
	µg/dl	6.22	4.67	7.77	0.78	1.55	
	ng/ml	62.2	46.7	77.7	7.75	15.50	Vitros ECI
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	86.7	121	8.65	17.30	
Urea	mmol/l	6.62	5.63	7.61	0.50	0.99	Ortho Vitros Microslide Systems
	mg/dl	39.8	33.8	45.8	3.00	6.00	
	mmol/l	6.75	5.74	7.76	0.51	1.01	Vitros DT60/DT60 II
	mg/dl	40.6	34.5	46.7	3.05	6.10	
	mmol/l	6.62	5.63	7.61	0.50	0.99	BUN
	mg/dl	18.6	15.8	21.4	1.40	2.80	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	

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

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	131	111	151	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	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
Bile Acids	µmol/l	28.2	22.6	33.8	2.80	5.60	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	15.9	12.6	19.2	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.930	0.737	1.12	0.10	0.19	
Bilirubin Total	µmol/l	22.8	18.0	27.6	2.40	4.80	Nitrobenzenediazonium salt
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Calcium	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	
Chloride	mmol/l	99.4	91.5	107	3.95	7.90	ISE direct

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

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
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	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	121	96.5	146	12.25	24.50	Creatinine PAP method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	114	91.1	137	11.45	22.90	Jaffe rate blanked
	mg/dl	1.29	1.03	1.55	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.17	5.25	7.09	0.46	0.92	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME
	mg/dl	62.1	52.9	71.3	4.60	9.20	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	

