

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. 875UE	EXPIRY: 2020-07-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Bromocresol Green
	g/dl	2.86	2.43	3.29	0.22	0.43	
	g/l	26.4	22.4	30.4	2.00	4.00	Bromocresol Purple
	g/dl	2.64	2.24	3.04	0.20	0.40	
Alkaline Phosphatase	U/l	275	234	316	20.50	41.00	AMP optimised to IFCC 37°C
	U/l	268	228	308	20.00	40.00	AMP non-optimised 37°C
ALT (GPT)	U/l	127	102	152	12.50	25.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	270	229	311	20.50	41.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	327	278	376	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	363	308	418	27.50	55.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.1	15.2	23.0	1.95	3.90	Enzymatic
Bile Acids	µmol/l	51.5	41.2	61.8	5.15	10.30	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.5	21.7	33.3	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Bilirubin Total	µmol/l	88.8	70.2	107	9.30	18.60	Diazo with Dichloroaniline (DCA)
	mg/dl	5.19	4.11	6.27	0.54	1.08	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	91.5	72.3	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.35	4.23	6.47	0.56	1.12	
	µmol/l	88.1	69.6	107	9.25	18.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.15	4.07	6.23	0.54	1.08	
	µmol/l	88.7	70.1	107	9.30	18.60	Diazonium ion
	mg/dl	5.19	4.10	6.28	0.55	1.09	
Calcium	mmol/l	3.07	2.77	3.37	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
Cholinesterase	U/l	6177	4942	7412	617.50	1235.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	623	511	735	56.00	112.00	CK-NAC serum start (DGKC) 37°C
	U/l	605	496	714	54.50	109.00	
Copper	µmol/l	20.1	16.1	24.1	2.00	4.00	Colorimetric
	µg/dl	128	102	154	13.00	26.00	
Creatinine	µmol/l	400	320	480	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	394	315	473	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	387	309	465	39.00	78.00	Creatinine PAP method
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	399	319	479	40.00	80.00	Jaffe rate blanked
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	400	320	480	40.00	80.00	IDMS traceable
	mg/dl	4.52	3.62	5.42	0.45	0.90	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Free T4	pmol/l	44.6	33.4	55.8	5.60	11.20	Abbott Architect
	ng/dl	3.48	2.61	4.35	0.44	0.87	
	pg/ml	34.8	26.1	43.5	4.35	8.70	Abbott Architect
gamma-GT	U/l	159	135	183	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	159	135	183	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	159	135	183	12.00	24.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 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	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.77	2.35	3.19	0.21	0.42	Direct HDL PPD
	mg/dl	107	90.7	123	8.15	16.30	
	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	2.72	2.31	3.13	0.21	0.41	HDL - Ultra
mg/dl	105	89.2	121	7.90	15.80		
Iron	µmol/l	37.5	30.7	44.3	3.40	6.80	Colorimetric with ppt.
	µg/dl	210	172	248	19.00	38.00	
	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
Lactate	mmol/l	5.53	4.53	6.53	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.8	40.8	58.8	4.50	9.00	
LD (LDH)	U/l	381	324	438	28.50	57.00	L->P 37°C
	U/l	381	324	438	28.50	57.00	L->P IFCC 37°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	57	46	68	5.50	11.00	Other Colorimetric 37°C
Lithium	mmol/l	2.08	1.83	2.33	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.09	0.17	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Arsenazo III
	mg/dl	4.16	3.65	4.67	0.26	0.51	
	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	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Enzymatic
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Osmolality	mOsm/kg	352	282	422	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.91	5.86	7.96	0.53	1.05	
	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	6.10	5.61	6.59	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction end point
	g/dl	4.39	3.51	5.27	0.44	0.88	
	g/l	44.7	35.7	53.7	4.50	9.00	Biuret reaction kinetic
	g/dl	4.47	3.57	5.37	0.45	0.90	
PSA Total	ng/ml =	29.4	22.1	36.7	3.65	7.30	Abbott Architect
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.91	0.73	1.09	0.09	0.18	Abbott Architect
TIBC	µmol/l	66.2	52.3	80.1	6.95	13.90	FE+UIBC(saturation with iron)
	µg/dl	370	292	448	39.00	78.00	
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	

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Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	264	221	307	21.50	43.00	
UIBC	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	224	308	21.00	42.00	
Urea	µmol/l	30.1	24.7	35.5	2.70	5.40	Direct Colorimetric
	µg/dl	168	138	198	15.00	30.00	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	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	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	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	
	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	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.8	24.4	33.2	2.20	4.40	Bromocresol Green
	g/dl	2.88	2.44	3.32	0.22	0.44	
Alkaline Phosphatase	U/l	286	243	329	21.50	43.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	137	109	165	14.00	28.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	166	133	199	16.50	33.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin Total	µmol/l	93.9	74.2	114	9.85	19.70	Diazo with Dichloroaniline (DCA)
	mg/dl	5.49	4.34	6.64	0.58	1.15	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.55	6.57	8.53	0.49	0.98	Cholesterol Oxidase
	mg/dl	291	254	328	18.50	37.00	
CK Total	U/l	596	489	703	53.50	107.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	377	301	453	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.26	3.40	5.12	0.43	0.86	
	µmol/l	384	307	461	38.50	77.00	Creatinine PAP method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
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	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	48	39	57	4.50	9.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.59	1.40	1.78	0.10	0.19	Xylidyl Blue
	mg/dl	3.86	3.40	4.32	0.23	0.46	
Phosphate Inorganic	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Protein Total	g/l	46.8	37.4	56.2	4.70	9.40	Biuret reaction end point
	g/dl	4.68	3.74	5.62	0.47	0.94	
Triglycerides	mmol/l	2.97	2.50	3.44	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	263	221	305	21.00	42.00	
Urea	mmol/l	17.6	15.0	20.2	1.30	2.60	Urease end point
	mg/dl	106	90.2	122	7.90	15.80	
	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease kinetic
	mg/dl	109	93.2	125	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	

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

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
Alkaline Phosphatase	U/l	278	236	320	21.00	42.00	AMP optimised to IFCC 37°C
	U/l	217	184	250	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	138	111	165	13.50	27.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	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
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	
Cholesterol	mmol/l	7.12	6.19	8.05	0.47	0.93	Cholesterol Oxidase
	mg/dl	275	239	311	18.00	36.00	
Creatinine	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	
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
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	

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

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	45.2	36.1	54.3	4.55	9.10	Biuret reaction kinetic
	g/dl	4.52	3.61	5.43	0.46	0.91	
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	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	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	0.55	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	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	426	337	515	44.50	89.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Green
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	461	392	530	34.50	69.00	Diethanolamine buffer DEA 37°C
	U/l	342	291	393	25.50	51.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
Amylase Total	U/l	292	248	336	22.00	44.00	pNP Maltotrioxide substrates 37°C
	U/l	282	240	324	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	296	252	340	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	298	253	343	22.50	45.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	165	132	198	16.50	33.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	20.3	16.1	24.5	2.10	4.20	Enzymatic
Bilirubin Direct	µmol/l	24.5	19.3	29.7	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	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	
Bilirubin Total	µmol/l	92.8	73.3	112	9.75	19.50	Diazo with Sulphanilic Acid
	mg/dl	5.43	4.29	6.57	0.57	1.14	
	µmol/l	92.0	72.7	111	9.65	19.30	DPD (Beckman AU)
	mg/dl	5.38	4.25	6.51	0.57	1.13	
Calcium	mmol/l	3.08	2.77	3.39	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. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	111	103	119	4.00	8.00	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	4774	3820	5728	477.00	954.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	615	504	726	55.50	111.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	25.8	20.7	30.9	2.55	5.10	Colorimetric
	µg/dl	164	132	196	16.00	32.00	
Creatinine	µmol/l	378	303	453	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.42	5.12	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	398	318	478	40.00	80.00	Creatinine PAP method
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	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	371	297	445	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	374	300	448	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.23	3.39	5.07	0.42	0.84	
	µmol/l	383	307	459	38.00	76.00	IDMS traceable
	mg/dl	4.33	3.47	5.19	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.14	0.97	1.31	0.08	0.17	Tris buffer 100mmol pH 8.5

