

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

CAT. NO. HE1532	GTIN: 05055273203608	SIZE: 20 x 5ml
CAT. NO. HS2611	GTIN: 05055273203813	SIZE: 5 x 5ml
LOT NO. 884UE	EXPIRY: 2020-08-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

MATERIALS PROVIDED

Human Assayed Multi-sera - Level 3 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

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

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Abbott Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.2	24.9	33.5	2.15	4.30	Bromocresol Green
	g/dl	2.92	2.49	3.35	0.22	0.43	
	g/l	27.1	23.1	31.1	2.00	4.00	Bromocresol Purple
	g/dl	2.71	2.31	3.11	0.20	0.40	
Alkaline Phosphatase	U/l	274	233	315	20.50	41.00	AMP optimised to IFCC 37°C
	U/l	269	229	309	20.00	40.00	AMP non-optimised 37°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	268	227	309	20.50	41.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	318	270	366	24.00	48.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	339	288	390	25.50	51.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bile Acids	µmol/l	44.2	35.3	53.1	4.45	8.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Bilirubin Total	µmol/l	84.5	66.7	102	8.90	17.80	Diazo with Dichloroaniline (DCA)
	mg/dl	4.94	3.90	5.98	0.52	1.04	
	µmol/l	88.3	69.8	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.17	4.08	6.26	0.55	1.09	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	86.4	68.2	105	9.10	18.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.05	3.99	6.11	0.53	1.06	
	µmol/l	83.7	66.2	101	8.75	17.50	Diazonium ion
	mg/dl	4.90	3.87	5.93	0.52	1.03	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	6293	5034	7552	629.50	1259.00	Colorimetric Butyrylthiocholine 37°C
	U/l	6235	4988	7482	623.50	1247.00	Agappe - DGKC/Butyrylthiocholine 37°C
CK Total	U/l	548	449	647	49.50	99.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	21.0	16.8	25.2	2.10	4.20	Colorimetric
	µg/dl	134	107	161	13.50	27.00	
Creatinine	µmol/l	403	322	484	40.50	81.00	Alkaline picrate no deproteinization
	mg/dl	4.55	3.64	5.46	0.46	0.91	
	µmol/l	397	318	476	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.49	3.59	5.39	0.45	0.90	
	µmol/l	398	318	478	40.00	80.00	Jaffe rate blanked
	mg/dl	4.50	3.59	5.41	0.46	0.91	
Free T4	pmol/l	43.2	32.4	54.0	5.40	10.80	Abbott Architect
	ng/dl	3.37	2.53	4.21	0.42	0.84	
	pg/ml	33.7	25.3	42.1	4.20	8.40	Abbott Architect

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	164	140	188	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	163	139	187	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	164	139	189	12.50	25.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
HDL - Cholesterol	mg/dl	287	243	331	22.00	44.00	
	mmol/l	2.64	2.24	3.04	0.20	0.40	Direct HDL PPD
	mg/dl	102	86.5	118	7.75	15.50	
HDL - Cholesterol	mmol/l	2.54	2.16	2.92	0.19	0.38	Direct Clearance Method
	mg/dl	98.0	83.4	113	7.30	14.60	
	mmol/l	2.63	2.23	3.03	0.20	0.40	HDL - Ultra
Iron	mg/dl	102	86.1	118	7.95	15.90	
	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric with ppt.
	µg/dl	208	170	246	19.00	38.00	
Iron	µmol/l	37.6	30.8	44.4	3.40	6.80	Colorimetric without ppt.
	µg/dl	210	172	248	19.00	38.00	
	mmol/l	5.48	4.49	6.47	0.50	0.99	Colorimetric Lactate Oxidase
Lactate	mg/dl	49.4	40.5	58.3	4.45	8.90	
	U/l	362	308	416	27.00	54.00	L->P 37°C
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	65	52	78	6.50	13.00	Other Colorimetric 37°C
Lipase	U/l	65	52	78	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.00	1.76	2.24	0.12	0.24	Spectrophotometric
	mg/dl	1.39	1.22	1.56	0.09	0.17	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Arsenazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	

Abbott Architect c/ci Systems®

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Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Xylidyl Blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Enzymatic
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Osmolality	mOsm/kg	358	286	430	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
	g/l	46.2	36.9	55.5	4.65	9.30	Biuret reaction kinetic
	g/dl	4.62	3.69	5.55	0.47	0.93	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.96	0.77	1.16	0.10	0.19	Abbott Architect
TIBC	µmol/l	64.2	50.7	77.7	6.75	13.50	FE+UIBC(saturation with iron)
	µg/dl	359	283	435	38.00	76.00	
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	223	309	21.50	43.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	8.32	10.8	0.62	1.24	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Green
	g/dl	2.94	2.50	3.38	0.22	0.44	
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	24.1	19.1	29.1	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.41	1.12	1.70	0.15	0.29	
Bilirubin Total	µmol/l	86.4	68.3	105	9.05	18.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.05	4.00	6.10	0.53	1.05	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.56	6.58	8.54	0.49	0.98	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
CK Total	U/l	532	436	628	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	402	322	482	40.00	80.00	Creatinine PAP method
	mg/dl	4.54	3.64	5.44	0.45	0.90	
Iron	µmol/l	36.9	30.3	43.5	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Potassium	mmol/l	5.96	5.48	6.44	0.24	0.48	ISE method - direct
Protein Total	g/l	48.6	38.8	58.4	4.90	9.80	Biuret reaction end point
	g/dl	4.86	3.88	5.84	0.49	0.98	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	3.05	2.57	3.53	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	270	227	313	21.50	43.00	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	

**Alfa Wassermann Alfa 600 / Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.2	25.6	34.8	2.30	4.60	Bromocresol Green
	g/dl	3.02	2.56	3.48	0.23	0.46	
Alkaline Phosphatase	U/l	284	241	327	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	221	188	254	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.9	67.0	103	8.95	17.90	Diazo with Sulphanilic Acid
	mg/dl	4.97	3.92	6.02	0.53	1.05	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.03	6.12	7.94	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	236	306	17.50	35.00	
Creatinine	µmol/l	347	278	416	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.92	3.14	4.70	0.39	0.78	
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	

**Alfa Wassermann Alfa 600 / Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Protein Total	g/l	45.5	36.4	54.6	4.55	9.10	Biuret reaction end point
	g/dl	4.55	3.64	5.46	0.46	0.91	
	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction kinetic
	g/dl	4.49	3.59	5.39	0.45	0.90	
Triglycerides	mmol/l	2.94	2.47	3.41	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	260	219	301	20.50	41.00	
Urea	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease kinetic
	mg/dl	109	93.2	125	7.90	15.80	
	mmol/l	18.2	15.5	20.9	1.35	2.70	BUN
	mg/dl	51.1	43.4	58.8	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.01	10.4	0.61	1.21	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	382	302	462	40.00	80.00	Oxobutryate < 10 mmol/l 37°C
Albumin	g/l	27.7	23.5	31.9	2.10	4.20	Bromocresol Green
	g/dl	2.77	2.35	3.19	0.21	0.42	
	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Purple
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	345	293	397	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
Amylase Total	U/l	282	240	324	21.00	42.00	pNP Maltotriose substrates 37°C
	U/l	274	233	315	20.50	41.00	Biotrol - blocked pNPG7 37°C
	U/l	284	242	326	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	291	248	334	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	152	121	183	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.1	15.2	23.0	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	22.3	17.6	27.0	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.30	1.03	1.57	0.14	0.27	
Bilirubin Total	µmol/l	88.5	69.9	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.18	4.09	6.27	0.55	1.09	
	µmol/l	88.6	70.0	107	9.30	18.60	DPD (Beckman AU)
	mg/dl	5.18	4.10	6.26	0.54	1.08	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.43	6.46	8.40	0.49	0.97	Cholesterol Oxidase
	mg/dl	287	249	325	19.00	38.00	
Cholinesterase	U/l	4860	3888	5832	486.00	972.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	592	485	699	53.50	107.00	CK-NAC substrate start (DGKC) 37°C
	U/l	561	460	662	50.50	101.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	26.7	21.3	32.1	2.70	5.40	Colorimetric
	µg/dl	170	135	205	17.50	35.00	
Creatinine	µmol/l	380	304	456	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	393	315	471	39.00	78.00	Enzymatic UV method (340nm)
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	400	320	480	40.00	80.00	Creatinine PAP method
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.16	0.99	1.33	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	141	119	163	11.00	22.00	Gamma glutamyl-4-nitroanilide 37°C

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
GLDH	U/l	32	25	39	3.50	7.00	Triethanolamine buffer 50 mmol 37°C	
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase	
	mg/dl	288	245	331	21.50	43.00		
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase	
	mg/dl	285	241	329	22.00	44.00		
HDL - Cholesterol	mmol/l	2.82	2.40	3.24	0.21	0.42	Direct HDL Immunoseparation	
	mg/dl	109	92.6	125	8.20	16.40		
	mmol/l	2.77	2.36	3.18	0.21	0.41	Direct Clearance Method	
	mg/dl	107	91.1	123	7.95	15.90		
	mmol/l	2.75	2.33	3.17	0.21	0.42	HDL - Ultra	
	mg/dl	106	89.9	122	8.05	16.10		
	Iron	µmol/l	38.1	31.3	44.9	3.40	6.80	Colorimetric with ppt.
		µg/dl	213	175	251	19.00	38.00	
µmol/l		37.6	30.9	44.3	3.35	6.70	Colorimetric without ppt.	
µg/dl		210	173	247	18.50	37.00		
Lactate	mmol/l	5.31	4.35	6.27	0.48	0.96	Colorimetric Lactate Oxidase	
	mg/dl	47.8	39.2	56.4	4.30	8.60		
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P 37°C	
	U/l	800	680	920	60.00	120.00	P->L Scandinavian & Dutch 37°C	
	U/l	357	304	410	26.50	53.00	L->P IFCC 37°C	
Lipase	U/l	68	54	82	7.00	14.00	Other Colorimetric 37°C	
	U/l	86	69	103	8.50	17.00	Randox Colorimetric 37°C	
Lithium	mmol/l	1.99	1.75	2.23	0.12	0.24	Spectrophotometric	
	mg/dl	1.38	1.22	1.54	0.08	0.16		