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

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Calmagite
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.05	1.80	2.30	0.13	0.25	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - direct
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
TIBC	µmol/l	50.5	39.9	61.1	5.30	10.60	FE+UIBC(saturation with iron)
	µg/dl	282	223	341	29.50	59.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
Urea	mmol/l	7.02	5.97	8.07	0.53	1.05	Urease kinetic
	mg/dl	42.2	35.9	48.5	3.15	6.30	
	mmol/l	7.02	5.97	8.07	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	242	191	293	25.50	51.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	183	144	222	19.50	39.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	137	108	166	14.50	29.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	3.71	2.49	4.93	0.61	1.22	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	3.50	2.35	4.65	0.58	1.15	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	13.9	9.31	18.5	2.30	4.59	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	13.9	9.31	18.5	2.30	4.59	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	17.4	11.7	23.1	2.85	5.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Purple
	g/dl	4.43	3.77	5.09	0.33	0.66	
	g/l	40.0	34.0	46.0	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.00	3.40	4.60	0.30	0.60	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	Ortho Vitros Microslide Systems 37°C
	U/l	256	218	294	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	199	170	228	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	164	139	189	12.50	25.00	Diethanolamine buffer DEA 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	92	126	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	161	137	185	12.00	24.00	AMP non-optimised 37°C
	U/l	125	107	143	9.00	18.00	AMP non-optimised 30°C
	U/l	103	88	118	7.50	15.00	AMP non-optimised 25°C
ALT (GPT)	U/l	49	39	59	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	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
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	73	62	84	5.50	11.00	Randox liquid stable pNPG7 37°C
	U/l	63	54	72	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	83	70	96	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	86	73	99	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	83	70	96	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	71	60	82	5.50	11.00	Randox - Ethylidene pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Randox liquid stable pNPG7 37°C
	U/l	87	74	100	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. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	87	74	100	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	94	80	108	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	63	53	73	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	84	71	97	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	85	72	98	6.50	13.00	Beckman Olympus - blocked pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	83	71	95	6.00	12.00	I.L. 2-chloro-pNPG3 37°C
	U/l	94	80	108	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	102	87	117	7.50	15.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.08	0.89	1.27	0.10	0.19	Immunoturbidimetric
	mg/dl	108	88.6	127	9.70	19.40	
Apolipoprotein B	g/l	0.57	0.46	0.67	0.05	0.10	Immunoturbidimetric
	mg/dl	56.6	46.4	66.8	5.10	10.20	
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	16.5	13.1	19.9	1.70	3.40	Colorimetric
	mmol/l	17.8	14.1	21.5	1.85	3.70	Ortho Vitros Microslide Systems
	mmol/l	16.6	13.1	20.1	1.75	3.50	Differential rate pH change
	mmol/l	16.3	13.0	19.6	1.65	3.30	Enzymatic
	mmol/l	16.9	13.4	20.4	1.75	3.50	Ion selective electrode
Bile Acids	µmol/l	27.3	21.8	32.8	2.75	5.50	4th Generation Colorimetric
	µmol/l	25.1	20.1	30.1	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.7	14.8	22.6	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.866	1.31	0.11	0.22	
	µmol/l	11.9	9.37	14.4	1.27	2.53	Vitros conjugated from BUBC
	mg/dl	0.696	0.548	0.844	0.07	0.15	
	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.913	1.39	0.12	0.24	
	µmol/l	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	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	
	µmol/l	19.5	15.4	23.6	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.14	0.901	1.38	0.12	0.24	
Bilirubin Total	µmol/l	14.6	11.5	17.7	1.55	3.10	Modified Jendrassik
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.7	20.3	31.1	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	33.1	26.1	40.1	3.50	7.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.94	1.53	2.35	0.21	0.41	
	μmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	μmol/l	28.6	22.6	34.6	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	μmol/l	23.5	18.6	28.4	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	μmol/l	29.4	23.2	35.6	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.72	1.36	2.08	0.18	0.36	
	μmol/l	33.7	26.6	40.8	3.55	7.10	Modified Jendrassik
	mg/dl	1.97	1.56	2.38	0.21	0.41	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.38	2.14	2.62	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.28	2.06	2.50	0.11	0.22	Ion selective electrode
	mg/dl	9.14	8.26	10.0	0.44	0.88	
	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	2.35	2.12	2.58	0.12	0.23	Arsenazo III
	mg/dl	9.42	8.50	10.3	0.46	0.92	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.34	2.11	2.57	0.12	0.23	NM-BAPTA
	mg/dl	9.38	8.46	10.3	0.46	0.92	
Chloride	mmol/l	101	93.3	109	3.85	7.70	Colorimetric
	mmol/l	97.4	89.6	105	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	95.8	88.1	104	3.85	7.70	ISE indirect
	mmol/l	98.3	90.5	106	3.90	7.80	ISE direct
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	161	140	182	10.50	21.00	
	mmol/l	4.30	3.74	4.86	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
Cholinesterase	U/l	5306	4245	6367	530.50	1061.00	Ortho Vitros Microslide Systems 37°C
	U/l	5420	4336	6504	542.00	1084.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	192	158	226	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	213	174	252	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	91	74	108	8.50	17.00	CK-NAC serum start (DGKC) 25°C
	U/l	210	172	248	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	133	110	156	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	91	74	108	8.50	17.00	CK-NAC (IFCC) 25°C
	U/l	219	180	258	19.50	39.00	Monothioglycerol 37°C
	U/l	137	113	161	12.00	24.00	Monothioglycerol 30°C
	U/l	93	77	109	8.00	16.00	Monothioglycerol 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	201	165	237	18.00	36.00	Dithioerythritol 37°C
	U/l	126	103	149	11.50	23.00	Dithioerythritol 30°C
	U/l	85	70	100	7.50	15.00	Dithioerythritol 25°C
	U/l	194	159	229	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	121	100	142	10.50	21.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	82	68	96	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.8	13.4	20.2	1.70	3.40	Atomic absorption
	µg/dl	107	85.2	129	10.90	21.80	
	µmol/l	16.9	13.5	20.3	1.70	3.40	Colorimetric
	µg/dl	107	85.9	128	10.55	21.10	
Cortisol	nmol/l	487	365	609	61.00	122.00	Roche Cobas E411
	µg/dl	17.5	13.1	21.9	2.20	4.40	
Creatinine	µmol/l	119	95.6	142	11.70	23.40	Alkaline picrate with deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	122	97.9	146	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	µmol/l	122	97.7	146	12.15	24.30	Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	Creatinine PAP method
	mg/dl	1.38	1.11	1.65	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	
	µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	125	99.9	150	12.55	25.10	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	118	94.8	141	11.60	23.20	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	μmol/l	121	96.5	146	12.25	24.50	Vitros IDMS Traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	μmol/l	122	97.4	147	12.30	24.60	IDMS traceable
	mg/dl	1.38	1.10	1.66	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.88	1.51	2.25	0.19	0.37	Immunoturbidimetric
	ng/ml	1.47	1.18	1.76	0.15	0.29	
Folate	nmol/l	36.0	27.4	44.6	4.30	8.59	Roche Cobas E411
	ng/ml	15.9	12.1	19.7	1.90	3.80	
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	18.1	13.6	22.6	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/dl	1.41	1.06	1.76	0.18	0.35	
	pg/ml	14.1	10.6	17.6	1.75	3.50	Siemens Centaur XP/XPT/Classic
	pmol/l	19.4	14.6	24.2	2.40	4.80	Diasorin Liaison
	ng/dl	1.51	1.14	1.88	0.19	0.37	
	pg/ml	15.1	11.4	18.8	1.85	3.70	Diasorin Liaison
	pmol/l	20.3	15.3	25.3	2.50	5.00	Siemens Immulite 1000
	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 Immulite 1000