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	168	143	193	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	141	119	163	11.00	22.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	167	142	192	12.50	25.00	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	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	16.3	13.8	18.8	1.25	2.50	Glucose oxidase
	mg/dl	294	249	339	22.50	45.00	
HDL - Cholesterol	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct HDL Immunoseparation
	mg/dl	113	96.5	130	8.25	16.50	
	mmol/l	2.83	2.41	3.25	0.21	0.42	Direct Clearance Method
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	2.97	2.52	3.42	0.23	0.45	HDL - Ultra
	mg/dl	115	97.3	133	8.85	17.70	
Iron	µmol/l	37.5	30.8	44.2	3.35	6.70	Colorimetric with ppt.
	µg/dl	210	172	248	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	
Lactate	mmol/l	5.42	4.44	6.40	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.8	40.0	57.6	4.40	8.80	
LD (LDH)	U/l	375	319	431	28.00	56.00	L->P 37°C
	U/l	849	721	977	64.00	128.00	P->L Scandinavian & Dutch 37°C
	U/l	379	322	436	28.50	57.00	L->P IFCC 37°C
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
	U/l	51	41	61	5.00	10.00	Roche Colorimetric 37°C

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	74	59	89	7.50	15.00	Radox 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	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Osmolality	mOsm/kg	342	274	410	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	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	6.03	5.55	6.51	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.7	35.8	53.6	4.45	8.90	Biuret reaction end point
	g/dl	4.47	3.58	5.36	0.45	0.89	
	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction kinetic
	g/dl	4.43	3.54	5.32	0.45	0.89	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	63.2	49.9	76.5	6.65	13.30	FE+UIBC(saturation with iron)
	µg/dl	353	279	427	37.00	74.00	
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	3.05	2.56	3.54	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	270	227	313	21.50	43.00	
UIBC	µmol/l	25.9	21.3	30.5	2.30	4.60	Direct Colorimetric
	µg/dl	145	119	171	13.00	26.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease end point
	mg/dl	113	96.2	130	8.40	16.80	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.61	8.35	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.28	10.7	0.62	1.23	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	8.30	10.8	0.62	1.24	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
	g/l	28.2	24.0	32.4	2.10	4.20	Bromocresol Purple
	g/dl	2.82	2.40	3.24	0.21	0.42	
Alkaline Phosphatase	U/l	321	273	369	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	320	272	368	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	122	98	146	12.00	24.00	Tris buffer without P5P 37°C
	U/l	120	96	144	12.00	24.00	Tris buffer SCE 37°C
Amylase Total	U/l	299	254	344	22.50	45.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	308	261	355	23.50	47.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	148	119	177	14.50	29.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	20.0	15.9	24.1	2.05	4.10	Differential rate pH change
	mmol/l	20.3	16.1	24.5	2.10	4.20	Ion selective electrode
Bilirubin Direct	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	88.9	70.2	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.20	4.11	6.29	0.55	1.09	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Ion selective electrode
	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	


Beckman CX4/5/7/9/LX20®/DxC600/800®
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.52	6.54	8.50	0.49	0.98	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
Cholinesterase	U/l	4734	3787	5681	473.50	947.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	599	491	707	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	608	498	718	55.00	110.00	Monothioglycerol 37°C
Creatinine	μmol/l	388	310	466	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	μmol/l	383	306	460	38.50	77.00	Enzymatic UV method (340nm)
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	μmol/l	388	310	466	39.00	78.00	Jaffe rate blanked
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	μmol/l	391	313	469	39.00	78.00	IDMS traceable
	mg/dl	4.42	3.54	5.30	0.44	0.88	
gamma-GT	U/l	135	115	155	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Oxygen electrode
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.00	2.55	3.45	0.23	0.45	Direct HDL PPD
	mg/dl	116	98.4	134	8.80	17.60	
	mmol/l	2.92	2.48	3.36	0.22	0.44	HDL - Ultra
	mg/dl	113	95.7	130	8.65	17.30	

Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
Lactate	mmol/l	5.00	4.10	5.90	0.45	0.90	Colorimetric Lactate Oxidase
	mg/dl	45.1	36.9	53.3	4.10	8.20	
LD (LDH)	U/l	318	271	365	23.50	47.00	L->P 37°C
	U/l	995	846	1144	74.50	149.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	2.01	1.77	2.25	0.12	0.24	Spectrophotometric
	mg/dl	1.40	1.23	1.57	0.09	0.17	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Calmagite
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Osmolality	mOsm/kg	333	266	400	33.50	67.00	Calculated
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.06	5.58	6.54	0.24	0.48	ISE method - indirect
Protein Total	g/l	43.6	34.9	52.3	4.35	8.70	Biuret reaction CX4/5/7
	g/dl	4.36	3.49	5.23	0.44	0.87	
	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	43.2	34.5	51.9	4.35	8.70	Biuret reaction kinetic
	g/dl	4.32	3.45	5.19	0.44	0.87	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	3.06	2.57	3.55	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	271	227	315	22.00	44.00	
	mmol/l	3.07	2.58	3.56	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	272	228	316	22.00	44.00	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease end point
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
mg/dl	54.2	46.1	62.3	4.05	8.10		
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.77	7.63	9.91	0.57	1.14	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	169	135	203	17.00	34.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	92.3	72.9	112	9.70	19.40	Diazo with Sulphanilic Acid
	mg/dl	5.40	4.26	6.54	0.57	1.14	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.29	6.35	8.23	0.47	0.94	Cholesterol Oxidase
	mg/dl	281	245	317	18.00	36.00	
Creatinine	µmol/l	350	280	420	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.96	3.16	4.76	0.40	0.80	
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
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	
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	16.6	14.1	19.1	1.25	2.50	Urease kinetic
	mg/dl	99.8	84.7	115	7.55	15.10	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	16.6	14.1	19.1	1.25	2.50	BUN
	mg/dl	46.6	39.6	53.6	3.50	7.00	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	295	251	339	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	230	196	264	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	182	145	219	18.50	37.00	Tris buffer without P5P 37°C
	U/l	123	98	148	12.50	25.00	Tris buffer without P5P 30°C
	U/l	87	69	105	9.00	18.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	93.3	73.7	113	9.80	19.60	Diazo with Sulphanilic Acid
	mg/dl	5.46	4.31	6.61	0.58	1.15	
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	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	636	521	751	57.50	115.00	CK-NAC (IFCC) 37°C
	U/l	398	326	470	36.00	72.00	CK-NAC (IFCC) 30°C
	U/l	270	221	319	24.50	49.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	348	278	418	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.93	3.14	4.72	0.40	0.79	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
LD (LDH)	U/l	775	658	892	58.50	117.00	P->L German methods 37°C
	U/l	560	475	645	42.50	85.00	P->L German methods 30°C
	U/l	393	334	452	29.50	59.00	P->L German methods 25°C
Phosphate Inorganic	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	
Protein Total	g/l	45.2	36.1	54.3	4.55	9.10	Biuret reaction end point
	g/dl	4.52	3.61	5.43	0.46	0.91	
Triglycerides	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	262	220	304	21.00	42.00	
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease end point
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	16.6	14.1	19.1	1.25	2.50	Urease kinetic
	mg/dl	99.8	84.7	115	7.55	15.10	
	mmol/l	16.6	14.1	19.1	1.25	2.50	BUN
	mg/dl	46.6	39.6	53.6	3.50	7.00	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