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Xylidyl Blue
	mg/dl	4.37	3.86	4.88	0.26	0.51	
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.16	6.08	8.24	0.54	1.08	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.18	5.68	6.68	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Biuret reaction end point
	g/dl	4.57	3.65	5.49	0.46	0.92	
	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction kinetic
	g/dl	4.60	3.68	5.52	0.46	0.92	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	62.4	49.3	75.5	6.55	13.10	FE+UIBC(saturation with iron)
	µg/dl	349	276	422	36.50	73.00	
Triglycerides	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
	mmol/l	3.11	2.62	3.60	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	275	232	318	21.50	43.00	
UIBC	µmol/l	24.5	20.1	28.9	2.20	4.40	Direct Colorimetric
	µg/dl	137	112	162	12.50	25.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease end point
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.73	8.47	11.0	0.63	1.26	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.64	8.38	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.53	8.28	10.8	0.63	1.25	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Green
	g/dl	3.03	2.58	3.48	0.23	0.45	
	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Purple
	g/dl	2.90	2.47	3.33	0.22	0.43	
Alkaline Phosphatase	U/l	327	278	376	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	320	272	368	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
	U/l	128	103	153	12.50	25.00	Tris buffer SCE 37°C
Amylase Total	U/l	293	249	337	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	301	256	346	22.50	45.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	135	108	162	13.50	27.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Differential rate pH change
	mmol/l	18.8	14.9	22.7	1.95	3.90	Ion selective electrode
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Bilirubin Total	µmol/l	84.2	66.5	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.89	5.97	0.52	1.04	
Calcium	mmol/l	2.98	2.68	3.28	0.15	0.30	Ion selective electrode
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	116	106	126	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.56	6.58	8.54	0.49	0.98	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
Cholinesterase	U/l	4956	3965	5947	495.50	991.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	581	476	686	52.50	105.00	CK-NAC (IFCC) 37°C
	U/l	562	461	663	50.50	101.00	Monothioglycerol 37°C
Creatinine	µmol/l	391	313	469	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	377	302	452	37.50	75.00	Enzymatic UV method (340nm)
	mg/dl	4.26	3.41	5.11	0.43	0.85	
	µmol/l	393	314	472	39.50	79.00	Jaffe rate blanked
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	392	314	470	39.00	78.00	IDMS traceable
	mg/dl	4.43	3.55	5.31	0.44	0.88	
gamma-GT	U/l	138	118	158	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL PPD
	mg/dl	110	93.4	127	8.30	16.60	
	mmol/l	2.84	2.41	3.27	0.22	0.43	HDL - Ultra
	mg/dl	110	93.0	127	8.50	17.00	
Iron	µmol/l	37.8	31.0	44.6	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.16	4.23	6.09	0.47	0.93	Colorimetric Lactate Oxidase
	mg/dl	46.5	38.1	54.9	4.20	8.40	
LD (LDH)	U/l	303	258	348	22.50	45.00	L->P 37°C
	U/l	932	792	1072	70.00	140.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	63	50	76	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	1.99	1.75	2.23	0.12	0.24	Spectrophotometric
	mg/dl	1.38	1.22	1.54	0.08	0.16	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Calmagite
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.10	6.05	8.15	0.53	1.05	
	mmol/l	2.30	1.96	2.64	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.13	6.08	8.18	0.53	1.05	
Potassium	mmol/l	6.20	5.71	6.69	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction CX4/5/7
	g/dl	4.70	3.76	5.64	0.47	0.94	
	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
	g/l	44.3	35.4	53.2	4.45	8.90	
g/dl	4.43	3.54	5.32	0.45	0.89		
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
	mmol/l	3.10	2.60	3.60	0.25	0.50	L/G Kinase EP. no correction
	mg/dl	274	230	318	22.00	44.00	

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.2	16.4	22.0	1.40	2.80	Urease end point
	mg/dl	115	98.6	131	8.20	16.40	
	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.85	7.71	9.99	0.57	1.14	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Green
	g/dl	2.83	2.41	3.25	0.21	0.42	
Alkaline Phosphatase	U/l	297	253	341	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	231	197	265	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	190	162	218	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	111	89	133	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	160	128	192	16.00	32.00	Tris buffer without P5P 37°C
	U/l	108	87	129	10.50	21.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.1	69.6	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.15	4.07	6.23	0.54	1.08	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.57	6.58	8.56	0.50	0.99	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
CK Total	U/l	572	469	675	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	358	294	422	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	243	199	287	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	353	283	423	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.99	3.20	4.78	0.40	0.79	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Glucose oxidase
	mg/dl	292	249	335	21.50	43.00	
HDL - Cholesterol	mmol/l	2.69	2.29	3.09	0.20	0.40	HDL - Ultra
	mg/dl	104	88.4	120	7.80	15.60	
LD (LDH)	U/l	791	672	910	59.50	119.00	P->L Scandinavian & Dutch 37°C
	U/l	571	485	657	43.00	86.00	P->L Scandinavian & Dutch 30°C
	U/l	401	341	461	30.00	60.00	P->L Scandinavian & Dutch 25°C
	U/l	709	603	815	53.00	106.00	P->L German methods 37°C
	U/l	512	435	589	38.50	77.00	P->L German methods 30°C
	U/l	359	306	412	26.50	53.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.33	1.98	2.68	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.22	6.14	8.30	0.54	1.08	
Protein Total	g/l	45.7	36.6	54.8	4.55	9.10	Biuret reaction end point
	g/dl	4.57	3.66	5.48	0.46	0.91	
Triglycerides	mmol/l	2.96	2.48	3.44	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	262	219	305	21.50	43.00	
Urea	mmol/l	17.0	14.5	19.5	1.25	2.50	Urease kinetic
	mg/dl	102	87.1	117	7.45	14.90	
	mmol/l	17.0	14.5	19.5	1.25	2.50	BUN
	mg/dl	47.7	40.5	54.9	3.60	7.20	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	

**BIOSYSTEMS A25**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	108	87	129	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	82.3	65.0	99.6	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	2.88	2.59	3.17	0.15	0.29	Arsenazo III
	mg/dl	11.5	10.4	12.6	0.55	1.10	
Cholesterol	mmol/l	7.20	6.26	8.14	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
CK Total	U/l	499	409	589	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	312	256	368	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	µmol/l	401	321	481	40.00	80.00	Creatinine PAP method
	mg/dl	4.53	3.63	5.43	0.45	0.90	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	105	89.2	121	7.90	15.80	
LD (LDH)	U/l	729	619	839	55.00	110.00	P->L SFBC 37°C
	U/l	526	447	605	39.50	79.00	P->L SFBC 30°C
	U/l	370	314	426	28.00	56.00	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Protein Total	g/l	47.5	38.0	57.0	4.75	9.50	Biuret reaction end point
	g/dl	4.75	3.80	5.70	0.48	0.95	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.94	7.78	10.1	0.58	1.16	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	214	182	246	16.00	32.00	Roche Integra AMP buffer 37°C
	U/l	167	142	192	12.50	25.00	Roche Integra AMP buffer 30°C
	U/l	137	116	158	10.50	21.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	283	241	325	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	283	240	326	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.6	13.9	21.3	1.85	3.70	Colorimetric
	mmol/l	17.7	14.1	21.3	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.24	1.90	0.17	0.33	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Bilirubin Total	µmol/l	83.1	65.7	101	8.70	17.40	Diazo with Dichloroaniline (DCA)
	mg/dl	4.86	3.84	5.88	0.51	1.02	
	µmol/l	80.6	63.6	97.6	8.50	17.00	Diazo with Sulphanilic Acid
	mg/dl	4.72	3.72	5.72	0.50	1.00	
	µmol/l	80.1	63.3	96.9	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazonium ion
	mg/dl	4.74	3.74	5.74	0.50	1.00	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.11	2.80	3.42	0.16	0.31	NM-BAPTA
mg/dl	12.5	11.2	13.8	0.65	1.30		
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.49	6.52	8.46	0.49	0.97	Cholesterol Oxidase
	mg/dl	289	252	326	18.50	37.00	
CK Total	U/l	567	465	669	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	355	291	419	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	241	198	284	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate with deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
	µmol/l	362	290	434	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.28	4.90	0.41	0.81	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	398	318	478	40.00	80.00	Enzymatic UV method (340nm)
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	393	315	471	39.00	78.00	Creatinine PAP method
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.47	3.58	5.36	0.45	0.89	
gamma-GT	µmol/l	367	294	440	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	µmol/l	362	289	435	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	U/l	154	131	177	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	103	139	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
Glucose	U/l	95	81	109	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	117	161	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	92	126	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	4.25	3.61	4.89	0.32	0.64	Direct HDL PEGME
	mg/dl	164	139	189	12.50	25.00	
Iron	mmol/l	4.27	3.63	4.91	0.32	0.64	Direct HDL Roche 3rd generation
	mg/dl	165	140	190	12.50	25.00	
Iron	µmol/l	38.1	31.3	44.9	3.40	6.80	Colorimetric with ppt.
	µg/dl	213	175	251	19.00	38.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	5.76	4.73	6.79	0.52	1.03	Colorimetric Lactate Oxidase
	mg/dl	51.9	42.6	61.2	4.65	9.30	
LD (LDH)	U/l	680	578	782	51.00	102.00	P->L German methods 37°C
	U/l	491	417	565	37.00	74.00	P->L German methods 30°C
	U/l	345	293	397	26.00	52.00	P->L German methods 25°C
	U/l	372	316	428	28.00	56.00	L->P IFCC 37°C
	U/l	269	228	310	20.50	41.00	L->P IFCC 30°C
	U/l	189	160	218	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	65	52	78	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.03	1.79	2.27	0.12	0.24	Ion selective electrode
	mg/dl	1.41	1.24	1.58	0.09	0.17	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.16	6.08	8.24	0.54	1.08	
	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.16	6.08	8.24	0.54	1.08	
Potassium	mmol/l	6.27	5.77	6.77	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction end point
	g/dl	4.43	3.54	5.32	0.45	0.89	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction kinetic
	g/dl	4.40	3.52	5.28	0.44	0.88	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect	
TIBC	μmol/l	64.7	51.1	78.3	6.80	13.60	FE+UIBC(saturation with iron)	
	μg/dl	362	286	438	38.00	76.00		
	μmol/l	65.2	51.5	78.9	6.85	13.70	Direct Colorimetric	
	μg/dl	364	288	440	38.00	76.00		
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction	
	mg/dl	257	216	298	20.50	41.00		
	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	258	216	300	21.00	42.00		
UIBC	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/Glycerol Dehydrogenase	
	mg/dl	254	213	295	20.50	41.00		
	Urea	μmol/l	26.0	21.3	30.7	2.35	4.70	Direct Colorimetric
		μg/dl	145	119	171	13.00	26.00	
Urea	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic	
	mg/dl	108	92.0	124	8.00	16.00		
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN	
	mg/dl	50.5	42.9	58.1	3.80	7.60		
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase	
	mg/dl	9.42	8.20	10.6	0.61	1.22		
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase	
	mg/dl	9.27	8.06	10.5	0.61	1.21		
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	9.39	8.16	10.6	0.62	1.23		