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	38.8	29.1	48.5	4.85	9.70	Vitros ECI
	ng/dl	3.03	2.27	3.79	0.38	0.76	
	pg/ml	30.3	22.7	37.9	3.80	7.60	Vitros ECI
	pmol/l	22.8	17.1	28.5	2.85	5.70	Roche Elecsys
	ng/dl	1.78	1.33	2.23	0.23	0.45	
	pg/ml	17.8	13.3	22.3	2.25	4.50	Roche Elecsys
	pmol/l	22.1	16.5	27.7	2.80	5.60	Roche Modular E170
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Roche Modular E170
	pmol/l	22.4	16.8	28.0	2.80	5.60	Roche Cobas E411
	ng/dl	1.75	1.31	2.19	0.22	0.44	
	pg/ml	17.5	13.1	21.9	2.20	4.40	Roche Cobas E411
	pmol/l	22.5	16.9	28.1	2.80	5.60	Roche Cobas 6000/8000
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Cobas 6000/8000
Gentamicin	pmol/l	20.0	15.0	25.0	2.50	5.00	Biomerieux Vidas FT4N Kit
	ng/dl	1.56	1.17	1.95	0.20	0.39	
	pg/ml	15.6	11.7	19.5	1.95	3.90	Biomerieux Vidas FT4N Kit
Gentamicin	μmol/l	8.31	6.64	9.97	0.83	1.67	Immunoturbidimetric
	μg/ml	3.97	3.17	4.77	0.40	0.80	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	107	90.6	123	8.20	16.40	
	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.7	126	8.15	16.30	
	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	6.41	5.45	7.37	0.48	0.96	Oxygen electrode
	mg/dl	116	98.2	134	8.90	17.80	
HDL - Cholesterol	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL PPD
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Vitros Magnetic HDL
	mg/dl	61.0	51.7	70.3	4.65	9.30	
	mmol/l	1.64	1.39	1.89	0.13	0.25	Direct HDL PEGME
	mg/dl	63.3	53.7	72.9	4.80	9.60	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.56	1.32	1.80	0.12	0.24	Vitros 5.1 FS microtip assay
	mg/dl	60.2	51.0	69.4	4.60	9.20	
	mmol/l	1.59	1.35	1.83	0.12	0.24	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	61.4	52.1	70.7	4.65	9.30	
	mmol/l	1.64	1.40	1.88	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	63.3	54.0	72.6	4.65	9.30	
	mmol/l	1.46	1.24	1.68	0.11	0.22	HDL - Ultra
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Immunoglobulin A	g/l	1.37	1.03	1.71	0.17	0.34	Immunoturbidimetric
	mg/dl	137	103	171	17.00	34.00	
Immunoglobulin G	g/l	6.71	5.50	7.91	0.60	1.21	Immunoturbidimetric
	mg/dl	671	550	792	60.50	121.00	
Immunoglobulin M	g/l	0.76	0.61	0.92	0.08	0.15	Immunoturbidimetric
	mg/dl	76.4	61.1	91.7	7.65	15.30	
Iron	μmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric with ppt.
	μg/dl	102	83.9	120	9.05	18.10	
	μmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	μg/dl	102	83.9	120	9.05	18.10	
	μmol/l	19.3	15.8	22.8	1.75	3.50	Ortho Vitros Microslide Systems
	μg/dl	108	88.3	128	9.85	19.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Ion selective electrode
	mg/dl	13.2	10.9	15.5	1.15	2.30	
	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	
	mmol/l	1.38	1.13	1.63	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.4	10.2	14.6	1.10	2.20	
	mmol/l	1.56	1.28	1.84	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.5	16.7	1.30	2.60	
	mmol/l	1.35	1.11	1.59	0.12	0.24	UV LDH
	mg/dl	12.2	10.0	14.4	1.10	2.20	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	607	516	698	45.50	91.00	Ortho Vitros Microslide Systems 37°C
	U/l	192	163	221	14.50	29.00	L->P 37°C
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	97	83	111	7.00	14.00	L->P 25°C
	U/l	451	383	519	34.00	68.00	P->L Scandinavian & Dutch 37°C
	U/l	326	277	375	24.50	49.00	P->L Scandinavian & Dutch 30°C
	U/l	229	194	264	17.50	35.00	P->L Scandinavian & Dutch 25°C
	U/l	406	345	467	30.50	61.00	P->L German methods 37°C
	U/l	293	249	337	22.00	44.00	P->L German methods 30°C
	U/l	206	175	237	15.50	31.00	P->L German methods 25°C
	U/l	407	346	468	30.50	61.00	P->L SFBC 37°C
	U/l	294	250	338	22.00	44.00	P->L SFBC 30°C
	U/l	206	175	237	15.50	31.00	P->L SFBC 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
	U/l	241	193	289	24.00	48.00	Ortho Vitros Microslide Systems 37°C
	U/l	33	26	40	3.50	7.00	Roche Colorimetric 37°C
	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
	U/l	195	156	234	19.50	39.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	1.20	1.06	1.34	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.833	0.736	0.930	0.05	0.10	
	mmol/l	1.04	0.92	1.16	0.06	0.12	Ion selective electrode
	mg/dl	0.722	0.638	0.806	0.04	0.08	
	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
	mmol/l	1.08	0.95	1.21	0.07	0.13	Randox Colorimetric
	mg/dl	0.750	0.660	0.840	0.05	0.09	
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	0.88	0.78	0.99	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.09	1.84	2.34	0.13	0.25	
NEFA	mmol/l	3.28	2.79	3.77	0.25	0.49	Colorimetric
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
	mOsm/kg	307	245	369	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.10	0.01	0.02	Colorimetric
	mg/l	12.1	9.68	14.5	1.21	2.42	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.09	3.77	4.41	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.13	3.80	4.46	0.17	0.33	Enzymatic
	mmol/l	4.01	3.69	4.33	0.16	0.32	Flame photometry
	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - direct
	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.6	47.6	71.6	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.96	4.76	7.16	0.60	1.20	
	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction kinetic
	g/dl	5.92	4.74	7.10	0.59	1.18	
PSA Total	ng/ml =	17.9	13.4	22.4	2.25	4.50	Roche Elecsys Modular E170
	ng/ml =	15.7	11.7	19.7	2.00	4.00	Beckman Access standardised to Hybritech
	ng/ml =	16.0	12.0	20.0	2.00	4.00	bioMerieux VIDAS TPSA
	ng/ml =	12.3	9.22	15.4	1.54	3.08	Siemens Centaur XP/XPT/Classic
	ng/ml =	14.4	10.8	18.0	1.80	3.60	Abbott Architect
	ng/ml =	18.1	13.6	22.6	2.25	4.50	Cobas E411
	ng/ml =	17.5	13.1	21.9	2.20	4.40	Roche Cobas 6000/8000
	ng/ml =	16.8	12.6	21.0	2.10	4.20	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml =	15.4	11.6	19.2	1.90	3.80	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.40	0.32	0.48	0.04	0.08	Enzymatic
	mg/dl	5.54	4.43	6.65	0.56	1.11	
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	Flame photometry
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	24.8	19.8	29.8	2.51	5.01	Immunoturbidimetric
	µg/ml	4.47	3.57	5.37	0.45	0.90	
Thyroid Stimulating Hormone	µU/ml =	1.19	0.95	1.43	0.12	0.24	Abbott Architect
	µU/ml =	1.51	1.20	1.82	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.42	1.14	1.70	0.14	0.28	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Vitros ECi