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	
Alkaline Phosphatase	U/l	480	408	552	36.00	72.00	Diethanolamine buffer DEA 37°C
	U/l	374	318	430	28.00	56.00	Diethanolamine buffer DEA 30°C
	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	76	60	92	8.00	16.00	Tris buffer without P5P 25°C
Calcium	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	
Cholesterol	mmol/l	7.34	6.39	8.29	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	247	319	18.00	36.00	
Creatinine	µmol/l	363	290	436	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	392	314	470	39.00	78.00	Creatinine PAP method
	mg/dl	4.43	3.55	5.31	0.44	0.88	
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	108	92.3	124	7.85	15.70	
LD (LDH)	U/l	739	628	850	55.50	111.00	P->L SFBC 37°C
	U/l	534	453	615	40.50	81.00	P->L SFBC 30°C
	U/l	375	318	432	28.50	57.00	P->L SFBC 25°C
Phosphate Inorganic	mmol/l	2.32	1.98	2.66	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.19	6.14	8.24	0.53	1.05	
Protein Total	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction end point
	g/dl	4.56	3.65	5.47	0.46	0.91	
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	
Urea	mmol/l	18.4	15.7	21.1	1.35	2.70	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.4	15.6	21.2	1.40	2.80	BUN
	mg/dl	51.6	43.9	59.3	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.72	7.58	9.86	0.57	1.14	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Bromocresol Green
	g/dl	2.98	2.54	3.42	0.22	0.44	
	g/l	26.0	22.1	29.9	1.95	3.90	Turbidimetric Assays
	g/dl	2.60	2.21	2.99	0.20	0.39	
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
ALT (GPT)	U/l	122	97	147	12.50	25.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	265	225	305	20.00	40.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	Saccharogenic 37°C
	U/l	288	245	331	21.50	43.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	286	243	329	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.4	15.4	23.4	2.00	4.00	Colorimetric
	mmol/l	19.3	15.3	23.3	2.00	4.00	Enzymatic
Bilirubin Direct	µmol/l	29.9	23.6	36.2	3.15	6.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	1.38	2.12	0.19	0.37	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Direct	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid	
	mg/dl	1.70	1.35	2.05	0.18	0.35		
	µmol/l	29.4	23.2	35.6	3.10	6.20	Roche JG factored	
	mg/dl	1.72	1.36	2.08	0.18	0.36		
Bilirubin Total	µmol/l	86.5	68.3	105	9.10	18.20	Diazo with Dichloroaniline (DCA)	
	mg/dl	5.06	4.00	6.12	0.53	1.06		
	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		
	µmol/l	84.3	66.6	102	8.85	17.70	Dichlorophenyl Diazonium (DPD)	
	mg/dl	4.93	3.90	5.96	0.52	1.03		
	µmol/l	84.1	66.4	102	8.85	17.70	Diazonium ion	
	mg/dl	4.92	3.88	5.96	0.52	1.04		
	Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Cresolphthalein complexone
		mg/dl	12.5	11.3	13.7	0.60	1.20	
mmol/l		3.13	2.82	3.44	0.16	0.31	NM-BAPTA	
mg/dl		12.5	11.3	13.7	0.60	1.20		
Chloride	mmol/l	114	104	124	5.00	10.00	ISE indirect	
Cholesterol	mmol/l	7.46	6.49	8.43	0.49	0.97	Cholesterol Oxidase	
	mg/dl	288	251	325	18.50	37.00		
CK Total	U/l	615	504	726	55.50	111.00	CK-NAC (IFCC) 37°C	
	U/l	385	316	454	34.50	69.00	CK-NAC (IFCC) 30°C	
	U/l	261	214	308	23.50	47.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization	
	mg/dl	4.12	3.30	4.94	0.41	0.82		
	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		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus	
	mg/dl	4.47	3.58	5.36	0.45	0.89		
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked	
	mg/dl	4.12	3.30	4.94	0.41	0.82		
	µmol/l	362	290	434	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	4.09	3.28	4.90	0.41	0.81		
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	4.12	3.30	4.94	0.41	0.82		
	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		171	146	196	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		135	115	155	10.00	20.00	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	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase	
	mg/dl	279	238	320	20.50	41.00		
	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase	
	mg/dl	281	240	322	20.50	41.00		
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase	
	mg/dl	287	243	331	22.00	44.00		
HDL - Cholesterol	mmol/l	4.33	3.68	4.98	0.33	0.65	Direct HDL PEGME	
	mg/dl	167	142	192	12.50	25.00		
	mmol/l	4.40	3.74	5.06	0.33	0.66	Direct HDL Roche 3rd generation	
	mg/dl	170	144	196	13.00	26.00		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	37.3	30.6	44.0	3.35	6.70	Colorimetric with ppt.
	µg/dl	209	171	247	19.00	38.00	
	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	5.73	4.70	6.76	0.52	1.03	Colorimetric Lactate Oxidase
	mg/dl	51.6	42.3	60.9	4.65	9.30	
LD (LDH)	U/l	717	609	825	54.00	108.00	P->L German methods 37°C
	U/l	518	440	596	39.00	78.00	P->L German methods 30°C
	U/l	364	309	419	27.50	55.00	P->L German methods 25°C
	U/l	393	334	452	29.50	59.00	L->P IFCC 37°C
	U/l	284	241	327	21.50	43.00	L->P IFCC 30°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	59	47	71	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.14	1.88	2.40	0.13	0.26	Ion selective electrode
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Methylthymol blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
	mmol/l	1.70	1.50	1.90	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.91	5.86	7.96	0.53	1.05	
	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	6.10	5.61	6.59	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.2	34.5	51.9	4.35	8.70	Biuret reaction end point
	g/dl	4.32	3.45	5.19	0.44	0.87	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	43.2	34.5	51.9	4.35	8.70	Biuret reaction kinetic
	g/dl	4.32	3.45	5.19	0.44	0.87	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	65.4	51.7	79.1	6.85	13.70	FE+UIBC(saturation with iron)
	µg/dl	366	289	443	38.50	77.00	
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	256	215	297	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	µmol/l	28.9	23.7	34.1	2.60	5.20	Direct Colorimetric
	µg/dl	162	132	192	15.00	30.00	
Urea	mmol/l	17.8	15.2	20.4	1.30	2.60	Urease kinetic
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	17.8	15.1	20.5	1.35	2.70	BUN
	mg/dl	50.0	42.5	57.5	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.19	8.00	10.4	0.60	1.19	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.29	8.10	10.5	0.60	1.19	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	453	385	521	34.00	68.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	152	121	183	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	94.1	74.4	114	9.85	19.70	Diazo with Sulphanilic Acid
	mg/dl	5.50	4.35	6.65	0.58	1.15	
	µmol/l	82.5	65.1	99.9	8.70	17.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.83	3.81	5.85	0.51	1.02	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	
CK Total	U/l	609	500	718	54.50	109.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	366	293	439	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	371	297	445	37.00	74.00	Jaffe rate blanked
	mg/dl	4.19	3.36	5.02	0.42	0.83	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
LD (LDH)	U/l	391	332	450	29.50	59.00	L->P IFCC 37°C
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	
Protein Total	g/l	47.7	38.1	57.3	4.80	9.60	Biuret reaction end point
	g/dl	4.77	3.81	5.73	0.48	0.96	
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	256	215	297	20.50	41.00	
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	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	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	477	377	577	50.00	100.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	360	285	435	37.50	75.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	270	213	327	28.50	57.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	14.0	9.38	18.6	2.31	4.62	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.3	6.90	13.7	1.70	3.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	19.9	13.3	26.5	3.30	6.60	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	36.8	24.7	48.9	6.05	12.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	33.9	22.7	45.1	5.60	11.20	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	47.1	31.6	62.6	7.75	15.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	185	157	213	14.00	28.00	Roche Integra AMP buffer 37°C
	U/l	144	122	166	11.00	22.00	Roche Integra AMP buffer 30°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	318	270	366	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	248	210	286	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	203	173	233	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
ALT (GPT)	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Pancreatic	U/l	259	220	298	19.50	39.00	Roche liquid stable pNPG7 37°C
	U/l	297	252	342	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	320	272	368	24.00	48.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	20.2	16.0	24.4	2.10	4.20	Enzymatic
Bile Acids	µmol/l	50.5	40.4	60.6	5.05	10.10	5th Generation Colorimetric
Bilirubin Direct	µmol/l	27.7	21.8	33.6	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Bilirubin Total	µmol/l	84.4	66.7	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.94	3.90	5.98	0.52	1.04	
	µmol/l	83.6	66.0	101	8.80	17.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.89	3.86	5.92	0.52	1.03	
	µmol/l	83.1	65.6	101	8.75	17.50	Diazonium ion
	mg/dl	4.86	3.84	5.88	0.51	1.02	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.14	2.82	3.46	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect	
Cholesterol	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase	
	mg/dl	286	249	323	18.50	37.00		
Cholinesterase	U/l	5273	4218	6328	527.50	1055.00	Colorimetric Butyrylthiocholine 37°C	
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	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	314	472	39.50	79.00	Roche Creatinine Plus	
	mg/dl	4.44	3.55	5.33	0.45	0.89		
	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	mmol/l	1.13	0.96	1.30	0.08	0.17	Tris buffer 100mmol pH 8.5
	gamma-GT	U/l	147	125	169	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
U/l		116	99	133	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
U/l		91	77	105	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		173	147	199	13.00	26.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
U/l		136	116	156	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
U/l		107	91	123	8.00	16.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
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	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	4.15	3.53	4.77	0.31	0.62	Direct HDL Roche 3rd generation
	mg/dl	160	136	184	12.00	24.00	
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.45	4.47	6.43	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.1	40.3	57.9	4.40	8.80	
LD (LDH)	U/l	733	623	843	55.00	110.00	P->L German methods 37°C
	U/l	529	450	608	39.50	79.00	P->L German methods 30°C
	U/l	372	316	428	28.00	56.00	P->L German methods 25°C
	U/l	379	322	436	28.50	57.00	L->P IFCC 37°C
	U/l	274	232	316	21.00	42.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	54	44	64	5.00	10.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Xylidyl Blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	
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	6.14	5.65	6.63	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.6	35.6	53.6	4.50	9.00	Biuret reaction end point
	g/dl	4.46	3.56	5.36	0.45	0.90	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	59.5	47.0	72.0	6.25	12.50	FE+UIBC(saturation with iron)
	µg/dl	333	263	403	35.00	70.00	
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	
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	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	0.54	0.47	0.61	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.00	7.85	10.2	0.58	1.15	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.99	7.81	10.2	0.59	1.18	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
Alkaline Phosphatase	U/l	320	272	368	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	249	212	286	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	204	174	234	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	119	95	143	12.00	24.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	301	255	347	23.00	46.00	I.L. 2-chloro-pNPG3 37°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
Bile Acids	µmol/l	46.9	37.5	56.3	4.70	9.40	Enzymatic Colorimetric
Bilirubin Total	µmol/l	91.4	72.2	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.35	4.22	6.48	0.57	1.13	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	109	101	117	4.00	8.00	ISE indirect
Cholesterol	mmol/l	7.43	6.47	8.39	0.48	0.96	Cholesterol Oxidase
	mg/dl	287	250	324	18.50	37.00	
CK Total	U/l	547	449	645	49.00	98.00	CK-NAC (IFCC) 37°C
	U/l	342	281	403	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	232	191	273	20.50	41.00	CK-NAC (IFCC) 25°C