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	31.1	26.4	35.8	2.35	4.70	Bromocresol Green
	g/dl	3.11	2.64	3.58	0.24	0.47	
Alkaline Phosphatase	U/l	452	384	520	34.00	68.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
Calcium	mmol/l	3.04	2.74	3.34	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Cholesterol	mmol/l	7.45	6.48	8.42	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	250	326	19.00	38.00	
CK Total	U/l	528	433	623	47.50	95.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	358	286	430	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.05	3.23	4.87	0.41	0.82	
	μmol/l	355	284	426	35.50	71.00	Jaffe rate blanked
	mg/dl	4.01	3.21	4.81	0.40	0.80	
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
LD (LDH)	U/l	360	306	414	27.00	54.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Protein Total	g/l	49.2	39.4	59.0	4.90	9.80	Biuret reaction end point
	g/dl	4.92	3.94	5.90	0.49	0.98	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
Urea	mmol/l	18.3	15.6	21.0	1.35	2.70	Urease kinetic
	mg/dl	110	93.8	126	8.10	16.20	
	mmol/l	18.3	15.6	21.0	1.35	2.70	BUN
	mg/dl	51.4	43.7	59.1	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.63	8.37	10.9	0.63	1.26	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	456	360	552	48.00	96.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	344	272	416	36.00	72.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	258	204	312	27.00	54.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	12.9	8.64	17.2	2.13	4.26	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	41.5	27.8	55.2	6.85	13.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	22.3	14.9	29.7	3.70	7.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	51.7	34.6	68.8	8.55	17.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	35.2	23.6	46.8	5.80	11.60	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	30.7	26.1	35.3	2.30	4.60	Bromocresol Green
	g/dl	3.07	2.61	3.53	0.23	0.46	
Alkaline Phosphatase	U/l	190	161	219	14.50	29.00	Roche Integra AMP buffer 37°C
	U/l	148	125	171	11.50	23.00	Roche Integra AMP buffer 30°C
	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	306	260	352	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	238	203	273	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	196	166	226	15.00	30.00	AMP optimised to IFCC 25°C
	U/l	323	275	371	24.00	48.00	Randox AMP 37°C
	U/l	252	214	290	19.00	38.00	Randox AMP 30°C
	U/l	206	176	236	15.00	30.00	Randox AMP 25°C
ALT (GPT)	U/l	137	110	164	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Pancreatic	U/l	253	215	291	19.00	38.00	Roche liquid stable pNPG7 37°C
	U/l	291	247	335	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	270	229	311	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.6	14.8	22.4	1.90	3.80	Enzymatic
Bile Acids	µmol/l	44.0	35.2	52.8	4.40	8.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Bilirubin Total	µmol/l	82.0	64.8	99.2	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.79	5.81	0.51	1.01	
	µmol/l	79.4	62.7	96.1	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	79.4	62.7	96.1	8.35	16.70	Diazonium ion
	mg/dl	4.64	3.67	5.61	0.49	0.97	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.42	6.46	8.38	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
Cholinesterase	U/l	5092	4074	6110	509.00	1018.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	517	424	610	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	324	265	383	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	220	180	260	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	398	318	478	40.00	80.00	Enzymatic UV method (340nm)
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	403	322	484	40.50	81.00	Creatinine PAP method
	mg/dl	4.55	3.64	5.46	0.46	0.91	
	µmol/l	399	320	478	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.51	3.62	5.40	0.45	0.89	
µmol/l	389	311	467	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	4.40	3.51	5.29	0.45	0.89		
D-3-Hydroxybutyrate	mmol/l	1.12	0.95	1.29	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	149	126	172	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	117	99	135	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	92	78	106	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	162	137	187	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	128	108	148	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	100	85	115	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	179	152	206	13.50	27.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	141	120	162	10.50	21.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l	110	94	126	8.00	16.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	35	28	42	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	27	22	32	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
HDL - Cholesterol	mmol/l	3.99	3.39	4.59	0.30	0.60	Direct HDL Roche 3rd generation
	mg/dl	154	131	177	11.50	23.00	
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
Lactate	mmol/l	5.54	4.55	6.53	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.9	41.0	58.8	4.45	8.90	
LD (LDH)	U/l	691	587	795	52.00	104.00	P->L German methods 37°C
	U/l	499	424	574	37.50	75.00	P->L German methods 30°C
	U/l	350	298	402	26.00	52.00	P->L German methods 25°C
	U/l	358	304	412	27.00	54.00	L->P IFCC 37°C
	U/l	258	219	297	19.50	39.00	L->P IFCC 30°C
	U/l	182	154	210	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	60	48	72	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.04	1.79	2.29	0.13	0.25	Spectrophotometric
	mg/dl	1.42	1.24	1.60	0.09	0.18	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Xylidyl Blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.31	5.80	6.82	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	μmol/l	60.8	48.0	73.6	6.40	12.80	FE+UIBC(saturation with iron)
	μg/dl	340	268	412	36.00	72.00	
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
UIBC	μmol/l	23.0	18.8	27.2	2.10	4.20	Direct Colorimetric
	μg/dl	129	105	153	12.00	24.00	
Urea	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.14	7.96	10.3	0.59	1.18	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
Alkaline Phosphatase	U/l	314	267	361	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	245	208	282	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	201	171	231	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	128	103	153	12.50	25.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	293	249	337	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
	U/l	91	72	110	9.50	19.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	39.9	31.9	47.9	4.00	8.00	Enzymatic Colorimetric
Bilirubin Total	µmol/l	88.2	69.6	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.16	4.07	6.25	0.55	1.09	
Calcium	mmol/l	3.17	2.86	3.48	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.29	6.35	8.23	0.47	0.94	Cholesterol Oxidase
	mg/dl	281	245	317	18.00	36.00	
CK Total	U/l	483	396	570	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	302	248	356	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 25°C

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	360	288	432	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.16	0.98	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	153	130	176	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	102	140	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	154	131	177	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	121	103	139	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	95	81	109	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.48	2.10	2.86	0.19	0.38	Direct HDL Immunoseparation
	mg/dl	95.7	81.1	110	7.30	14.60	
LD (LDH)	U/l	732	622	842	55.00	110.00	P->L German methods 37°C
	U/l	529	449	609	40.00	80.00	P->L German methods 30°C
	U/l	371	315	427	28.00	56.00	P->L German methods 25°C
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.82	1.60	2.04	0.11	0.22	Enzymatic
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	


ILab 600®/650®/Aries/Taurus
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.28	5.78	6.78	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
	mmol/l	3.11	2.61	3.61	0.25	0.50	L/G Kinase EP. no correction
	mg/dl	275	231	319	22.00	44.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	27.6	23.5	31.7	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.76	2.35	3.17	0.21	0.41	
Alkaline Phosphatase	U/l	190	161	219	14.50	29.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	147	117	177	15.00	30.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	172	146	198	13.00	26.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	195	156	234	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	20.2	16.1	24.3	2.05	4.10	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	76.0	60.1	91.9	7.95	15.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.45	3.52	5.38	0.47	0.93	
	µmol/l	74.2	58.7	89.7	7.75	15.50	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.34	3.43	5.25	0.46	0.91	
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Chloride	mmol/l	116	106	126	5.00	10.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	6.76	5.88	7.64	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	261	227	295	17.00	34.00	
Cholinesterase	U/l	5046	4037	6055	504.50	1009.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	441	362	520	39.50	79.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	395	316	474	39.50	79.00	Vitros IDMS Traceable
	mg/dl	4.46	3.57	5.35	0.45	0.89	
gamma-GT	U/l	202	172	232	15.00	30.00	Ortho Vitros Microslide Systems 37°C

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	14.7	12.5	16.9	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	265	225	305	20.00	40.00	
HDL - Cholesterol	mmol/l	2.63	2.23	3.03	0.20	0.40	Vitros Magnetic HDL
	mg/dl	102	86.1	118	7.95	15.90	
	mmol/l	2.68	2.28	3.08	0.20	0.40	Vitros 5.1 FS microtip assay
	mg/dl	103	88.0	118	7.50	15.00	
Iron	mmol/l	2.67	2.27	3.07	0.20	0.40	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	103	87.6	118	7.70	15.40	
Iron	µmol/l	40.3	33.0	47.6	3.65	7.30	Ortho Vitros Microslide Systems
	µg/dl	225	184	266	20.50	41.00	
Lactate	mmol/l	5.02	4.12	5.92	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	45.2	37.1	53.3	4.05	8.10	
LD (LDH)	U/l	1071	911	1231	80.00	160.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	757	607	907	75.00	150.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.40	2.11	2.69	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.67	1.47	1.87	0.10	0.20	
Magnesium	mmol/l	1.78	1.56	2.00	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.33	3.79	4.87	0.27	0.54	
Phosphate Inorganic	mmol/l	2.24	1.91	2.57	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.14	5.65	6.63	0.25	0.49	Ortho Vitros Microslide Systems
Protein Total	g/l	46.9	37.5	56.3	4.70	9.40	Ortho Vitros Microslide Systems
	g/dl	4.69	3.75	5.63	0.47	0.94	
Sodium	mmol/l	162	154	170	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.19	0.95	1.43	0.12	0.24	Vitros ECi

**JOHNSON AND JOHNSON VITROS®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	3.34	2.80	3.88	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	296	248	344	24.00	48.00	
Urea	mmol/l	17.4	14.8	20.0	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	88.9	121	8.05	16.10	
	mmol/l	17.4	14.8	20.0	1.30	2.60	BUN
	mg/dl	48.8	41.5	56.1	3.65	7.30	
Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.80	7.64	9.96	0.58	1.16	

Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Green
	g/dl	2.91	2.47	3.35	0.22	0.44	
Alkaline Phosphatase	U/l	291	247	335	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	227	192	262	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	108	87	129	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	85	125	10.00	20.00	Tris buffer without P5P 30°C
	U/l	74	60	88	7.00	14.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	44.4	35.5	53.3	4.45	8.90	Enzymatic Colorimetric
Bilirubin Total	µmol/l	82.1	64.9	99.3	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.80	5.80	0.50	1.00	
	µmol/l	82.6	65.3	99.9	8.65	17.30	Nitrobenzenediazonium salt
	mg/dl	4.83	3.82	5.84	0.51	1.01	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.28	6.33	8.23	0.48	0.95	Cholesterol Oxidase
	mg/dl	281	244	318	18.50	37.00	

Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	550	451	649	49.50	99.00	CK-NAC (IFCC) 37°C
	U/l	344	282	406	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	234	192	276	21.00	42.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	389	311	467	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	396	317	475	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.47	3.58	5.36	0.45	0.89	
Creatinine	µmol/l	403	322	484	40.50	81.00	Creatinine PAP method
	mg/dl	4.55	3.64	5.46	0.46	0.91	
D-3-Hydroxybutyrate	mmol/l	1.13	0.96	1.30	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	168	143	193	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	132	113	151	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	104	88	120	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.2	13.8	18.6	1.20	2.40	Hexokinase
	mg/dl	292	249	335	21.50	43.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
HDL - Cholesterol	mmol/l	3.87	3.29	4.45	0.29	0.58	Direct HDL PEGME
	mg/dl	149	127	171	11.00	22.00	
Iron	µmol/l	38.1	31.3	44.9	3.40	6.80	Colorimetric without ppt.
	µg/dl	213	175	251	19.00	38.00	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Calmagite
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	

Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Potassium	mmol/l	6.05	5.56	6.54	0.25	0.49	ISE method - direct
Protein Total	g/l	46.4	37.2	55.6	4.60	9.20	Biuret reaction end point
	g/dl	4.64	3.72	5.56	0.46	0.92	
Sodium	mmol/l	157	150	164	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	3.05	2.56	3.54	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	270	227	313	21.50	43.00	
Urea	mmol/l	17.7	15.1	20.3	1.30	2.60	Urease kinetic
	mg/dl	106	90.8	121	7.60	15.20	
	mmol/l	17.7	15.0	20.4	1.35	2.70	BUN
	mg/dl	49.7	42.2	57.2	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.74	8.48	11.0	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.25	10.7	0.62	1.24	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.79	8.52	11.1	0.64	1.27	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	456	360	552	48.00	96.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	344	272	416	36.00	72.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	258	204	312	27.00	54.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	12.9	8.64	17.2	2.13	4.26	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.2	6.83	13.6	1.69	3.37	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	22.3	14.9	29.7	3.70	7.40	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	41.5	27.8	55.2	6.85	13.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	35.2	23.6	46.8	5.80	11.60	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	51.7	34.6	68.8	8.55	17.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	29.5	25.1	33.9	2.20	4.40	Bromocresol Green
	g/dl	2.95	2.51	3.39	0.22	0.44	
	g/l	27.9	23.7	32.1	2.10	4.20	Bromocresol Purple
	g/dl	2.79	2.37	3.21	0.21	0.42	
	g/l	27.6	23.5	31.7	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.76	2.35	3.17	0.21	0.41	
	g/l	26.3	22.4	30.2	1.95	3.90	Turbidimetric Assays
g/dl	2.63	2.24	3.02	0.20	0.39		
Alkaline Phosphatase	U/l	190	161	219	14.50	29.00	Ortho Vitros Microslide Systems 37°C
	U/l	465	395	535	35.00	70.00	Diethanolamine buffer DEA 37°C
	U/l	362	308	416	27.00	54.00	Diethanolamine buffer DEA 30°C
	U/l	297	252	342	22.50	45.00	Diethanolamine buffer DEA 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	239	203	275	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	196	167	225	14.50	29.00	AMP optimised to IFCC 25°C
	U/l	285	243	327	21.00	42.00	AMP non-optimised 37°C
	U/l	222	189	255	16.50	33.00	AMP non-optimised 30°C
	U/l	182	155	209	13.50	27.00	AMP non-optimised 25°C
ALT (GPT)	U/l	147	117	177	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	177	142	212	17.50	35.00	Tris buffer with P5P 37°C
	U/l	131	105	157	13.00	26.00	Tris buffer with P5P 30°C
	U/l	100	80	120	10.00	20.00	Tris buffer with P5P 25°C
	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
	U/l	129	103	155	13.00	26.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	261	222	300	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	253	215	291	19.00	38.00	Roche liquid stable pNPG7 37°C
	U/l	291	247	335	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	285	243	327	21.00	42.00	pNP Maltotriose substrates 37°C
	U/l	289	246	332	21.50	43.00	Siemens - blocked pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Biotrol - blocked pNPG7 37°C
	U/l	237	201	273	18.00	36.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	315	268	362	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	279	237	321	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	287	244	330	21.50	43.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	280	238	322	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	172	146	198	13.00	26.00	Ortho Vitros Microslide Systems 37°C
	U/l	273	232	314	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	345	293	397	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
	U/l	281	239	323	21.00	42.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	291	248	334	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	301	256	346	22.50	45.00	Beckman Synchron AMY7 37°C
	U/l	294	250	338	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
	U/l	318	270	366	24.00	48.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	342	291	393	25.50	51.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	0.97	0.80	1.15	0.09	0.18	Immunoturbidimetric
	mg/dl	97.0	79.5	115	8.75	17.50	
Apolipoprotein B	g/l	0.60	0.49	0.70	0.05	0.11	Immunoturbidimetric
	mg/dl	59.6	48.9	70.3	5.35	10.70	
AST (GOT)	U/l	195	156	234	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
	U/l	229	183	275	23.00	46.00	Tris buffer with P5P 37°C
	U/l	155	124	186	15.50	31.00	Tris buffer with P5P 30°C
	U/l	109	87	131	11.00	22.00	Tris buffer with P5P 25°C
	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	96	77	115	9.50	19.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
	U/l	135	108	162	13.50	27.00	Tris buffer SCE 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer SCE 30°C
U/l	64	51	77	6.50	13.00	Tris buffer SCE 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Colorimetric
	mmol/l	20.2	16.1	24.3	2.05	4.10	Ortho Vitros Microslide Systems
	mmol/l	18.4	14.6	22.2	1.90	3.80	Differential rate pH change
	mmol/l	18.7	14.8	22.6	1.95	3.90	Enzymatic
	mmol/l	18.7	14.8	22.6	1.95	3.90	Ion selective electrode
Bile Acids	µmol/l	40.8	32.6	49.0	4.10	8.20	4th Generation Colorimetric
	µmol/l	44.0	35.2	52.8	4.40	8.80	5th Generation Colorimetric
Bilirubin Direct	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	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	31.4	24.8	38.0	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	1.45	2.23	0.20	0.39	
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Modified Jendrassik
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	76.0	60.1	91.9	7.95	15.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.45	3.52	5.38	0.47	0.93	
	µmol/l	74.2	58.7	89.7	7.75	15.50	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.34	3.43	5.25	0.46	0.91	
	µmol/l	94.1	74.3	114	9.90	19.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.50	4.35	6.65	0.58	1.15	
	µmol/l	84.5	66.7	102	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.94	3.90	5.98	0.52	1.04	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Total	µmol/l	95.9	75.8	116	10.05	20.10	Dichlorophenyl Diazonium (DPD)	
	mg/dl	5.61	4.43	6.79	0.59	1.18		
	µmol/l	81.6	64.4	98.8	8.60	17.20	Nitrobenzenediazonium salt	
	mg/dl	4.77	3.77	5.77	0.50	1.00		
	µmol/l	80.3	63.4	97.2	8.45	16.90	Diazonium ion	
	mg/dl	4.70	3.71	5.69	0.50	0.99		
	µmol/l	91.2	72.0	110	9.60	19.20	Oxidation to Biliverdin/Vanadate	
	mg/dl	5.34	4.21	6.47	0.57	1.13		
	µmol/l	97.9	77.3	119	10.30	20.60	Modified Jendrassik	
	mg/dl	5.73	4.52	6.94	0.61	1.21		
	Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Cresolphthalein complexone
		mg/dl	12.3	11.0	13.6	0.65	1.30	
mmol/l		3.05	2.75	3.35	0.15	0.30	Ortho Vitros Microslide Systems	
mg/dl		12.2	11.0	13.4	0.60	1.20		
mmol/l		2.98	2.68	3.28	0.15	0.30	Ion selective electrode	
mg/dl		11.9	10.7	13.1	0.60	1.20		
mmol/l		3.02	2.72	3.32	0.15	0.30	Methylthymol blue	
mg/dl		12.1	10.9	13.3	0.60	1.20		
mmol/l		3.08	2.77	3.39	0.16	0.31	Arsenazo III	
mg/dl		12.3	11.1	13.5	0.60	1.20		
mmol/l		3.10	2.79	3.41	0.16	0.31	NM-BAPTA	
mg/dl		12.4	11.2	13.6	0.60	1.20		
Chloride	mmol/l	114	105	123	4.50	9.00	Colorimetric	
	mmol/l	116	106	126	5.00	10.00	Ortho Vitros Microslide Systems	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.76	5.88	7.64	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	261	227	295	17.00	34.00	
	mmol/l	7.37	6.42	8.32	0.48	0.95	Cholesterol Oxidase
	mg/dl	284	248	320	18.00	36.00	
Cholinesterase	U/l	5046	4037	6055	504.50	1009.00	Ortho Vitros Microslide Systems 37°C
	U/l	5249	4199	6299	525.00	1050.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	441	362	520	39.50	79.00	Ortho Vitros Microslide Systems 37°C
	U/l	556	456	656	50.00	100.00	CK-NAC serum start (DGKC) 37°C
	U/l	348	285	411	31.50	63.00	CK-NAC serum start (DGKC) 30°C
	U/l	236	194	278	21.00	42.00	CK-NAC serum start (DGKC) 25°C
	U/l	536	440	632	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	336	275	397	30.50	61.00	CK-NAC substrate start (DGKC) 30°C
	U/l	228	187	269	20.50	41.00	CK-NAC substrate start (DGKC) 25°C
	U/l	553	453	653	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	346	284	408	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	235	193	277	21.00	42.00	CK-NAC (IFCC) 25°C
	U/l	562	461	663	50.50	101.00	Monothioglycerol 37°C
	U/l	352	289	415	31.50	63.00	Monothioglycerol 30°C
	U/l	239	196	282	21.50	43.00	Monothioglycerol 25°C
	U/l	511	419	603	46.00	92.00	Dithioerythritol 37°C
	U/l	320	262	378	29.00	58.00	Dithioerythritol 30°C
	U/l	217	178	256	19.50	39.00	Dithioerythritol 25°C
U/l	506	415	597	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C	
U/l	317	260	374	28.50	57.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	215	176	254	19.50	39.00	Dithioerythritol (DTE) IFCC correlated 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Copper	µmol/l	26.4	21.1	31.7	2.65	5.30	Atomic absorption
	µg/dl	168	134	202	17.00	34.00	
	µmol/l	26.0	20.8	31.2	2.60	5.20	Colorimetric
	µg/dl	165	132	198	16.50	33.00	
Cortisol	nmol/l	975	731	1219	122.00	244.00	Roche Cobas E411
	µg/dl	35.1	26.3	43.9	4.40	8.80	
Creatinine	µmol/l	342	273	411	34.50	69.00	Alkaline picrate with deproteinization
	mg/dl	3.86	3.08	4.64	0.39	0.78	
	µmol/l	370	296	444	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	394	316	472	39.00	78.00	Enzymatic UV method (340nm)
	mg/dl	4.45	3.57	5.33	0.44	0.88	
	µmol/l	394	315	473	39.50	79.00	Creatinine PAP method
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	399	319	479	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.24	3.39	5.09	0.43	0.85	
µmol/l	395	316	474	39.50	79.00	Vitros IDMS Traceable	
mg/dl	4.46	3.57	5.35	0.45	0.89		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	391	313	469	39.00	78.00	IDMS traceable
	mg/dl	4.42	3.54	5.30	0.44	0.88	
D-3-Hydroxybutyrate	mmol/l	1.16	0.99	1.33	0.09	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.69	2.95	4.43	0.37	0.74	Immunoturbidimetric
	ng/ml	2.88	2.30	3.46	0.29	0.58	
Folate	nmol/l	17.5	13.3	21.7	2.10	4.20	Roche Cobas E411
	ng/ml	7.72	5.87	9.57	0.93	1.85	
Free T4	pmol/l	42.1	31.5	52.7	5.30	10.60	Abbott Architect
	ng/dl	3.28	2.46	4.10	0.41	0.82	
	pg/ml	32.8	24.6	41.0	4.10	8.20	Abbott Architect
	pmol/l	56.9	42.7	71.1	7.10	14.20	Siemens Centaur XP/XPT/Classic
	ng/dl	4.44	3.33	5.55	0.56	1.11	
	pg/ml	44.4	33.3	55.5	5.55	11.10	Siemens Centaur XP/XPT/Classic
	pmol/l	55.9	41.9	69.9	7.00	14.00	Beckman Access
	ng/dl	4.36	3.27	5.45	0.55	1.09	
	pg/ml	43.6	32.7	54.5	5.45	10.90	Beckman Access
	pmol/l	62.9	47.2	78.6	7.85	15.70	Beckman Dxl800
	ng/dl	4.91	3.68	6.14	0.62	1.23	
	pg/ml	49.1	36.8	61.4	6.15	12.30	Beckman Dxl800
	pmol/l	60.8	45.6	76.0	7.60	15.20	Roche Elecsys
	ng/dl	4.74	3.56	5.92	0.59	1.18	
	pg/ml	47.4	35.6	59.2	5.90	11.80	Roche Elecsys
	pmol/l	60.1	45.0	75.2	7.55	15.10	Roche Modular E170
	ng/dl	4.69	3.51	5.87	0.59	1.18	
	pg/ml	46.9	35.1	58.7	5.90	11.80	Roche Modular E170