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.44	1.16	1.72	0.14	0.28	Roche Elecsys
	µU/ml =	1.52	1.22	1.82	0.15	0.30	Roche Modular E170
	µU/ml =	1.53	1.22	1.84	0.16	0.31	Roche Cobas E411
	µU/ml =	1.52	1.22	1.82	0.15	0.30	Roche Cobas 6000/8000
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Beckman Dxl800 Hyper TSH
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	45.4	35.9	54.9	4.75	9.50	Removal of excess free iron
	µg/dl	254	201	307	26.50	53.00	
	µmol/l	47.4	37.5	57.3	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	265	210	320	27.50	55.00	
	µmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	µg/dl	273	216	330	28.50	57.00	
Tobramycin	µmol/l	5.68	4.55	6.82	0.57	1.13	Immunoturbidimetric
	µg/ml	2.66	2.13	3.19	0.27	0.53	
Total T3	nmol/l	2.60	1.95	3.25	0.33	0.65	Abbott Architect
	ng/ml	1.69	1.27	2.11	0.21	0.42	
	ng/dl	169	127	211	21.00	42.00	Abbott Architect
	nmol/l	3.34	2.50	4.18	0.42	0.84	Siemens Centaur XP/XPT/Classic
	ng/ml	2.17	1.63	2.71	0.27	0.54	
	ng/dl	217	163	271	27.00	54.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.79	2.09	3.49	0.35	0.70	BioMerieux Vidas
	ng/ml	1.82	1.36	2.28	0.23	0.46	
	ng/dl	182	136	228	23.00	46.00	BioMerieux Vidas

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	3.05	2.28	3.82	0.39	0.77	Roche Modular E170
	ng/ml	1.99	1.48	2.50	0.26	0.51	
	ng/dl	199	148	250	25.50	51.00	Roche Modular E170
	nmol/l	4.12	3.09	5.15	0.52	1.03	Vitros ECI
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	Vitros ECI
	nmol/l	2.88	2.16	3.60	0.36	0.72	Roche Cobas E411
	ng/ml	1.87	1.41	2.33	0.23	0.46	
	ng/dl	187	141	233	23.00	46.00	Roche Cobas E411
	nmol/l	3.10	2.32	3.88	0.39	0.78	Roche Cobas 6000/8000
	ng/ml	2.02	1.51	2.53	0.26	0.51	
	ng/dl	202	151	253	25.50	51.00	Roche Cobas 6000/8000
Total T4	nmol/l	92.3	69.2	115	11.55	23.10	Abbott Architect
	µg/dl	7.20	5.40	9.00	0.90	1.80	
	ng/ml	72.0	54.0	90.0	9.00	18.00	Abbott Architect
	nmol/l	87.4	65.6	109	10.90	21.80	Siemens Centaur XP/XPT/Classic
	µg/dl	6.82	5.12	8.52	0.85	1.70	
	ng/ml	68.2	51.2	85.2	8.50	17.00	Siemens Centaur XP/XPT/Classic
	nmol/l	85.7	64.2	107	10.75	21.50	BioMerieux Vidas
	µg/dl	6.68	5.01	8.35	0.84	1.67	
	ng/ml	66.8	50.1	83.5	8.35	16.70	BioMerieux Vidas
	nmol/l	87.0	65.2	109	10.90	21.80	Siemens Immulite 1000
	µg/dl	6.79	5.09	8.49	0.85	1.70	
	ng/ml	67.9	50.9	84.9	8.50	17.00	Siemens Immulite 1000
	nmol/l	92.3	69.2	115	11.55	23.10	Siemens Immulite 2000/2500
	µg/dl	7.20	5.40	9.00	0.90	1.80	
	ng/ml	72.0	54.0	90.0	9.00	18.00	Siemens Immulite 2000/2500