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
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	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	155	132	178	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	122	104	140	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	96	81	111	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.51	2.13	2.89	0.19	0.38	Direct HDL Immunoseparation
	mg/dl	96.9	82.2	112	7.35	14.70	
Iron	µmol/l	36.4	29.9	42.9	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
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	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Enzymatic
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.18	1.86	2.50	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.76	5.77	7.75	0.50	0.99	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.6	35.7	53.5	4.45	8.90	Biuret reaction end point
	g/dl	4.46	3.57	5.35	0.45	0.89	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.09	2.60	3.58	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	273	230	316	21.50	43.00	
	mmol/l	3.05	2.56	3.54	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	270	227	313	21.50	43.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease end point
	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	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	


JOHNSON AND JOHNSON VITROS®
ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	27.1	23.0	31.2	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.71	2.30	3.12	0.21	0.41	
Alkaline Phosphatase	U/l	195	166	224	14.50	29.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	141	112	170	14.50	29.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	173	147	199	13.00	26.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	212	170	254	21.00	42.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	22.4	17.8	27.0	2.30	4.60	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	82.6	65.3	99.9	8.65	17.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.83	3.82	5.84	0.51	1.01	
	µmol/l	84.2	66.5	102	8.85	17.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.93	3.89	5.97	0.52	1.04	
	µmol/l	82.5	65.2	99.8	8.65	17.30	
	mg/dl	4.83	3.81	5.85	0.51	1.02	Vitros DT60/DT60 II Total Bil
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	6.80	5.91	7.69	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	262	228	296	17.00	34.00	
Cholinesterase	U/l	5055	4044	6066	505.50	1011.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	478	392	564	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	514	421	607	46.50	93.00	Vitros DT60/DT60 II/DTSC II 37°C

JOHNSON AND JOHNSON VITROS®

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Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	388	311	465	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.38	3.51	5.25	0.44	0.87	
gamma-GT	U/l	199	169	229	15.00	30.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
HDL - Cholesterol	mmol/l	2.79	2.37	3.21	0.21	0.42	Vitros 5.1 FS microtip assay
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	2.76	2.34	3.18	0.21	0.42	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	107	90.3	124	8.35	16.70	
Iron	µmol/l	40.1	32.9	47.3	3.60	7.20	Ortho Vitros Microslide Systems
	µg/dl	224	184	264	20.00	40.00	
Lactate	mmol/l	4.98	4.08	5.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	44.9	36.8	53.0	4.05	8.10	
LD (LDH)	U/l	1129	960	1298	84.50	169.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	629	505	753	62.00	124.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.45	2.16	2.74	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.70	1.50	1.90	0.10	0.20	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	Ortho Vitros Microslide Systems
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.60	3.68	5.52	0.46	0.92	
Sodium	mmol/l	159	151	167	4.00	8.00	Ortho Vitros Microslide Systems

**JOHNSON AND JOHNSON VITROS®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	3.24	2.73	3.75	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	287	242	332	22.50	45.00	
Urea	mmol/l	17.3	14.7	19.9	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	104	88.3	120	7.85	15.70	
	mmol/l	17.3	14.7	19.9	1.30	2.60	BUN
	mg/dl	48.6	41.3	55.9	3.65	7.30	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.58	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.65	7.53	9.77	0.56	1.12	

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

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
Alkaline Phosphatase	U/l	284	242	326	21.00	42.00	AMP optimised to IFCC 37°C
	U/l	221	189	253	16.00	32.00	AMP optimised to IFCC 30°C
	U/l	181	155	207	13.00	26.00	AMP optimised to IFCC 25°C
ALT (GPT)	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
AST (GOT)	U/l	169	135	203	17.00	34.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	53.4	42.8	64.0	5.30	10.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	33.8	26.7	40.9	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.98	1.56	2.40	0.21	0.42	
Bilirubin Total	µmol/l	84.7	66.9	103	8.90	17.80	Nitrobenzenediazonium salt
	mg/dl	4.95	3.91	5.99	0.52	1.04	
Calcium	mmol/l	3.19	2.88	3.50	0.16	0.31	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.23	6.29	8.17	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	

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

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	596	488	704	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	373	305	441	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	253	207	299	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	374	299	449	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	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	
gamma-GT	µmol/l	392	314	470	39.00	78.00	Creatinine PAP method
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	U/l	165	140	190	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	130	110	150	10.00	20.00	
U/l	102	86	118	8.00	16.00		
Glucose	mmol/l	16.1	13.6	18.6	1.25	2.50	Hexokinase
	mg/dl	290	245	335	22.50	45.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	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	37.1	30.5	43.7	3.30	6.60	Colorimetric without ppt.
	µg/dl	207	170	244	18.50	37.00	
Magnesium	mmol/l	1.61	1.41	1.81	0.10	0.20	Xylidyl Blue
	mg/dl	3.91	3.43	4.39	0.24	0.48	
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	5.86	5.39	6.33	0.24	0.47	ISE method - direct