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	61.1	45.8	76.4	7.65	15.30	Roche Cobas E411
	ng/dl	4.77	3.57	5.97	0.60	1.20	
	pg/ml	47.7	35.7	59.7	6.00	12.00	Roche Cobas E411
	pmol/l	60.7	45.5	75.9	7.60	15.20	Roche Cobas 6000/8000
	ng/dl	4.73	3.55	5.91	0.59	1.18	
	pg/ml	47.3	35.5	59.1	5.90	11.80	Roche Cobas 6000/8000
	pmol/l	58.8	44.1	73.5	7.35	14.70	Biomerieux Vidas FT4N Kit
	ng/dl	4.59	3.44	5.74	0.58	1.15	
Gentamicin	µmol/l	16.4	13.1	19.7	1.65	3.30	Immunoturbidimetric
	µg/ml	7.84	6.26	9.42	0.79	1.58	
gamma-GT	U/l	161	137	185	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	127	108	146	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	85	113	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	202	172	232	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	139	118	160	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	86	73	99	6.50	13.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	115	157	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	106	90	122	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	179	152	206	13.50	27.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	141	120	162	10.50	21.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l	110	94	126	8.00	16.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
GLDH	U/l	31	24	38	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	24	18	30	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.7	12.5	16.9	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	265	225	305	20.00	40.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose dehydrogenase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.79	2.38	3.20	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	2.63	2.23	3.03	0.20	0.40	Vitros Magnetic HDL
	mg/dl	102	86.1	118	7.95	15.90	
	mmol/l	4.06	3.45	4.67	0.31	0.61	Direct HDL PEGME
	mg/dl	157	133	181	12.00	24.00	
	mmol/l	2.09	1.78	2.40	0.16	0.31	Direct Clearance Method
	mg/dl	80.7	68.7	92.7	6.00	12.00	
	mmol/l	2.68	2.28	3.08	0.20	0.40	Vitros 5.1 FS microtip assay
	mg/dl	103	88.0	118	7.50	15.00	
	mmol/l	2.67	2.27	3.07	0.20	0.40	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	103	87.6	118	7.70	15.40	
mmol/l	4.12	3.50	4.74	0.31	0.62	Direct HDL Roche 3rd generation	
mg/dl	159	135	183	12.00	24.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
HDL - Cholesterol	mmol/l	2.66	2.26	3.06	0.20	0.40	HDL - Ultra	
	mg/dl	103	87.2	119	7.90	15.80		
Immunoglobulin A	g/l	1.92	1.44	2.40	0.24	0.48	Immunoturbidimetric	
	mg/dl	192	144	240	24.00	48.00		
Immunoglobulin G	g/l	5.73	4.70	6.76	0.52	1.03	Immunoturbidimetric	
	mg/dl	573	470	676	51.50	103.00		
Immunoglobulin M	g/l	0.67	0.53	0.80	0.07	0.13	Immunoturbidimetric	
	mg/dl	66.6	53.3	79.9	6.65	13.30		
Iron	µmol/l	37.4	30.6	44.2	3.40	6.80	Colorimetric with ppt.	
	µg/dl	209	171	247	19.00	38.00		
	µmol/l	37.5	30.8	44.2	3.35	6.70	Colorimetric without ppt.	
	µg/dl	210	172	248	19.00	38.00		
	µmol/l	40.3	33.0	47.6	3.65	7.30	Ortho Vitros Microslide Systems	
	µg/dl	225	184	266	20.50	41.00		
	Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	Ion selective electrode
		mg/dl	47.6	39.0	56.2	4.30	8.60	
mmol/l		5.43	4.46	6.40	0.49	0.97	Colorimetric Lactate Oxidase	
mg/dl		48.9	40.2	57.6	4.35	8.70		
mmol/l		5.02	4.12	5.92	0.45	0.90	Ortho Vitros Microslide Systems	
mg/dl		45.2	37.1	53.3	4.05	8.10		
mmol/l		5.71	4.68	6.74	0.52	1.03	Enzymatic Electrode	
mg/dl		51.4	42.2	60.6	4.60	9.20		
mmol/l		5.48	4.49	6.47	0.50	0.99	UV LDH	
mg/dl		49.4	40.5	58.3	4.45	8.90		
LAP	U/l	15	13	17	1.00	2.00	NAGEL 37°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	1071	911	1231	80.00	160.00	Ortho Vitros Microslide Systems 37°C
	U/l	331	281	381	25.00	50.00	L->P 37°C
	U/l	239	203	275	18.00	36.00	L->P 30°C
	U/l	168	142	194	13.00	26.00	L->P 25°C
	U/l	781	664	898	58.50	117.00	P->L Scandinavian & Dutch 37°C
	U/l	564	479	649	42.50	85.00	P->L Scandinavian & Dutch 30°C
	U/l	396	337	455	29.50	59.00	P->L Scandinavian & Dutch 25°C
	U/l	702	597	807	52.50	105.00	P->L German methods 37°C
	U/l	507	431	583	38.00	76.00	P->L German methods 30°C
	U/l	356	303	409	26.50	53.00	P->L German methods 25°C
	U/l	721	613	829	54.00	108.00	P->L SFBC 37°C
	U/l	521	443	599	39.00	78.00	P->L SFBC 30°C
	U/l	366	311	421	27.50	55.00	P->L SFBC 25°C
	U/l	360	306	414	27.00	54.00	L->P IFCC 37°C
	U/l	260	221	299	19.50	39.00	L->P IFCC 30°C
U/l	183	155	211	14.00	28.00	L->P IFCC 25°C	
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
	U/l	757	607	907	75.00	150.00	Ortho Vitros Microslide Systems 37°C
	U/l	59	47	71	6.00	12.00	Roche Colorimetric 37°C
	U/l	89	72	106	8.50	17.00	Randox Colorimetric 37°C
	U/l	423	339	507	42.00	84.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.40	2.11	2.69	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.67	1.47	1.87	0.10	0.20	
	mmol/l	2.04	1.80	2.28	0.12	0.24	Ion selective electrode
	mg/dl	1.42	1.25	1.59	0.09	0.17	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lithium	mmol/l	2.00	1.76	2.24	0.12	0.24	Spectrophotometric
	mg/dl	1.39	1.22	1.56	0.09	0.17	
	mmol/l	2.02	1.78	2.26	0.12	0.24	Randox Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Arsenazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.78	1.56	2.00	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.33	3.79	4.87	0.27	0.54	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Calmagite
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.77	1.55	1.99	0.11	0.22	Xylidyl Blue
	mg/dl	4.30	3.77	4.83	0.27	0.53	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.74	1.54	1.94	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.23	3.74	4.72	0.25	0.49	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Enzymatic
	mg/dl	4.28	3.77	4.79	0.26	0.51	
NEFA	mmol/l	0.75	0.64	0.86	0.06	0.11	Colorimetric
Osmolality	mOsm/kg	350	280	420	35.00	70.00	Calculated
	mOsm/kg	384	307	461	38.50	77.00	Freezing point depression
Paracetamol	mmol/l	0.56	0.45	0.67	0.06	0.11	Colorimetric
	mg/l	84.4	67.5	101	8.45	16.90	
Phosphate Inorganic	mmol/l	2.24	1.91	2.57	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.94	5.92	7.96	0.51	1.02	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.07	6.01	8.13	0.53	1.06	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.94	5.92	7.96	0.51	1.02	
Potassium	mmol/l	6.14	5.65	6.63	0.25	0.49	Ortho Vitros Microslide Systems
	mmol/l	6.27	5.77	6.77	0.25	0.50	Enzymatic
	mmol/l	5.91	5.44	6.38	0.24	0.47	Flame photometry
	mmol/l	6.18	5.68	6.68	0.25	0.50	ISE method - direct
	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
	mmol/l	5.90	5.43	6.37	0.24	0.47	Colorimetric
Protein Total	g/l	46.9	37.5	56.3	4.70	9.40	Ortho Vitros Microslide Systems
	g/dl	4.69	3.75	5.63	0.47	0.94	
	g/l	45.8	36.6	55.0	4.60	9.20	Biuret reaction end point
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction kinetic
	g/dl	4.52	3.62	5.42	0.45	0.90	
PSA Total	ng/ml =	37.5	28.1	46.9	4.70	9.40	Roche Elecsys Modular E170
	ng/ml =	37.0	27.8	46.2	4.60	9.20	Beckman Access standardised to Hybritech
	ng/ml =	35.9	26.9	44.9	4.50	9.00	bioMerieux VIDAS TPSA
	ng/ml =	30.9	23.2	38.6	3.85	7.70	Siemens Centaur XP/XPT/Classic
	ng/ml =	31.9	23.9	39.9	4.00	8.00	Abbott Architect
	ng/ml =	39.9	30.0	49.8	4.95	9.90	Cobas E411
	ng/ml =	38.2	28.6	47.8	4.80	9.60	Roche Cobas 6000/8000
Salicylate	mmol/l	0.92	0.74	1.10	0.09	0.18	Enzymatic
	mg/dl	12.7	10.2	15.2	1.25	2.50	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Sodium	mmol/l	162	154	170	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	160	152	168	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry
	mmol/l	160	152	168	4.00	8.00	ISE method - direct
	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	147	118	176	14.50	29.00	Immunturbidimetric
	µg/ml	26.5	21.3	31.7	2.60	5.20	
Thyroid Stimulating Hormone	µU/ml =	0.96	0.77	1.16	0.10	0.19	Abbott Architect
	µU/ml =	1.32	1.05	1.59	0.14	0.27	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.26	1.01	1.51	0.13	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Siemens Immulite 1000
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Vitros ECi
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Roche Elecsys
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Modular E170
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Roche Cobas E411
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Roche Cobas 6000/8000
	µU/ml =	1.08	0.86	1.30	0.11	0.22	Beckman Dxl800 Hyper TSH
µU/ml =	1.06	0.85	1.27	0.10	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra	
TIBC	µmol/l	59.0	46.6	71.4	6.20	12.40	Removal of excess free iron
	µg/dl	330	260	400	35.00	70.00	
	µmol/l	62.8	49.6	76.0	6.60	13.20	FE+UIBC(saturation with iron)
	µg/dl	351	277	425	37.00	74.00	
	µmol/l	58.2	46.0	70.4	6.10	12.20	Direct Colorimetric
µg/dl	325	257	393	34.00	68.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	39.0	30.8	47.2	4.10	8.20	Calculated from Transferrin
	µg/dl	218	172	264	23.00	46.00	
	µmol/l	61.7	48.7	74.7	6.50	13.00	Randox Direct
	µg/dl	345	272	418	36.50	73.00	
Tobramycin	µmol/l	13.8	11.0	16.6	1.40	2.80	Immunoturbidimetric
	µg/ml	6.46	5.15	7.77	0.66	1.31	
Total T3	nmol/l	3.16	2.37	3.95	0.40	0.79	Abbott Architect
	ng/ml	2.06	1.54	2.58	0.26	0.52	
	ng/dl	206	154	258	26.00	52.00	Abbott Architect
	nmol/l	3.41	2.56	4.26	0.43	0.85	Beckman Access
	ng/ml	2.22	1.67	2.77	0.28	0.55	
	ng/dl	222	167	277	27.50	55.00	Beckman Access
	nmol/l	4.75	3.56	5.94	0.60	1.19	Siemens Centaur XP/XPT/Classic
	ng/ml	3.09	2.32	3.86	0.39	0.77	
	ng/dl	309	232	386	38.50	77.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.12	2.34	3.90	0.39	0.78	Beckman Dxl800
	ng/ml	2.03	1.52	2.54	0.26	0.51	
	ng/dl	203	152	254	25.50	51.00	Beckman Dxl800
	nmol/l	3.84	2.88	4.80	0.48	0.96	BioMerieux Vidas
	ng/ml	2.50	1.87	3.13	0.32	0.63	
	ng/dl	250	187	313	31.50	63.00	BioMerieux Vidas
	nmol/l	4.18	3.14	5.22	0.52	1.04	Roche Cobas E411
	ng/ml	2.72	2.04	3.40	0.34	0.68	
	ng/dl	272	204	340	34.00	68.00	Roche Cobas E411
nmol/l	4.10	3.07	5.13	0.52	1.03	Roche Cobas 6000/8000	
ng/ml	2.67	2.00	3.34	0.34	0.67		
ng/dl	267	200	334	33.50	67.00	Roche Cobas 6000/8000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	196	147	245	24.50	49.00	Abbott Architect
	µg/dl	15.3	11.5	19.1	1.90	3.80	
	ng/ml	153	115	191	19.00	38.00	Abbott Architect
	nmol/l	186	140	232	23.00	46.00	Siemens Centaur XP/XPT/Classic
	µg/dl	14.5	10.9	18.1	1.80	3.60	
	ng/ml	145	109	181	18.00	36.00	Siemens Centaur XP/XPT/Classic
	nmol/l	215	161	269	27.00	54.00	Beckman Access
	µg/dl	16.8	12.6	21.0	2.10	4.20	
	ng/ml	168	126	210	21.00	42.00	Beckman Access
	nmol/l	192	144	240	24.00	48.00	BioMerieux Vidas
	µg/dl	15.0	11.2	18.8	1.90	3.80	
	ng/ml	150	112	188	19.00	38.00	BioMerieux Vidas
	nmol/l	188	141	235	23.50	47.00	Siemens Immulite 1000
	µg/dl	14.7	11.0	18.4	1.85	3.70	
	ng/ml	147	110	184	18.50	37.00	Siemens Immulite 1000
	nmol/l	190	143	237	23.50	47.00	Siemens Immulite 2000/2500
	µg/dl	14.8	11.2	18.4	1.80	3.60	
	ng/ml	148	112	184	18.00	36.00	Siemens Immulite 2000/2500
	nmol/l	164	123	205	20.50	41.00	Roche Modular E170
	µg/dl	12.8	9.59	16.0	1.61	3.21	
ng/ml	128	95.9	160	16.05	32.10	Roche Modular E170	
nmol/l	180	135	225	22.50	45.00	Roche Cobas E411	
µg/dl	14.0	10.5	17.5	1.75	3.50		
ng/ml	140	105	175	17.50	35.00	Roche Cobas E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	164	123	205	20.50	41.00	Roche Cobas 6000/8000
	µg/dl	12.8	9.59	16.0	1.61	3.21	
	ng/ml	128	95.9	160	16.05	32.10	Roche Cobas 6000/8000
Transferrin	g/l	1.74	1.39	2.09	0.18	0.35	Immunoturbidimetric
	mg/dl	174	139	209	17.50	35.00	
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	
	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	257	216	298	20.50	41.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	2.96	2.48	3.44	0.24	0.48	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	262	219	305	21.50	43.00	
	mmol/l	2.96	2.48	3.44	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	262	219	305	21.50	43.00	
UIBC	µmol/l	25.0	20.5	29.5	2.25	4.50	Direct Colorimetric
	µg/dl	140	115	165	12.50	25.00	
Urea	mmol/l	17.4	14.8	20.0	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	88.9	121	8.05	16.10	
	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease end point
	mg/dl	109	93.2	125	7.90	15.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
mg/dl	113	96.2	130	8.40	16.80		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease hypochlorite	
	mg/dl	108	91.4	125	8.30	16.60		
	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease Berthelot	
	mg/dl	109	92.6	125	8.20	16.40		
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN	
	mg/dl	52.8	44.9	60.7	3.95	7.90		
	Uric Acid (Urate)	mmol/l	0.52	0.46	0.59	0.03	0.07	Ortho Vitros Microslide Systems
		mg/dl	8.80	7.64	9.96	0.58	1.16	
mmol/l		0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm	
mg/dl		9.17	7.98	10.4	0.60	1.19		
mmol/l		0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase	
mg/dl		9.41	8.20	10.6	0.61	1.21		
mmol/l		0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase	
mg/dl		9.21	8.01	10.4	0.60	1.20		
mmol/l		0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290	
mg/dl		9.12	7.95	10.3	0.59	1.17		
mmol/l		0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		9.21	8.01	10.4	0.60	1.20		
Vitamin B12	pmol/l	260	208	312	26.00	52.00	Roche Cobas E411	
	pg/ml	352	282	422	35.00	70.00		
Zinc	µmol/l	31.7	25.4	38.0	3.15	6.30	Atomic absorption	
	µg/dl	207	166	248	20.50	41.00		
	µmol/l	31.6	25.3	37.9	3.15	6.30	Colorimetric with deproteinisation	
	µg/dl	206	165	247	20.50	41.00		