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	79.8	59.9	99.7	9.95	19.90	Vitros ECI
	µg/dl	6.22	4.67	7.77	0.78	1.55	
	ng/ml	62.2	46.7	77.7	7.75	15.50	
	nmol/l	88.8	66.6	111	11.10	22.20	Roche Modular E170
	µg/dl	6.93	5.19	8.67	0.87	1.74	
	ng/ml	69.3	51.9	86.7	8.70	17.40	
	nmol/l	102	76.6	127	12.70	25.40	Tosoh AIA360
	µg/dl	7.96	5.97	9.95	1.00	1.99	
	ng/ml	79.6	59.7	99.5	9.95	19.90	
	nmol/l	91.2	68.4	114	11.40	22.80	Roche Cobas E411
	µg/dl	7.11	5.34	8.88	0.89	1.77	
	ng/ml	71.1	53.4	88.8	8.85	17.70	
	nmol/l	91.8	68.8	115	11.50	23.00	Roche Cobas 6000/8000
	µg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	
Transferrin	g/l	1.84	1.47	2.21	0.19	0.37	Immunoturbidimetric
	mg/dl	184	147	221	18.50	37.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.9	112	7.80	15.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	1.04	0.88	1.20	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.5	107	7.25	14.50	
	mmol/l	1.17	0.98	1.36	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	104	86.7	121	8.65	17.30	
	µmol/l	30.6	25.1	36.1	2.75	5.50	TIBC - FE
	µg/dl	171	140	202	15.50	31.00	
Urea	mmol/l	6.62	5.63	7.61	0.50	0.99	Ortho Vitros Microslide Systems
	mg/dl	39.8	33.8	45.8	3.00	6.00	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease end point
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.04	5.98	8.10	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	6.85	5.82	7.88	0.52	1.03	Urease hypochlorite
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease Berthelot
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.04	5.98	8.10	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Vitamin B12	pmol/l	531	425	637	53.10	106.20	Roche Cobas E411
	pg/ml	720	576	864	72.00	144.00	
Zinc	μmol/l	31.6	25.3	37.9	3.15	6.30	Atomic absorption
	μg/dl	206	165	247	20.50	41.00	
	μmol/l	30.6	24.5	36.7	3.05	6.10	Colorimetric with deproteinisation
	μg/dl	200	160	240	20.00	40.00	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.3	61.5	75.1	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.8	4.4	7.2	0.70	1.39	% of total Protein (Beckman Capillary)
alpha-2-globulin		5.9	4.5	7.3	0.71	1.42	% of total Protein (Beckman Capillary)
beta-globulin		9.6	7.3	11.9	1.15	2.30	% of total Protein (Beckman Capillary)
gamma-globulin		10.4	7.9	12.9	1.25	2.50	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
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
	U/l	39	31	47	4.00	8.00	Agappee - IFCC 37°C
	U/l	29	23	35	3.00	6.00	Agappee - IFCC 30°C
	U/l	22	17	27	2.50	5.00	Agappee - IFCC 25°C
Amylase Total	U/l	86	73	99	6.50	13.00	pNP Maltotriose substrates 37°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	22	30	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	31	47	4.00	8.00	Agappee - IFCC 37°C
	U/l	26	21	31	2.50	5.00	Agappee - IFCC 30°C
	U/l	19	15	23	2.00	4.00	Agappee - IFCC 25°C
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	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	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	
Cholinesterase	U/l	5540	4432	6648	554.00	1108.00	Colorimetric Butyrylthiocholine 37°C
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	114	91.2	137	11.40	22.80	Alkaline picrate with deproteinization
	mg/dl	1.29	1.03	1.55	0.13	0.26	
	μmol/l	119	95.1	143	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	μmol/l	115	92.4	138	11.30	22.60	Enzymatic UV method
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	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
gamma-GT	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	6.47	5.50	7.44	0.49	0.97	Hexokinase
	mg/dl	117	99.1	135	8.95	17.90	
Glucose	mmol/l	6.29	5.35	7.23	0.47	0.94	Glucose oxidase
	mg/dl	113	96.4	130	8.30	16.60	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PPD
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct Clearance Method
	mg/dl	56.4	47.9	64.9	4.25	8.50	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	μmol/l	18.2	15.0	21.4	1.60	3.20	Colorimetric without ppt.
	μg/dl	102	83.9	120	9.05	18.10	
LD (LDH)	U/l	407	346	468	30.50	61.00	P->L German methods 37°C
	U/l	294	250	338	22.00	44.00	P->L German methods 30°C
	U/l	206	175	237	15.50	31.00	P->L German methods 25°C
	U/l	427	363	491	32.00	64.00	P->L SFBC 37°C
	U/l	308	262	354	23.00	46.00	P->L SFBC 30°C
	U/l	216	184	248	16.00	32.00	P->L SFBC 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Protein Total	g/l	60.9	48.7	73.1	6.10	12.20	Biuret reaction end point
	g/dl	6.09	4.87	7.31	0.61	1.22	
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	7.13	6.06	8.20	0.54	1.07	Urease end point
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.11	6.05	8.17	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.4	49.0	3.15	6.30	
	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease hypochlorite
	mg/dl	42.7	36.3	49.1	3.20	6.40	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Green
	g/dl	4.32	3.67	4.97	0.33	0.65	
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.45	2.21	2.69	0.12	0.24	Arsenazo III
	mg/dl	9.82	8.86	10.8	0.48	0.96	
Cholesterol	mmol/l	4.45	3.87	5.03	0.29	0.58	Cholesterol Oxidase
	mg/dl	172	149	195	11.50	23.00	
CK Total	U/l	228	187	269	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	143	117	169	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	97	79	115	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Glucose oxidase
	mg/dl	114	96.4	132	8.80	17.60	
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.0	45.9	62.1	4.05	8.10	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.5	107	7.25	14.50	
Urea	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.20	6.12	8.28	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	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	