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

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction end point
	g/dl	4.56	3.65	5.47	0.46	0.91	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	223	309	21.50	43.00	
Urea	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease kinetic
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	17.8	15.1	20.5	1.35	2.70	BUN
	mg/dl	50.0	42.5	57.5	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.69	8.43	11.0	0.63	1.26	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.44	8.22	10.7	0.61	1.22	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
alpha-HBDH	U/l	477	377	577	50.00	100.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	360	285	435	37.50	75.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	270	213	327	28.50	57.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	14.0	9.38	18.6	2.31	4.62	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	10.3	6.90	13.7	1.70	3.40	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	19.9	13.3	26.5	3.30	6.60	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	36.8	24.7	48.9	6.05	12.10	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	33.9	22.7	45.1	5.60	11.20	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	47.1	31.6	62.6	7.75	15.50	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	29.0	24.6	33.4	2.20	4.40	Bromocresol Green
	g/dl	2.90	2.46	3.34	0.22	0.44	
	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	
	g/l	27.1	23.0	31.2	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.71	2.30	3.12	0.21	0.41	
	g/l	26.0	22.1	29.9	1.95	3.90	Turbidimetric Assays
	g/dl	2.60	2.21	2.99	0.20	0.39	
Alkaline Phosphatase	U/l	195	166	224	14.50	29.00	Ortho Vitros Microslide Systems 37°C
	U/l	469	398	540	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	365	310	420	27.50	55.00	Diethanolamine buffer DEA 30°C
	U/l	300	254	346	23.00	46.00	Diethanolamine buffer DEA 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	304	259	349	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	237	202	272	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	194	166	222	14.00	28.00	AMP optimised to IFCC 25°C
	U/l	288	245	331	21.50	43.00	AMP non-optimised 37°C
	U/l	224	191	257	16.50	33.00	AMP non-optimised 30°C
	U/l	184	157	211	13.50	27.00	AMP non-optimised 25°C
ALT (GPT)	U/l	141	112	170	14.50	29.00	Ortho Vitros Microslide Systems 37°C
	U/l	165	132	198	16.50	33.00	Tris buffer with P5P 37°C
	U/l	122	98	146	12.00	24.00	Tris buffer with P5P 30°C
	U/l	93	74	112	9.50	19.00	Tris buffer with P5P 25°C
	U/l	126	101	151	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
	U/l	120	96	144	12.00	24.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	266	226	306	20.00	40.00	Immunoinhibition EPS substrate 37°C
	U/l	258	219	297	19.50	39.00	Roche liquid stable pNPG7 37°C
	U/l	297	252	342	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	293	249	337	22.00	44.00	pNP Maltotriose substrates 37°C
	U/l	286	243	329	21.50	43.00	Siemens - blocked pNPG7 37°C
	U/l	282	240	324	21.00	42.00	Biotrol - blocked pNPG7 37°C
	U/l	245	208	282	18.50	37.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	321	273	369	24.00	48.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	272	232	312	20.00	40.00	BM/Roche Colorimetric pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	297	253	341	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	353	300	406	26.50	53.00	Siemens - maltopenta/hexaoside 37°C
	U/l	273	232	314	20.50	41.00	Saccharogenic 37°C
	U/l	284	241	327	21.50	43.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	173	147	199	13.00	26.00	Ortho Vitros Microslide Systems 37°C
	U/l	275	233	317	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	280	238	322	21.00	42.00	Roche liquid stable pNPG7 37°C
	U/l	357	304	410	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
	U/l	298	254	342	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	308	261	355	23.50	47.00	Beckman Synchron AMY7 37°C
	U/l	301	255	347	23.00	46.00	I.L. 2-chloro-pNPG3 37°C
	U/l	327	278	376	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	359	305	413	27.00	54.00	Abbott Architect IFCC Cal. 37°C
Apolipoprotein A-1	g/l	0.93	0.76	1.09	0.08	0.17	Immunoturbidimetric
	mg/dl	92.7	76.0	109	8.35	16.70	
Apolipoprotein B	g/l	0.58	0.48	0.68	0.05	0.10	Immunoturbidimetric
	mg/dl	57.9	47.5	68.3	5.20	10.40	
AST (GOT)	U/l	212	170	254	21.00	42.00	Ortho Vitros Microslide visible slide 37°C
	U/l	245	196	294	24.50	49.00	Tris buffer with P5P 37°C
	U/l	166	132	200	17.00	34.00	Tris buffer with P5P 30°C
	U/l	117	93	141	12.00	24.00	Tris buffer with P5P 25°C
	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
	U/l	148	119	177	14.50	29.00	Tris buffer SCE 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer SCE 30°C
U/l	70	57	83	6.50	13.00	Tris buffer SCE 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bicarbonate	mmol/l	19.9	15.8	24.0	2.05	4.10	Colorimetric
	mmol/l	22.4	17.8	27.0	2.30	4.60	Ortho Vitros Microslide Systems
	mmol/l	20.0	15.9	24.1	2.05	4.10	Differential rate pH change
	mmol/l	20.1	15.9	24.3	2.10	4.20	Enzymatic
	mmol/l	20.1	16.0	24.2	2.05	4.10	Ion selective electrode
Bile Acids	µmol/l	47.8	38.2	57.4	4.80	9.60	4th Generation Colorimetric
	µmol/l	50.5	40.4	60.6	5.05	10.10	5th Generation Colorimetric
Bilirubin Direct	µmol/l	27.9	22.1	33.7	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	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	30.6	24.2	37.0	3.20	6.40	Modified Jendrassik
	mg/dl	1.79	1.42	2.16	0.19	0.37	
	µmol/l	82.6	65.3	99.9	8.65	17.30	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.83	3.82	5.84	0.51	1.01	
	µmol/l	84.2	66.5	102	8.85	17.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.93	3.89	5.97	0.52	1.04	
	µmol/l	99.4	78.5	120	10.45	20.90	Diazo with Dichloroaniline (DCA)
	mg/dl	5.81	4.59	7.03	0.61	1.22	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	87.7	69.3	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.13	4.05	6.21	0.54	1.08	
	µmol/l	102	80.6	123	10.70	21.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.97	4.72	7.22	0.63	1.25	
	µmol/l	85.3	67.4	103	8.95	17.90	Nitrobenzenediazonium salt
	mg/dl	4.99	3.94	6.04	0.53	1.05	
	µmol/l	84.4	66.7	102	8.85	17.70	Diazonium ion
	mg/dl	4.94	3.90	5.98	0.52	1.04	
µmol/l	96.0	75.8	116	10.10	20.20	Oxidation to Biliverdin/Vanadate	
mg/dl	5.62	4.43	6.81	0.60	1.19		
µmol/l	104	82.2	126	10.90	21.80	Modified Jendrassik	
mg/dl	6.08	4.81	7.35	0.64	1.27		
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	3.10	2.79	3.41	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.06	2.76	3.36	0.15	0.30	Methylthymol blue
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
mmol/l	3.14	2.83	3.45	0.16	0.31	NM-BAPTA	
mg/dl	12.6	11.3	13.9	0.65	1.30		
Chloride	mmol/l	112	103	121	4.50	9.00	Colorimetric