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin (electrophoresis)		59.7	53.8	65.6	2.95	5.90	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.2	4.7	7.7	0.75	1.49	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.4	4.9	7.9	0.77	1.54	% of total Protein (Beckman Capillary)
beta-globulin		16.2	12.3	20.1	1.95	3.90	% of total Protein (Beckman Capillary)
gamma-globulin		11.5	8.7	14.3	1.38	2.76	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	417	354	480	31.50	63.00	Diethanolamine buffer DEA 37°C
	U/l	325	276	374	24.50	49.00	Diethanolamine buffer DEA 30°C
	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 25°C
	U/l	329	279	379	25.00	50.00	AMP optimised to IFCC 37°C
	U/l	256	217	295	19.50	39.00	AMP optimised to IFCC 30°C
	U/l	210	178	242	16.00	32.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	106	84	128	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	64	98	8.50	17.00	Tris buffer without P5P 25°C
Amylase Total	U/l	287	244	330	21.50	43.00	pNP Maltotrioxide substrates 37°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	32.4	25.6	39.2	3.40	6.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Bilirubin Total	µmol/l	90.8	71.8	110	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.31	4.20	6.42	0.56	1.11	
	µmol/l	87.6	69.2	106	9.20	18.40	Oxidation to Biliverdin/Vanadate
	mg/dl	5.12	4.05	6.19	0.54	1.07	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Calcium	mmol/l	2.93	2.63	3.23	0.15	0.30	Cresolphthalein complexone	
	mg/dl	11.7	10.5	12.9	0.60	1.20		
	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III	
	mg/dl	12.5	11.3	13.7	0.60	1.20		
Cholesterol	mmol/l	7.29	6.34	8.24	0.48	0.95	Cholesterol Oxidase	
	mg/dl	281	245	317	18.00	36.00		
CK Total	U/l	546	448	644	49.00	98.00	CK-NAC (IFCC) 37°C	
	U/l	342	280	404	31.00	62.00	CK-NAC (IFCC) 30°C	
	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	343	275	411	34.00	68.00	Alkaline picrate with deproteinization	
	mg/dl	3.88	3.11	4.65	0.39	0.77		
	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization	
	mg/dl	4.21	3.38	5.04	0.42	0.83		
	µmol/l	393	314	472	39.50	79.00	Enzymatic UV method (340nm)	
	mg/dl	4.44	3.55	5.33	0.45	0.89		
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked	
	mg/dl	4.29	3.44	5.14	0.43	0.85		
	µmol/l	321	257	385	32.00	64.00	Agappe - Jaffe Kinetic	
	mg/dl	3.63	2.90	4.36	0.37	0.73		
	gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
		U/l	132	112	152	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
U/l		103	88	118	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase	
	mg/dl	285	243	327	21.00	42.00		
	mmol/l	15.8	13.5	18.1	1.15	2.30	Glucose oxidase	
	mg/dl	285	243	327	21.00	42.00		

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	36.9	30.2	43.6	3.35	6.70	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
LD (LDH)	U/l	754	641	867	56.50	113.00	P->L German methods 37°C
	U/l	544	463	625	40.50	81.00	P->L German methods 30°C
	U/l	382	325	439	28.50	57.00	P->L German methods 25°C
	U/l	717	610	824	53.50	107.00	P->L SFBC 37°C
	U/l	518	440	596	39.00	78.00	P->L SFBC 30°C
	U/l	364	309	419	27.50	55.00	P->L SFBC 25°C
	U/l	357	303	411	27.00	54.00	L->P IFCC 37°C
	U/l	258	219	297	19.50	39.00	L->P IFCC 30°C
Magnesium	mmol/l	1.65	1.46	1.84	0.10	0.19	Xylidyl Blue
	mg/dl	4.01	3.55	4.47	0.23	0.46	
Phosphate Inorganic	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.88	5.83	7.93	0.53	1.05	
	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.88	5.83	7.93	0.53	1.05	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.5	38.0	57.0	4.75	9.50	Biuret reaction end point
	g/dl	4.75	3.80	5.70	0.48	0.95	
	g/l	46.7	37.3	56.1	4.70	9.40	Biuret reaction kinetic
	g/dl	4.67	3.73	5.61	0.47	0.94	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	243	204	282	19.50	39.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease hypochlorite
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
Alkaline Phosphatase	U/l	448	381	515	33.50	67.00	Diethanolamine buffer DEA 37°C
	U/l	349	297	401	26.00	52.00	Diethanolamine buffer DEA 30°C
	U/l	286	243	329	21.50	43.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	65	99	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Bilirubin Total	µmol/l	83.0	65.5	101	8.75	17.50	Diazo with Dichloroaniline (DCA)
	mg/dl	4.86	3.83	5.89	0.52	1.03	
Cholesterol	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase
	mg/dl	285	248	322	18.50	37.00	
CK Total	U/l	563	462	664	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	376	301	451	37.50	75.00	Creatinine PAP method
	mg/dl	4.25	3.40	5.10	0.43	0.85	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	398	318	478	40.00	80.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.50	3.59	5.41	0.46	0.91	
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.34	1.99	2.69	0.18	0.35	Direct HDL Immunoseparation
	mg/dl	90.3	76.8	104	6.75	13.50	
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.51	0.44	0.57	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.53	7.43	9.63	0.55	1.10	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.21	0.41	
	g/l	26.4	22.4	30.4	2.00	4.00	Turbidimetric Assays
	g/dl	2.64	2.24	3.04	0.20	0.40	
Alkaline Phosphatase	U/l	218	185	251	16.50	33.00	Roche Integra AMP buffer 37°C
	U/l	170	144	196	13.00	26.00	Roche Integra AMP buffer 30°C
	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	131	104	158	13.50	27.00	Tris buffer without P5P 37°C
	U/l	97	77	117	10.00	20.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	250	212	288	19.00	38.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	275	233	317	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.7	14.8	22.6	1.95	3.90	Colorimetric