Roche Cobas 6000 c501 e601

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		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
	g/l	42.2	35.9	48.5	3.15	6.30	Turbidimetric Assays
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	131	112	150	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	84	72	96	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	62	53	71	4.50	9.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	83	71	95	6.00	12.00	Randox liquid stable pNPG7 37°C
	U/l	85	72	98	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Colorimetric
	mmol/l	16.1	12.7	19.5	1.70	3.40	Enzymatic
Bile Acids	μmol/l	26.1	20.9	31.3	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	μmol/l	18.4	14.6	22.2	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	μmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	μmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
Bilirubin Total	μmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	μmol/l	25.9	20.5	31.3	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	μmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
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	2.35	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	92.2	84.8	99.6	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.32	3.75	4.89	0.29	0.57	Cholesterol Oxidase
	mg/dl	167	145	189	11.00	22.00	
Cholinesterase	U/l	5200	4160	6240	520.00	1040.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC substrate start (DGKC) 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	136	111	161	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	92	76	108	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	123	98.6	147	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	μmol/l	125	99.8	150	12.60	25.20	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	123	98.2	148	12.40	24.80	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	μmol/l	123	98.7	147	12.15	24.30	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	μmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	22.5	16.9	28.1	2.80	5.60	Roche Cobas 6000/8000
	ng/dl	1.76	1.32	2.20	0.22	0.44	
	pg/ml	17.6	13.2	22.0	2.20	4.40	Roche Cobas 6000/8000
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	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME
	mg/dl	62.1	52.9	71.3	4.60	9.20	
	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	84.4	122	9.30	18.60	
	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	402	342	462	30.00	60.00	P->L German methods 37°C
	U/l	290	247	333	21.50	43.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	409	347	471	31.00	62.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
	U/l	33	26	40	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.05	0.93	1.17	0.06	0.12	Spectrophotometric
	mg/dl	0.729	0.643	0.815	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.91	2.45	0.14	0.27	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.28	3.66	4.90	0.31	0.62	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.31	3.69	4.93	0.31	0.62	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction kinetic
	g/dl	5.92	4.74	7.10	0.59	1.18	
PSA Total	ng/ml =	17.5	13.1	21.9	2.20	4.40	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.52	1.22	1.82	0.15	0.30	Roche Cobas 6000/8000

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Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	μmol/l	45.7	36.1	55.3	4.80	9.60	FE+UIBC(saturation with iron)
	μg/dl	255	202	308	26.50	53.00	
	μmol/l	43.4	34.3	52.5	4.55	9.10	Direct Colorimetric
	μg/dl	243	192	294	25.50	51.00	
Total T3	nmol/l	3.10	2.32	3.88	0.39	0.78	Roche Cobas 6000/8000
	ng/ml	2.02	1.51	2.53	0.26	0.51	
	ng/dl	202	151	253	25.50	51.00	Roche Cobas 6000/8000
Total T4	nmol/l	91.8	68.8	115	11.50	23.00	Roche Cobas 6000/8000
	μg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.07	0.90	1.25	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	94.7	79.2	110	7.75	15.50	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Urease kinetic
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.92	6.36	0.36	0.72	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	152	129	175	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	97	82	112	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	18.2	14.3	22.1	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	

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Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	mmol/l	2.32	2.09	2.55	0.12	0.23	NM-BAPTA
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Chloride	mmol/l	98.1	90.2	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.35	3.79	4.91	0.28	0.56	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
CK Total	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	134	110	158	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	117	93.8	140	11.60	23.20	Alkaline picrate no deproteinization
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	121	96.6	145	12.20	24.40	Roche Creatinine Plus
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	110	87.9	132	11.05	22.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.24	0.993	1.49	0.12	0.25	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.21	5.27	7.15	0.47	0.94	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	