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Chloride	mmol/l	113	104	122	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	112	103	121	4.50	9.00	ISE indirect
	mmol/l	113	104	122	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.80	5.91	7.69	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	262	228	296	17.00	34.00	
	mmol/l	7.35	6.39	8.31	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	5185	4148	6222	518.50	1037.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	478	392	564	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	614	504	724	55.00	110.00	CK-NAC serum start (DGKC) 37°C
	U/l	384	316	452	34.00	68.00	CK-NAC serum start (DGKC) 30°C
	U/l	261	214	308	23.50	47.00	CK-NAC serum start (DGKC) 25°C
	U/l	591	485	697	53.00	106.00	CK-NAC substrate start (DGKC) 37°C
	U/l	370	304	436	33.00	66.00	CK-NAC substrate start (DGKC) 30°C
	U/l	251	206	296	22.50	45.00	CK-NAC substrate start (DGKC) 25°C
	U/l	601	493	709	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	376	309	443	33.50	67.00	CK-NAC (IFCC) 30°C
	U/l	255	210	300	22.50	45.00	CK-NAC (IFCC) 25°C
	U/l	608	498	718	55.00	110.00	Monothioglycerol 37°C
	U/l	381	312	450	34.50	69.00	Monothioglycerol 30°C
	U/l	258	212	304	23.00	46.00	Monothioglycerol 25°C
	U/l	566	464	668	51.00	102.00	Dithioerythritol 37°C
	U/l	354	290	418	32.00	64.00	Dithioerythritol 30°C
	U/l	241	197	285	22.00	44.00	Dithioerythritol 25°C
	U/l	563	462	664	50.50	101.00	Dithioerythritol (DTE) IFCC correlated 37°C
U/l	352	289	415	31.50	63.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	239	196	282	21.50	43.00	Dithioerythritol (DTE) IFCC correlated 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Copper	µmol/l	26.0	20.8	31.2	2.60	5.20	Atomic absorption
	µg/dl	165	132	198	16.50	33.00	
	µmol/l	25.8	20.6	31.0	2.60	5.20	Colorimetric
	µg/dl	164	131	197	16.50	33.00	
Cortisol	nmol/l	968	726	1210	121.00	242.00	Roche Cobas E411
	µg/dl	34.8	26.1	43.5	4.35	8.70	
Creatinine	µmol/l	337	270	404	33.50	67.00	Alkaline picrate with deproteinization
	mg/dl	3.81	3.05	4.57	0.38	0.76	
	µmol/l	368	294	442	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	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	
	µmol/l	391	313	469	39.00	78.00	Creatinine PAP method
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	396	316	476	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.47	3.57	5.37	0.45	0.90	
	µmol/l	382	305	459	38.50	77.00	Jaffe rate blanked
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
µmol/l	371	296	446	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	4.19	3.34	5.04	0.43	0.85		
µmol/l	388	311	465	38.50	77.00	Vitros IDMS Traceable	
mg/dl	4.38	3.51	5.25	0.44	0.87		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	389	311	467	39.00	78.00	IDMS traceable
	mg/dl	4.40	3.51	5.29	0.45	0.89	
D-3-Hydroxybutyrate	mmol/l	1.13	0.96	1.30	0.08	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.97	3.18	4.76	0.40	0.79	Immunoturbidimetric
	ng/ml	3.10	2.48	3.72	0.31	0.62	
Folate	nmol/l	16.7	12.7	20.7	2.01	4.01	Roche Cobas E411
	ng/ml	7.37	5.60	9.14	0.89	1.77	
Free T4	pmol/l	43.6	32.7	54.5	5.45	10.90	Abbott Architect
	ng/dl	3.40	2.55	4.25	0.43	0.85	
	pg/ml	34.0	25.5	42.5	4.25	8.50	Abbott Architect
	pmol/l	58.2	43.6	72.8	7.30	14.60	Siemens Centaur XP/XPT/Classic
	ng/dl	4.54	3.40	5.68	0.57	1.14	
	pg/ml	45.4	34.0	56.8	5.70	11.40	Siemens Centaur XP/XPT/Classic
	pmol/l	61.2	45.9	76.5	7.65	15.30	Beckman Access
	ng/dl	4.77	3.58	5.96	0.60	1.19	
	pg/ml	47.7	35.8	59.6	5.95	11.90	Beckman Access
	pmol/l	61.8	46.3	77.3	7.75	15.50	Beckman Dxl800
	ng/dl	4.82	3.61	6.03	0.61	1.21	
	pg/ml	48.2	36.1	60.3	6.05	12.10	Beckman Dxl800
	pmol/l	62.7	47.0	78.4	7.85	15.70	Siemens Immulite 2000/2500
	ng/dl	4.89	3.67	6.11	0.61	1.22	
	pg/ml	48.9	36.7	61.1	6.10	12.20	Siemens Immulite 2000/2500
	pmol/l	67.6	50.7	84.5	8.45	16.90	Roche Elecsys
	ng/dl	5.27	3.95	6.59	0.66	1.32	
	pg/ml	52.7	39.5	65.9	6.60	13.20	Roche Elecsys

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Free T4	pmol/l	65.1	48.8	81.4	8.15	16.30	Roche Modular E170
	ng/dl	5.08	3.81	6.35	0.64	1.27	
	pg/ml	50.8	38.1	63.5	6.35	12.70	Roche Modular E170
	pmol/l	64.7	48.5	80.9	8.10	16.20	Roche Cobas E411
	ng/dl	5.05	3.78	6.32	0.64	1.27	
	pg/ml	50.5	37.8	63.2	6.35	12.70	Roche Cobas E411
	pmol/l	65.9	49.4	82.4	8.25	16.50	Roche Cobas 6000/8000
	ng/dl	5.14	3.85	6.43	0.65	1.29	
	pg/ml	51.4	38.5	64.3	6.45	12.90	Roche Cobas 6000/8000
	pmol/l	61.2	45.9	76.5	7.65	15.30	Biomerieux Vidas FT4N Kit
ng/dl	4.77	3.58	5.96	0.60	1.19		
pg/ml	47.7	35.8	59.6	5.95	11.90	Biomerieux Vidas FT4N Kit	
Gentamicin	µmol/l	16.4	13.1	19.7	1.64	3.28	Immunoturbidimetric
	µg/ml	7.83	6.26	9.40	0.79	1.57	
gamma-GT	U/l	157	133	181	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	124	105	143	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	97	82	112	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	199	169	229	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	135	115	155	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	106	91	121	7.50	15.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	83	71	95	6.00	12.00	Gamma glutamyl-4-nitroanilide 25°C
	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