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Enzymatic
Bile Acids	µmol/l	42.3	33.8	50.8	4.25	8.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Roche JG factored
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin Total	µmol/l	80.0	63.2	96.8	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.68	3.70	5.66	0.49	0.98	
	µmol/l	79.7	63.0	96.4	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.66	3.69	5.63	0.49	0.97	
	µmol/l	80.0	63.2	96.8	8.40	16.80	Diazonium ion
	mg/dl	4.68	3.70	5.66	0.49	0.98	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.10	2.79	3.41	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	5156	4125	6187	515.50	1031.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	561	460	662	50.50	101.00	CK-NAC substrate start (DGKC) 37°C
	U/l	351	288	414	31.50	63.00	CK-NAC substrate start (DGKC) 30°C
	U/l	238	196	280	21.00	42.00	CK-NAC substrate start (DGKC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	562	461	663	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	394	315	473	39.50	79.00	Alkaline picrate no deproteinization
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	402	322	482	40.00	80.00	Enzymatic UV method (340nm)
	mg/dl	4.54	3.64	5.44	0.45	0.90	
	µmol/l	400	320	480	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
D-3-Hydroxybutyrate	µmol/l	383	307	459	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.33	3.47	5.19	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.19	1.01	1.37	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	60.7	45.5	75.9	7.60	15.20	Roche Cobas 6000/8000
	ng/dl	4.73	3.55	5.91	0.59	1.18	
	pg/ml	47.3	35.5	59.1	5.90	11.80	Roche Cobas 6000/8000
gamma-GT	U/l	152	129	175	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	120	102	138	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	94	80	108	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	116	156	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
GLDH	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
HDL - Cholesterol	mg/dl	285	241	329	22.00	44.00	
	mmol/l	4.10	3.49	4.71	0.31	0.61	Direct HDL PEGME
	mg/dl	158	135	181	11.50	23.00	
HDL - Cholesterol	mmol/l	4.16	3.54	4.78	0.31	0.62	Direct HDL Roche 3rd generation
	mg/dl	161	137	185	12.00	24.00	
	mmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric with ppt.
Iron	µg/dl	205	168	242	18.50	37.00	
	µmol/l	37.4	30.7	44.1	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	172	246	18.50	37.00	
Lactate	mmol/l	5.41	4.43	6.39	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.9	57.5	4.40	8.80	
LD (LDH)	U/l	686	583	789	51.50	103.00	P->L German methods 37°C
	U/l	495	421	569	37.00	74.00	P->L German methods 30°C
	U/l	348	296	400	26.00	52.00	P->L German methods 25°C
	U/l	359	305	413	27.00	54.00	L->P IFCC 37°C
	U/l	259	220	298	19.50	39.00	L->P IFCC 30°C
	U/l	182	155	209	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
	U/l	56	45	67	5.50	11.00	Roche Turbidimetric with colipase 37°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lithium	mmol/l	2.03	1.78	2.28	0.13	0.25	Spectrophotometric
	mg/dl	1.41	1.24	1.58	0.09	0.17	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Osmolality	mOsm/kg	354	284	424	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.30	5.80	6.80	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction end point
	g/dl	4.52	3.62	5.42	0.45	0.90	
	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	
PSA Total	ng/ml =	38.2	28.6	47.8	4.80	9.60	Roche Cobas 6000/8000
Sodium	mmol/l	163	154	172	4.50	9.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.29	1.03	1.55	0.13	0.26	Roche Cobas 6000/8000
TIBC	µmol/l	62.2	49.1	75.3	6.55	13.10	FE+UIBC(saturation with iron)
	µg/dl	348	274	422	37.00	74.00	
	µmol/l	39.7	31.3	48.1	4.20	8.40	Calculated from Transferrin
	µg/dl	222	175	269	23.50	47.00	
Total T3	nmol/l	4.10	3.07	5.13	0.52	1.03	Roche Cobas 6000/8000
	ng/ml	2.67	2.00	3.34	0.34	0.67	
	ng/dl	267	200	334	33.50	67.00	Roche Cobas 6000/8000

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	164	123	205	20.50	41.00	Roche Cobas 6000/8000
	µg/dl	12.8	9.59	16.0	1.61	3.21	
	ng/ml	128	95.9	160	16.05	32.10	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	L/G Kinase EP. no correction
UIBC	mg/dl	253	212	294	20.50	41.00	
	µmol/l	24.7	20.3	29.1	2.20	4.40	Direct Colorimetric
	µg/dl	138	113	163	12.50	25.00	
Urea	mmol/l	18.8	15.9	21.7	1.45	2.90	Urease kinetic
	mg/dl	113	95.6	130	8.70	17.40	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	7.90	10.2	0.59	1.17	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.23	0.45	
Alkaline Phosphatase	U/l	208	177	239	15.50	31.00	Roche Integra AMP buffer 37°C
	U/l	162	138	186	12.00	24.00	Roche Integra AMP buffer 30°C
	U/l	133	113	153	10.00	20.00	Roche Integra AMP buffer 25°C
	U/l	226	192	260	17.00	34.00	AMP optimised to IFCC 37°C
	U/l	176	150	202	13.00	26.00	AMP optimised to IFCC 30°C
	U/l	144	123	165	10.50	21.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	128	103	153	12.50	25.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	282	240	324	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	92	74	110	9.00	18.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.3	21.5	33.1	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Roche JG factored
	mg/dl	1.63	1.29	1.97	0.17	0.34	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	80.5	63.6	97.4	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.71	3.72	5.70	0.50	0.99	
	µmol/l	79.7	62.9	96.5	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.66	3.68	5.64	0.49	0.98	
	µmol/l	79.8	63.0	96.6	8.40	16.80	Diazonium ion
	mg/dl	4.67	3.69	5.65	0.49	0.98	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.07	2.76	3.38	0.16	0.31	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.49	6.52	8.46	0.49	0.97	Cholesterol Oxidase
	mg/dl	289	252	326	18.50	37.00	
CK Total	U/l	569	466	672	51.50	103.00	CK-NAC (IFCC) 37°C
	U/l	356	292	420	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	354	283	425	35.50	71.00	Alkaline picrate with deproteinization
	mg/dl	4.00	3.20	4.80	0.40	0.80	
	µmol/l	346	277	415	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.91	3.13	4.69	0.39	0.78	
	µmol/l	395	316	474	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.46	3.57	5.35	0.45	0.89	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	350	280	420	35.00	70.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.96	3.16	4.76	0.40	0.80	
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	131	111	151	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	87	117	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	3.92	3.33	4.51	0.30	0.59	Direct HDL Roche 3rd generation
	mg/dl	151	129	173	11.00	22.00	
Iron	µmol/l	37.6	30.8	44.4	3.40	6.80	Colorimetric without ppt.
	µg/dl	210	172	248	19.00	38.00	
LD (LDH)	U/l	371	315	427	28.00	56.00	L->P IFCC 37°C
	U/l	268	227	309	20.50	41.00	L->P IFCC 30°C
	U/l	188	160	216	14.00	28.00	L->P IFCC 25°C
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Chlorophosphonazo III
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.18	5.69	6.67	0.25	0.49	ISE method - indirect
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.90	2.43	3.37	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	257	215	299	21.00	42.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease kinetic
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease hypochlorite
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	BUN
	mg/dl	50.8	43.2	58.4	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.03	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.19	8.00	10.4	0.60	1.19	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Purple
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	215	182	248	16.50	33.00	Roche Integra AMP buffer 37°C
	U/l	167	142	192	12.50	25.00	Roche Integra AMP buffer 30°C
	U/l	137	116	158	10.50	21.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	255	217	293	19.00	38.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.7	14.1	21.3	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	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	20.4	31.4	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.19	1.85	0.17	0.33	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	80.3	63.4	97.2	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.70	3.71	5.69	0.50	0.99	
	µmol/l	79.4	62.8	96.0	8.30	16.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.64	3.67	5.61	0.49	0.97	
Calcium	µmol/l	80.1	63.2	97.0	8.45	16.90	Diazonium ion
	mg/dl	4.69	3.70	5.68	0.50	0.99	
	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
		mg/dl	12.6	11.3	13.9	0.65	
mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III	
	mg/dl	12.4	11.1	13.7	0.65		1.30
mmol/l	3.12	2.80	3.44	0.16	0.32	NM-BAPTA	
	mg/dl	12.5	11.2	13.8	0.65		1.30
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase
	mg/dl	285	248	322	18.50	37.00	
Cholinesterase	U/l	5349	4279	6419	535.00	1070.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	565	463	667	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	354	290	418	32.00	64.00	CK-NAC (IFCC) 30°C
	U/l	240	197	283	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	381	305	457	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	396	317	475	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.47	3.58	5.36	0.45	0.89	
µmol/l	404	323	485	40.50	81.00	Roche Creatinine Plus	
	mg/dl	4.57	3.65	5.49	0.46		0.92

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	396	317	475	39.50	79.00	Jaffe rate blanked
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	387	310	464	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	3.50	5.24	0.44	0.87	
gamma-GT	U/l	154	131	177	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	103	139	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	95	81	109	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	115	157	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	106	90	122	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	4.00	3.40	4.60	0.30	0.60	Direct HDL PEGME
	mg/dl	154	131	177	11.50	23.00	
	mmol/l	3.99	3.40	4.58	0.30	0.59	Direct HDL Roche 3rd generation
	mg/dl	154	131	177	11.50	23.00	
Iron	µmol/l	37.0	30.3	43.7	3.35	6.70	Colorimetric without ppt.
	µg/dl	207	169	245	19.00	38.00	
Lactate	mmol/l	5.49	4.51	6.47	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.6	58.4	4.45	8.90	
LD (LDH)	U/l	674	573	775	50.50	101.00	P->L German methods 37°C
	U/l	487	414	560	36.50	73.00	P->L German methods 30°C
	U/l	342	291	393	25.50	51.00	P->L German methods 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	355	301	409	27.00	54.00	L->P IFCC 37°C
	U/l	256	217	295	19.50	39.00	L->P IFCC 30°C
	U/l	180	153	207	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	58	47	69	5.50	11.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.31	5.81	6.81	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction end point
	g/dl	4.52	3.62	5.42	0.45	0.90	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.6	26.0	35.2	2.30	4.60	Bromocresol Green
	g/dl	3.06	2.60	3.52	0.23	0.46	
Alkaline Phosphatase	U/l	184	157	211	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	250	213	287	18.50	37.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	276	235	317	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.5	14.7	22.3	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Bilirubin Total	µmol/l	78.2	61.8	94.6	8.20	16.40	Diazo with Sulphanilic Acid
	mg/dl	4.57	3.62	5.52	0.48	0.95	
	µmol/l	77.9	61.5	94.3	8.20	16.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	77.6	61.3	93.9	8.15	16.30	Diazonium ion
	mg/dl	4.54	3.59	5.49	0.48	0.95	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.06	2.75	3.37	0.16	0.31	NM-BAPTA
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.30	6.36	8.24	0.47	0.94	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
CK Total	U/l	511	419	603	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	320	262	378	29.00	58.00	CK-NAC (IFCC) 30°C
	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	398	319	477	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.50	3.60	5.40	0.45	0.90	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.34	3.47	5.21	0.44	0.87	
gamma-GT	U/l	145	123	167	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	114	97	131	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	89	76	102	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	135	114	156	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	106	89	123	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	4.02	3.42	4.62	0.30	0.60	Direct HDL Roche 3rd generation
	mg/dl	155	132	178	11.50	23.00	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	36.9	30.3	43.5	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
Lactate	mmol/l	5.43	4.45	6.41	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.9	40.1	57.7	4.40	8.80	
LD (LDH)	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
	U/l	255	217	293	19.00	38.00	L->P IFCC 30°C
	U/l	179	152	206	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.04	1.80	2.28	0.12	0.24	Spectrophotometric
	mg/dl	1.42	1.25	1.59	0.09	0.17	
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.31	5.80	6.82	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	62.0	49.0	75.0	6.50	13.00	FE+UIBC(saturation with iron)
	µg/dl	347	274	420	36.50	73.00	
	µmol/l	40.0	31.6	48.4	4.20	8.40	Calculated from Transferrin
	µg/dl	224	177	271	23.50	47.00	
Triglycerides	mmol/l	2.90	2.43	3.37	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	257	215	299	21.00	42.00	
Urea	mmol/l	18.5	15.8	21.2	1.35	2.70	Urease kinetic
	mg/dl	111	95.0	127	8.00	16.00	



Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.02	7.85	10.2	0.59	1.17	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.95	7.80	10.1	0.58	1.15	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.1	25.5	34.7	2.30	4.60	Bromocresol Green
	g/dl	3.01	2.55	3.47	0.23	0.46	
Alkaline Phosphatase	U/l	522	444	600	39.00	78.00	Diethanolamine buffer DEA 37°C
	U/l	323	275	371	24.00	48.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	132	106	158	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	291	247	335	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	22.4	17.8	27.0	2.30	4.60	Enzymatic
Bile Acids	µmol/l	44.0	35.2	52.8	4.40	8.80	5th Generation Colorimetric
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Bilirubin Total	µmol/l	90.1	71.2	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.27	4.17	6.37	0.55	1.10	
	µmol/l	92.8	73.3	112	9.75	19.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.43	4.29	6.57	0.57	1.14	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.64	6.65	8.63	0.50	0.99	Cholesterol Oxidase
	mg/dl	295	257	333	19.00	38.00	
CK Total	U/l	543	445	641	49.00	98.00	CK-NAC substrate start (DGKC) 37°C
	U/l	588	482	694	53.00	106.00	
Creatinine	µmol/l	326	261	391	32.50	65.00	Alkaline picrate no deproteinization
	mg/dl	3.68	2.95	4.41	0.37	0.73	
	µmol/l	391	313	469	39.00	78.00	Enzymatic UV method (340nm)
	mg/dl	4.42	3.54	5.30	0.44	0.88	
gamma-GT	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	16.5	14.0	19.0	1.25	2.50	Glucose oxidase
	mg/dl	297	252	342	22.50	45.00	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.30	4.35	6.25	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.8	39.2	56.4	4.30	8.60	
LD (LDH)	U/l	746	634	858	56.00	112.00	P->L German methods 37°C
	U/l	360	306	414	27.00	54.00	
Lipase	U/l	93	74	112	9.50	19.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.02	1.78	2.26	0.12	0.24	Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.23	1.90	2.56	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.91	5.89	7.93	0.51	1.02	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.27	5.77	6.77	0.25	0.50	Enzymatic
	mmol/l	6.17	5.67	6.67	0.25	0.50	ISE method - direct
Protein Total	g/l	46.5	37.2	55.8	4.65	9.30	Biuret reaction end point
	g/dl	4.65	3.72	5.58	0.47	0.93	
Sodium	mmol/l	163	155	171	4.00	8.00	Enzymatic
	mmol/l	160	152	168	4.00	8.00	ISE method - direct
TIBC	µmol/l	61.7	48.7	74.7	6.50	13.00	Direct Colorimetric
	µg/dl	345	272	418	36.50	73.00	
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	265	222	308	21.50	43.00	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.58	8.33	10.8	0.63	1.25	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.46	8.23	10.7	0.62	1.23	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.4	24.1	32.7	2.15	4.30	Bromocresol Green
	g/dl	2.84	2.41	3.27	0.22	0.43	
	g/l	27.1	23.1	31.1	2.00	4.00	Bromocresol Purple
	g/dl	2.71	2.31	3.11	0.20	0.40	
Alkaline Phosphatase	U/l	259	220	298	19.50	39.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	261	222	300	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	289	246	332	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	144	116	172	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	21.3	16.9	25.7	2.20	4.40	Enzymatic
Bilirubin Direct	µmol/l	31.3	24.7	37.9	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Bilirubin Total	µmol/l	90.8	71.7	110	9.55	19.10	Oxidation to Biliverdin/Vanadate
	mg/dl	5.31	4.19	6.43	0.56	1.12	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.47	6.50	8.44	0.49	0.97	Cholesterol Oxidase
	mg/dl	288	251	325	18.50	37.00	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholinesterase	U/l	5537	4429	6645	554.00	1108.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	533	437	629	48.00	96.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	375	300	450	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
mg/dl	4.24	3.39	5.09	0.43	0.85		
gamma-GT	U/l	169	144	194	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.10	1.78	2.42	0.16	0.32	Direct Clearance Method
	mg/dl	81.1	68.7	93.5	6.20	12.40	
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.50	39.00	
Lactate	mmol/l	5.54	4.54	6.54	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.9	40.9	58.9	4.50	9.00	
LD (LDH)	U/l	348	296	400	26.00	52.00	L->P 37°C
	U/l	702	597	807	52.50	105.00	P->L German methods 37°C
	U/l	362	307	417	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	81	65	97	8.00	16.00	Other Colorimetric 37°C
Lithium	mmol/l	1.94	1.71	2.17	0.12	0.23	Spectrophotometric
	mg/dl	1.35	1.19	1.51	0.08	0.16	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Osmolality	mOsm/kg	348	279	417	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.30	5.79	6.81	0.26	0.51	ISE method - indirect
Protein Total	g/l	47.1	37.7	56.5	4.70	9.40	Biuret reaction end point
	g/dl	4.71	3.77	5.65	0.47	0.94	
Sodium	mmol/l	163	154	172	4.50	9.00	ISE method - indirect
TIBC	μmol/l	61.6	48.6	74.6	6.50	13.00	Direct Colorimetric
	μg/dl	344	272	416	36.00	72.00	
Triglycerides	mmol/l	3.11	2.61	3.61	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	275	231	319	22.00	44.00	
	mmol/l	3.06	2.57	3.55	0.25	0.49	L/G Kinase EP. no correction
Urea	mg/dl	271	227	315	22.00	44.00	Urease kinetic
	mmol/l	18.9	16.1	21.7	1.40	2.80	
	mg/dl	114	96.8	131	8.60	17.20	
Uric Acid (Urate)	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	
	mmol/l	0.55	0.48	0.63	0.04	0.07	
Uric Acid (Urate)	mg/dl	9.31	8.10	10.5	0.61	1.21	Uricase peroxidase no ascorbate oxidase

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	27.1	23.1	31.1	2.00	4.00	Bromocresol Purple
	g/dl	2.71	2.31	3.11	0.20	0.40	
Alkaline Phosphatase	U/l	267	227	307	20.00	40.00	Siemens Dimension AMP buffer 37°C
	U/l	265	225	305	20.00	40.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	150	120	180	15.00	30.00	Tris buffer with P5P 37°C
	U/l	152	122	182	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	345	293	397	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	195	156	234	19.50	39.00	Tris buffer with P5P 37°C
	U/l	197	158	236	19.50	39.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	20.4	16.2	24.6	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	84.1	66.5	102	8.80	17.60	Diazo with Sulphanilic Acid
	mg/dl	4.92	3.89	5.95	0.52	1.03	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
	mmol/l	6.98	6.08	7.88	0.45	0.90	Dimension-Siemens reagents
	mg/dl	269	235	303	17.00	34.00	

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	518	425	611	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	506	415	597	45.50	91.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	394	316	472	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.45	3.57	5.33	0.44	0.88	
	µmol/l	386	309	463	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	393	315	471	39.00	78.00	
mg/dl	4.44	3.56	5.32	0.44	0.88		
gamma-GT	U/l	175	149	201	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	205	175	235	15.00	30.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	4.00	3.40	4.60	0.30	0.60	Direct HDL PPD
	mg/dl	154	131	177	11.50	23.00	
	mmol/l	4.04	3.44	4.64	0.30	0.60	Direct HDL PEGME
	mg/dl	156	133	179	11.50	23.00	
Iron	µmol/l	36.2	29.7	42.7	3.25	6.50	Colorimetric with ppt.
	µg/dl	202	166	238	18.00	36.00	
	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	165	239	18.50	37.00	
Lactate	mmol/l	5.40	4.43	6.37	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.9	57.5	4.40	8.80	
	mmol/l	5.60	4.59	6.61	0.51	1.01	UV LDH
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	351	298	404	26.50	53.00	Siemens Dimension L-P Non IFCC 37°C

Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	347	295	399	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	263	211	315	26.00	52.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Methylthymol blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction end point
	g/dl	4.70	3.76	5.64	0.47	0.94	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.96	2.49	3.43	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	262	220	304	21.00	42.00	
	mmol/l	2.95	2.47	3.43	0.24	0.48	
mg/dl	261	219	303	21.00	42.00	Lipase/Glycerol Dehydrogenase	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.87	7.71	10.0	0.58	1.16	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.14	7.95	10.3	0.60	1.19	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
	g/l	27.4	23.3	31.5	2.05	4.10	Bromocresol Purple
	g/dl	2.74	2.33	3.15	0.21	0.41	
Alkaline Phosphatase	U/l	261	222	300	19.50	39.00	Siemens Dimension AMP buffer 37°C
	U/l	265	225	305	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	265	225	305	20.00	40.00	Randox AMP 37°C
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer with P5P 37°C
	U/l	151	121	181	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	346	294	398	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	194	156	232	19.00	38.00	Tris buffer with P5P 37°C
	U/l	200	160	240	20.00	40.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	21.3	16.9	25.7	2.20	4.40	Enzymatic
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	
Bilirubin Total	µmol/l	83.6	66.0	101	8.80	17.60	Diazo with Sulphanilic Acid
	mg/dl	4.89	3.86	5.92	0.52	1.03	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	118	108	128	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.03	6.12	7.94	0.46	0.91	Dimension-Siemens reagents
	mg/dl	271	236	306	17.50	35.00	


SIEMENS DIMENSION RxL/Max/Xpand®
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	515	423	607	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	515	422	608	46.50	93.00	Dithioerythritol 37°C
Creatinine	µmol/l	399	319	479	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	388	311	465	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	402	322	482	40.00	80.00	Jaffe rate blanked
	mg/dl	4.54	3.64	5.44	0.45	0.90	
gamma-GT	µmol/l	386	309	463	38.50	77.00	IDMS traceable
	mg/dl	4.36	3.49	5.23	0.44	0.87	
glucose	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	201	171	231	15.00	30.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	4.00	3.40	4.60	0.30	0.60	Direct HDL PPD
	mg/dl	154	131	177	11.50	23.00	
	mmol/l	4.13	3.51	4.75	0.31	0.62	Direct HDL PEGME
	mg/dl	159	135	183	12.00	24.00	
	mmol/l	3.65	3.10	4.20	0.28	0.55	Direct Clearance Method
	mg/dl	141	120	162	10.50	21.00	
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.40	4.42	6.38	0.49	0.98	UV LDH
	mg/dl	48.7	39.8	57.6	4.45	8.90	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	351	298	404	26.50	53.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	343	291	395	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	260	209	311	25.50	51.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.78	1.57	1.99	0.11	0.21	Methylthymol blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.25	6.17	8.33	0.54	1.08	
	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.1	37.7	56.5	4.70	9.40	Biuret reaction end point
	g/dl	4.71	3.77	5.65	0.47	0.94	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	55.6	43.9	67.3	5.85	11.70	Removal of excess free iron
	µg/dl	311	245	377	33.00	66.00	
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	265	222	308	21.50	43.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	263	220	306	21.50	43.00	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease end point
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease kinetic
	mg/dl	114	97.4	131	8.30	16.60	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 884UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2020-08-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.11	7.93	10.3	0.59	1.18	