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Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose oxidase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL Roche 3rd generation
	mg/dl	63.7	54.0	73.4	4.85	9.70	
LD (LDH)	U/l	218	185	251	16.50	33.00	L->P IFCC 37°C
	U/l	157	134	180	11.50	23.00	L->P IFCC 30°C
	U/l	111	94	128	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.2	48.1	72.3	6.05	12.10	Biuret reaction end point
	g/dl	6.02	4.81	7.23	0.61	1.21	
Sodium	mmol/l	141	134	148	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	79.7	110	7.50	15.00	
	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	
Urea	mmol/l	6.84	5.81	7.87	0.52	1.03	Urease kinetic
	mg/dl	41.1	34.9	47.3	3.10	6.20	
	mmol/l	7.10	6.03	8.17	0.54	1.07	Urease hypochlorite
	mg/dl	42.7	36.2	49.2	3.25	6.50	
	mmol/l	6.84	5.81	7.87	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Green
	g/dl	4.40	3.74	5.06	0.33	0.66	
	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Purple
	g/dl	4.44	3.77	5.11	0.34	0.67	
Alkaline Phosphatase	U/l	130	110	150	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	70	96	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	85	73	97	6.00	12.00	Roche liquid stable 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	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with 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. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	μmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	μmol/l	26.1	20.6	31.6	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	μmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	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	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.36	2.13	2.59	0.12	0.23	NM-BAPTA
	mg/dl	9.46	8.54	10.4	0.46	0.92	
Chloride	mmol/l	93.2	85.7	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.34	3.77	4.91	0.29	0.57	Cholesterol Oxidase
	mg/dl	168	146	190	11.00	22.00	
Cholinesterase	U/l	5138	4110	6166	514.00	1028.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	223	183	263	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	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
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	126	100	152	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.42	1.13	1.71	0.15	0.29	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	121	96.6	145	12.20	24.40	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.63	1.39	1.87	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	62.9	53.7	72.1	4.60	9.20	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.49	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	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	204	174	234	15.00	30.00	L->P IFCC 37°C
	U/l	147	126	168	10.50	21.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	33	26	40	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	
	mmol/l	0.87	0.77	0.98	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.12	1.86	2.38	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.9	48.0	71.8	5.95	11.90	Biuret reaction end point
	g/dl	5.99	4.80	7.18	0.60	1.19	
	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction kinetic
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	259	205	313	27.00	54.00	
	µmol/l	48.1	38.0	58.2	5.05	10.10	Direct Colorimetric
	µg/dl	269	212	326	28.50	57.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.05	0.89	1.21	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	92.9	78.4	107	7.25	14.50	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.01	6.51	0.38	0.75	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	95	81	109	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	78	66	90	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	62	52	72	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.6	19.5	29.7	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.35	2.11	2.59	0.12	0.24	Cresolphthalein complexone
	mg/dl	9.42	8.46	10.4	0.48	0.96	
	mmol/l	2.33	2.10	2.56	0.12	0.23	NM-BAPTA
	mg/dl	9.34	8.42	10.3	0.46	0.92	
Chloride	mmol/l	93.5	86.0	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.26	3.71	4.81	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	61.0	51.7	70.3	4.65	9.30	
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	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	32	26	38	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
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	
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
Urea	mmol/l	6.88	5.85	7.91	0.52	1.03	Urease kinetic
	mg/dl	41.3	35.2	47.4	3.05	6.10	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.88	5.85	7.91	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bile Acids	µmol/l	27.9	22.3	33.5	2.80	5.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	32.0	25.3	38.7	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.87	1.48	2.26	0.20	0.39	
	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	2.43	2.19	2.67	0.12	0.24	Arsenazo III
	mg/dl	9.74	8.78	10.7	0.48	0.96	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.48	3.90	5.06	0.29	0.58	Cholesterol Oxidase
	mg/dl	173	151	195	11.00	22.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	252	207	297	22.50	45.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	98.0	146	12.00	24.00	Enzymatic UV method
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Glucose oxidase
	mg/dl	116	98.7	133	8.65	17.30	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	421	358	484	31.50	63.00	P->L German methods 37°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	0.97	0.85	1.09	0.06	0.12	Colorimetric
	mg/dl	0.674	0.593	0.755	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.29	3.95	4.63	0.17	0.34	Enzymatic
	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - direct
Protein Total	g/l	61.4	49.1	73.7	6.15	12.30	Biuret reaction end point
	g/dl	6.14	4.91	7.37	0.62	1.23	
Sodium	mmol/l	147	140	154	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	μmol/l	54.7	43.2	66.2	5.75	11.50	Direct Colorimetric
	μg/dl	306	241	371	32.50	65.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
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	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Purple
	g/dl	4.42	3.76	5.08	0.33	0.66	
Alkaline Phosphatase	U/l	251	213	289	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	156	132	180	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	156	133	179	11.50	23.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Enzymatic
Bile Acids	µmol/l	26.1	20.9	31.3	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.14	0.901	1.38	0.12	0.24	
Bilirubin Total	µmol/l	29.3	23.2	35.4	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Calcium	mmol/l	2.28	2.06	2.50	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.14	8.26	10.0	0.44	0.88	
	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	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.8	89.9	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	
Cholinesterase	U/l	5515	4412	6618	551.50	1103.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	μmol/l	118	94.7	141	11.65	23.30	Enzymatic UV method
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	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	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	Hexokinase
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.14	0.97	1.31	0.09	0.17	Direct Clearance Method
	mg/dl	44.0	37.3	50.7	3.35	6.70	
Iron	μmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	μg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.31	1.07	1.55	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	11.8	9.64	14.0	1.08	2.16	
LD (LDH)	U/l	208	177	239	15.50	31.00	L->P 37°C

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

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	210	178	242	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.632	0.798	0.04	0.08	
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.7	48.6	72.8	6.05	12.10	Biuret reaction end point
	g/dl	6.07	4.86	7.28	0.61	1.21	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	51.5	40.7	62.3	5.40	10.80	Direct Colorimetric
	µg/dl	288	228	348	30.00	60.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.1	115	8.00	16.00	
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	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Purple
	g/dl	4.44	3.77	5.11	0.34	0.67	
Alkaline Phosphatase	U/l	151	128	174	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	150	127	173	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	40	62	5.50	11.00	Tris buffer with P5P 37°C
	U/l	52	41	63	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.9	13.4	20.4	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	12.5	9.88	15.1	1.31	2.62	Diazo with Sulphanilic Acid
	mg/dl	0.731	0.578	0.884	0.08	0.15	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.89	3.38	4.40	0.26	0.51	Dimension-Siemens reagents
	mg/dl	150	130	170	10.00	20.00	
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	190	156	224	17.00	34.00	Dithioerythritol (DTE) IFCC correlated 37°C