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
gamma-GT	U/l	173	147	199	13.00	26.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	136	116	156	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	107	91	123	8.00	16.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	31	25	37	3.00	6.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	24	19	29	2.50	5.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	19	16	22	1.50	3.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems	
	mg/dl	259	220	298	19.50	39.00		
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase	
	mg/dl	279	238	320	20.50	41.00		
	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase	
	mg/dl	281	240	322	20.50	41.00		
	mmol/l	15.4	13.1	17.7	1.15	2.30	Oxygen electrode	
	mg/dl	278	236	320	21.00	42.00		
	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	2.90	2.46	3.34	0.22	0.44	Direct HDL Immunoseparation
		mg/dl	112	95.0	129	8.50	17.00	
mmol/l		4.16	3.54	4.78	0.31	0.62	Direct HDL PEGME	
mg/dl		161	137	185	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		2.79	2.37	3.21	0.21	0.42	Vitros 5.1 FS microtip assay	
mg/dl		108	91.5	125	8.25	16.50		
mmol/l		2.76	2.34	3.18	0.21	0.42	Vitros dHDL PTA/MgCl2 direct precipitation	
mg/dl		107	90.3	124	8.35	16.70		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	4.27	3.63	4.91	0.32	0.64	Direct HDL Roche 3rd generation
	mg/dl	165	140	190	12.50	25.00	
	mmol/l	2.77	2.36	3.18	0.21	0.41	HDL - Ultra
	mg/dl	107	91.1	123	7.95	15.90	
Immunoglobulin A	g/l	1.76	1.32	2.20	0.22	0.44	Immunoturbidimetric
	mg/dl	176	132	220	22.00	44.00	
Immunoglobulin G	g/l	5.59	4.58	6.60	0.51	1.01	Immunoturbidimetric
	mg/dl	559	458	660	50.50	101.00	
Immunoglobulin M	g/l	0.62	0.50	0.75	0.06	0.13	Immunoturbidimetric
	mg/dl	62.4	49.9	74.9	6.25	12.50	
Iron	µmol/l	37.1	30.4	43.8	3.35	6.70	Colorimetric with ppt.
	µg/dl	207	170	244	18.50	37.00	
	µmol/l	37.3	30.6	44.0	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	171	247	19.00	38.00	
	µmol/l	40.1	32.9	47.3	3.60	7.20	
µg/dl	224	184	264	20.00	40.00	Ortho Vitros Microslide Systems	
Lactate	mmol/l	5.09	4.17	6.01	0.46	0.92	Ion selective electrode
	mg/dl	45.9	37.6	54.2	4.15	8.30	
	mmol/l	5.49	4.50	6.48	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.5	58.5	4.50	9.00	
	mmol/l	4.98	4.08	5.88	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	44.9	36.8	53.0	4.05	8.10	
	mmol/l	5.65	4.64	6.66	0.51	1.01	Enzymatic Electrode
	mg/dl	50.9	41.8	60.0	4.55	9.10	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lactate	mmol/l	5.49	4.50	6.48	0.50	0.99	UV LDH
	mg/dl	49.5	40.5	58.5	4.50	9.00	
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1129	960	1298	84.50	169.00	Ortho Vitros Microslide Systems 37°C
	U/l	345	294	396	25.50	51.00	L->P 37°C
	U/l	249	212	286	18.50	37.00	L->P 30°C
	U/l	175	149	201	13.00	26.00	L->P 25°C
	U/l	830	706	954	62.00	124.00	P->L Scandinavian & Dutch 37°C
	U/l	599	510	688	44.50	89.00	P->L Scandinavian & Dutch 30°C
	U/l	421	358	484	31.50	63.00	P->L Scandinavian & Dutch 25°C
	U/l	739	628	850	55.50	111.00	P->L German methods 37°C
	U/l	534	453	615	40.50	81.00	P->L German methods 30°C
	U/l	375	318	432	28.50	57.00	P->L German methods 25°C
	U/l	738	627	849	55.50	111.00	P->L SFBC 37°C
	U/l	533	453	613	40.00	80.00	P->L SFBC 30°C
	U/l	374	318	430	28.00	56.00	P->L SFBC 25°C
	U/l	380	323	437	28.50	57.00	L->P IFCC 37°C
	U/l	274	233	315	20.50	41.00	L->P IFCC 30°C
U/l	193	164	222	14.50	29.00	L->P IFCC 25°C	
Lipase	U/l	59	47	71	6.00	12.00	Other Colorimetric 37°C
	U/l	629	505	753	62.00	124.00	Ortho Vitros Microslide Systems 37°C
	U/l	52	42	62	5.00	10.00	Roche Colorimetric 37°C
	U/l	75	60	90	7.50	15.00	Randox Colorimetric 37°C
	U/l	368	295	441	36.50	73.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.45	2.16	2.74	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.70	1.50	1.90	0.10	0.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Lithium	mmol/l	2.14	1.88	2.40	0.13	0.26	Ion selective electrode	
	mg/dl	1.49	1.31	1.67	0.09	0.18		
	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric	
	mg/dl	1.44	1.26	1.62	0.09	0.18		
	mmol/l	2.11	1.86	2.36	0.13	0.25	Randox Colorimetric	
	mg/dl	1.47	1.29	1.65	0.09	0.18		
	Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Arsenazo III
		mg/dl	4.16	3.65	4.67	0.26	0.51	
mmol/l		1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems	
mg/dl		4.28	3.77	4.79	0.26	0.51		
mmol/l		1.70	1.50	1.90	0.10	0.20	Calmagite	
mg/dl		4.13	3.65	4.61	0.24	0.48		
mmol/l		1.74	1.54	1.94	0.10	0.20	Xylidyl Blue	
mg/dl		4.23	3.74	4.72	0.25	0.49		
mmol/l		1.73	1.52	1.94	0.11	0.21	Methylthymol blue	
mg/dl		4.20	3.69	4.71	0.26	0.51		
mmol/l		1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III	
mg/dl		4.18	3.67	4.69	0.26	0.51		
mmol/l		1.73	1.52	1.94	0.11	0.21	Enzymatic	
mg/dl		4.20	3.69	4.71	0.26	0.51		
NEFA	mmol/l	0.76	0.64	0.87	0.06	0.11	Colorimetric	
Osmolality	mOsm/kg	343	274	412	34.50	69.00	Calculated	
	mOsm/kg	380	304	456	38.00	76.00	Freezing point depression	
Paracetamol	mmol/l	0.56	0.45	0.68	0.06	0.11	Colorimetric	
	mg/l	85.3	68.2	102	8.55	17.10		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Ortho Vitros Microslide Systems	
	mg/dl	6.88	5.86	7.90	0.51	1.02		
	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate enzymatic	
	mg/dl	6.88	5.86	7.90	0.51	1.02		
	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		
	Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	Ortho Vitros Microslide Systems
		mmol/l	6.12	5.63	6.61	0.25	0.49	Enzymatic
mmol/l		5.88	5.41	6.35	0.24	0.47	Flame photometry	
mmol/l		6.02	5.54	6.50	0.24	0.48	ISE method - direct	
mmol/l		6.10	5.61	6.59	0.25	0.49	ISE method - indirect	
mmol/l		5.95	5.48	6.42	0.24	0.47	Colorimetric	
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Ortho Vitros Microslide Systems	
	g/dl	4.60	3.68	5.52	0.46	0.92		
	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction end point	
	g/dl	4.48	3.58	5.38	0.45	0.90		
	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction kinetic	
	g/dl	4.41	3.53	5.29	0.44	0.88		
PSA Total	ng/ml =	35.9	26.9	44.9	4.50	9.00	Roche Elecsys Modular E170	
	ng/ml =	31.5	23.6	39.4	3.95	7.90	bioMerieux VIDAS TPSA	
	ng/ml =	26.2	19.7	32.7	3.25	6.50	Siemens Centaur XP/XPT/Classic	
	ng/ml =	28.6	21.4	35.8	3.60	7.20	Abbott Architect	
	ng/ml =	36.4	27.3	45.5	4.55	9.10	Cobas E411	
	ng/ml =	36.3	27.2	45.4	4.55	9.10	Roche Cobas 6000/8000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
PSA Total	ng/ml =	30.9	23.1	38.7	3.90	7.80	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.90	0.72	1.08	0.09	0.18	Enzymatic
	mg/dl	12.4	9.92	14.9	1.24	2.48	
Sodium	mmol/l	159	151	167	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	158	150	166	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry
	mmol/l	157	150	164	3.50	7.00	ISE method - direct
	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	144	115	173	14.60	29.20	Immunoturbidimetric
	µg/ml	26.0	20.7	31.3	2.65	5.30	
Thyroid Stimulating Hormone	µU/ml =	0.91	0.73	1.09	0.09	0.18	Abbott Architect
	µU/ml =	1.06	0.85	1.27	0.10	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.23	0.99	1.47	0.12	0.24	bioMerieux VIDAS TSH
	µU/ml =	1.07	0.86	1.28	0.11	0.21	Vitros Eci
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Roche Elecsys
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Roche Modular E170
	µU/ml =	1.28	1.02	1.54	0.13	0.26	Roche Cobas E411
	µU/ml =	1.24	1.00	1.49	0.12	0.25	Roche Cobas 6000/8000
µU/ml =	1.03	0.83	1.24	0.10	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra	
TIBC	µmol/l	57.5	45.4	69.6	6.05	12.10	Removal of excess free iron
	µg/dl	321	254	388	33.50	67.00	
	µmol/l	63.5	50.2	76.8	6.65	13.30	FE+UIBC(saturation with iron)
	µg/dl	355	281	429	37.00	74.00	
	µmol/l	58.9	46.5	71.3	6.20	12.40	Direct Colorimetric
µg/dl	329	260	398	34.50	69.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
TIBC	µmol/l	39.4	31.1	47.7	4.15	8.30	Calculated from Transferrin
	µg/dl	220	174	266	23.00	46.00	
	µmol/l	62.4	49.3	75.5	6.55	13.10	Randox Direct
	µg/dl	349	276	422	36.50	73.00	
Tobramycin	µmol/l	14.0	11.2	16.8	1.41	2.82	Immunoturbidimetric
	µg/ml	6.56	5.24	7.88	0.66	1.32	
Total T3	nmol/l	3.36	2.52	4.20	0.42	0.84	Abbott Architect
	ng/ml	2.19	1.64	2.74	0.28	0.55	
	ng/dl	219	164	274	27.50	55.00	Abbott Architect
	nmol/l	3.53	2.65	4.41	0.44	0.88	Beckman Access
	ng/ml	2.30	1.73	2.87	0.29	0.57	
	ng/dl	230	173	287	28.50	57.00	Beckman Access
	nmol/l	4.88	3.66	6.10	0.61	1.22	Siemens Centaur XP/XPT/Classic
	ng/ml	3.18	2.38	3.98	0.40	0.80	
	ng/dl	318	238	398	40.00	80.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.85	2.89	4.81	0.48	0.96	BioMerieux Vidas
	ng/ml	2.51	1.88	3.14	0.32	0.63	
	ng/dl	251	188	314	31.50	63.00	BioMerieux Vidas
	nmol/l	4.24	3.18	5.30	0.53	1.06	Roche Cobas E411
	ng/ml	2.76	2.07	3.45	0.35	0.69	
	ng/dl	276	207	345	34.50	69.00	Roche Cobas E411
	Total T4	nmol/l	191	143	239	24.00	48.00
µg/dl		14.9	11.2	18.6	1.85	3.70	
ng/ml		149	112	186	18.50	37.00	Abbott Architect