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

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	
	μmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	64	55	73	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	1.71	1.46	1.96	0.13	0.25	Direct HDL PPD
	mg/dl	66.0	56.4	75.6	4.80	9.60	
	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL PEGME
	mg/dl	64.8	55.2	74.4	4.80	9.60	
Iron	μmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric with ppt.
	μg/dl	98.9	81.1	117	8.90	17.80	
	μmol/l	17.2	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	1.38	1.13	1.63	0.13	0.25	UV LDH
	mg/dl	12.4	10.2	14.6	1.10	2.20	
LD (LDH)	U/l	199	169	229	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	143	115	171	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.8	35.4	54.2	4.70	9.40	Removal of excess free iron
	μg/dl	250	198	302	26.00	52.00	
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.2	104	7.10	14.20	
	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.4	106	7.40	14.80	
Urea	mmol/l	6.96	5.91	8.01	0.53	1.05	Urease kinetic
	mg/dl	41.8	35.5	48.1	3.15	6.30	
	mmol/l	6.96	5.92	8.00	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.71	4.97	6.45	0.37	0.74	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Green
	g/dl	4.42	3.76	5.08	0.33	0.66	
	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Purple
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	154	131	177	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	165	140	190	12.50	25.00	Randox AMP 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	80	110	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	12.2	9.65	14.8	1.28	2.55	Diazo with Sulphanilic Acid
	mg/dl	0.714	0.565	0.863	0.07	0.15	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE indirect

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Dimension-Siemens reagents
	mg/dl	152	132	172	10.00	20.00	
CK Total	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	201	165	237	18.00	36.00	Dithioerythritol 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	122	97.6	146	12.20	24.40	Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	55	75	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Hexokinase
	mg/dl	114	96.4	132	8.80	17.60	
	mmol/l	6.23	5.30	7.16	0.47	0.93	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.71	1.45	1.97	0.13	0.26	Direct HDL PPD
	mg/dl	66.0	56.0	76.0	5.00	10.00	
	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL PEGME
	mg/dl	64.8	55.2	74.4	4.80	9.60	
	mmol/l	1.58	1.35	1.81	0.12	0.23	Direct Clearance Method
	mg/dl	61.0	52.1	69.9	4.45	8.90	
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	
LD (LDH)	U/l	200	170	230	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	144	115	173	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.8	49.5	74.1	6.15	12.30	Biuret reaction end point
	g/dl	6.18	4.95	7.41	0.62	1.23	
	g/l	61.5	49.2	73.8	6.15	12.30	Biuret reaction kinetic
	g/dl	6.15	4.92	7.38	0.62	1.23	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.4	35.1	53.7	4.65	9.30	Removal of excess free iron
	µg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.5	107	7.25	14.50	
	mmol/l	1.03	0.86	1.20	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	91.2	76.3	106	7.45	14.90	
	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.4	106	7.40	14.80	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	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	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.5	37.9	51.1	3.30	6.60	Bromocresol Purple
	g/dl	4.45	3.79	5.11	0.33	0.66	
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Tris buffer with P5P 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	12.5	9.89	15.1	1.31	2.61	Diazo with Sulphanilic Acid
	mg/dl	0.731	0.579	0.883	0.08	0.15	
Bilirubin Total	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Chloride	mmol/l	99.8	91.8	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Dimension-Siemens reagents
	mg/dl	152	132	172	10.00	20.00	
CK Total	U/l	198	162	234	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	127	101	153	13.00	26.00	IDMS traceable
	mg/dl	1.44	1.14	1.74	0.15	0.30	
gamma-GT	U/l	61	51	71	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	5.88	4.99	6.77	0.45	0.89	Hexokinase
	mg/dl	106	89.9	122	8.05	16.10	

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.64	1.40	1.88	0.12	0.24	Direct HDL PEGME
	mg/dl	63.3	54.0	72.6	4.65	9.30	
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	1.43	1.17	1.69	0.13	0.26	UV LDH
	mg/dl	12.9	10.5	15.3	1.20	2.40	
LD (LDH)	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	154	124	184	15.00	30.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	62.0	49.6	74.4	6.20	12.40	Biuret reaction end point
	g/dl	6.20	4.96	7.44	0.62	1.24	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.3	118	8.35	16.70	
Urea	mmol/l	7.37	6.27	8.47	0.55	1.10	Urease kinetic
	mg/dl	44.3	37.7	50.9	3.30	6.60	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.89	6.37	0.37	0.74	

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1104UN Cat. No. HN1530 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2020-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
Alkaline Phosphatase	U/l	267	227	307	20.00	40.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.32	2.08	2.56	0.12	0.24	Arsenazo III
	mg/dl	9.30	8.34	10.3	0.48	0.96	
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	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	
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Urea	mmol/l	7.10	6.03	8.17	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.2	49.2	3.25	6.50	

**VITALAB FLEXOR®**

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	