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	190	142	238	24.00	48.00	Siemens Centaur XP/XPT/Classic
	µg/dl	14.8	11.1	18.5	1.85	3.70	
	ng/ml	148	111	185	18.50	37.00	Siemens Centaur XP/XPT/Classic
	nmol/l	205	154	256	25.50	51.00	Beckman Access
	µg/dl	16.0	12.0	20.0	2.00	4.00	
	ng/ml	160	120	200	20.00	40.00	Beckman Access
	nmol/l	188	141	235	23.50	47.00	BioMerieux Vidas
	µg/dl	14.7	11.0	18.4	1.85	3.70	
	ng/ml	147	110	184	18.50	37.00	BioMerieux Vidas
	nmol/l	185	139	231	23.00	46.00	Siemens Immulite 2000/2500
	µg/dl	14.4	10.8	18.0	1.80	3.60	
	ng/ml	144	108	180	18.00	36.00	Siemens Immulite 2000/2500
	nmol/l	177	133	221	22.00	44.00	Roche Cobas E411
	µg/dl	13.8	10.4	17.2	1.70	3.40	
	ng/ml	138	104	172	17.00	34.00	Roche Cobas E411
Transferrin	nmol/l	166	125	207	20.50	41.00	Roche Cobas 6000/8000
	µg/dl	12.9	9.75	16.1	1.58	3.15	
	ng/ml	129	97.5	161	15.75	31.50	Roche Cobas 6000/8000
Triglycerides	g/l	1.69	1.35	2.03	0.17	0.34	Immunoturbidimetric
	mg/dl	169	135	203	17.00	34.00	
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	
	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	254	213	295	20.50	41.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
UIBC	mmol/l	3.24	2.73	3.75	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	287	242	332	22.50	45.00	
Urea	µmol/l	26.3	21.6	31.0	2.35	4.70	Direct Colorimetric
	µg/dl	147	121	173	13.00	26.00	
Urea	mmol/l	17.3	14.7	19.9	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	104	88.3	120	7.85	15.70	
	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease end point
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.5	15.8	21.2	1.35	2.70	Urease kinetic
	mg/dl	111	95.0	127	8.00	16.00	
	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease hypochlorite
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease Berthelot
	mg/dl	118	100	136	9.00	18.00	
Uric Acid (Urate)	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	
	mmol/l	0.52	0.45	0.58	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.65	7.53	9.77	0.56	1.12	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase catalase 340nm
	mg/dl	8.94	7.78	10.1	0.58	1.16	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	
	mmol/l	0.53	0.46	0.60	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	8.97	7.80	10.1	0.59	1.17	
Vitamin B12	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.12	7.95	10.3	0.59	1.17	
Vitamin B12	pmol/l	260	208	312	26.10	52.20	Roche Cobas E411
	pg/ml	353	282	424	35.50	71.00	
Zinc	µmol/l	31.6	25.3	37.9	3.15	6.30	Atomic absorption
	µg/dl	206	165	247	20.50	41.00	
	µmol/l	33.1	26.5	39.7	3.30	6.60	Colorimetric with deproteinisation
	µg/dl	216	173	259	21.50	43.00	

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		59.5	53.6	65.4	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		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
beta-globulin		16.8	12.8	20.8	2.00	4.00	% of total Protein (Beckman Capillary)
gamma-globulin		11.2	8.5	13.9	1.35	2.69	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.7	25.2	34.2	2.25	4.50	Bromocresol Green
	g/dl	2.97	2.52	3.42	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
ALT (GPT)	U/l	132	105	159	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	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	157	126	188	15.50	31.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	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	94.9	75.0	115	9.95	19.90	Oxidation to Biliverdin/Vanadate
	mg/dl	5.55	4.39	6.71	0.58	1.16	
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	
	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	
Cholesterol	mmol/l	7.32	6.37	8.27	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	602	494	710	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	377	309	445	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	256	210	302	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	μmol/l	353	283	423	35.00	70.00	Alkaline picrate with deproteinization
	mg/dl	3.99	3.20	4.78	0.40	0.79	
	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	
gamma-GT	μmol/l	376	301	451	37.50	75.00	Enzymatic UV method (340nm)
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	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
Glucose	U/l	103	88	118	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	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	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	2.84	2.41	3.27	0.22	0.43	Direct HDL PPD
	mg/dl	110	93.0	127	8.50	17.00	
Iron	mmol/l	3.01	2.56	3.46	0.23	0.45	Direct Clearance Method
	mg/dl	116	98.8	133	8.60	17.20	
	μmol/l	35.9	29.5	42.3	3.20	6.40	Colorimetric without ppt.
LD (LDH)	μg/dl	201	165	237	18.00	36.00	
	U/l	783	665	901	59.00	118.00	P->L German methods 37°C
	U/l	565	480	650	42.50	85.00	P->L German methods 30°C
	U/l	397	337	457	30.00	60.00	P->L German methods 25°C

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	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
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Xylidyl Blue
	mg/dl	4.01	3.52	4.50	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	
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	
	g/l	45.7	36.5	54.9	4.60	9.20	Biuret reaction kinetic
	g/dl	4.57	3.65	5.49	0.46	0.92	
Triglycerides	mmol/l	2.86	2.41	3.31	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	253	213	293	20.00	40.00	
Urea	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	18.4	15.7	21.1	1.35	2.70	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	17.8	15.2	20.4	1.30	2.60	Urease hypochlorite
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	18.4	15.6	21.2	1.40	2.80	BUN
	mg/dl	51.6	43.9	59.3	3.85	7.70	
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	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.01	10.4	0.61	1.21	

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.04	7.86	10.2	0.59	1.18	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	27.8	23.6	32.0	2.10	4.20	Bromocresol Green
	g/dl	2.78	2.36	3.20	0.21	0.42	
ALT (GPT)	U/l	136	109	163	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	61	93	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 Direct	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Bilirubin Total	µmol/l	85.7	67.7	104	9.00	18.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.01	3.96	6.06	0.53	1.05	
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	7.51	6.53	8.49	0.49	0.98	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
Protein Total	g/l	43.8	35.1	52.5	4.35	8.70	Biuret reaction end point
	g/dl	4.38	3.51	5.25	0.44	0.87	
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	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
	g/l	26.3	22.3	30.3	2.00	4.00	Bromocresol Purple
	g/dl	2.63	2.23	3.03	0.20	0.40	
	g/l	25.9	22.0	29.8	1.95	3.90	Turbidimetric Assays
	g/dl	2.59	2.20	2.98	0.20	0.39	
Alkaline Phosphatase	U/l	213	181	245	16.00	32.00	Roche Integra AMP buffer 37°C
	U/l	166	141	191	12.50	25.00	Roche Integra AMP buffer 30°C
	U/l	136	116	156	10.00	20.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	122	98	146	12.00	24.00	Tris buffer without P5P 37°C
	U/l	90	73	107	8.50	17.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	255	216	294	19.50	39.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	276	235	317	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	278	236	320	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
	U/l	103	83	123	10.00	20.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.8	15.7	23.9	2.05	4.10	Colorimetric
	mmol/l	19.8	15.7	23.9	2.05	4.10	Enzymatic

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bile Acids	µmol/l	52.1	41.6	62.6	5.25	10.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Roche JG factored
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	83.3	65.8	101	8.75	17.50	Diazo with Sulphanilic Acid
	mg/dl	4.87	3.85	5.89	0.51	1.02	
Bilirubin Total	µmol/l	83.9	66.3	102	8.80	17.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.91	3.88	5.94	0.52	1.03	
	µmol/l	83.6	66.0	101	8.80	17.60	Diazonium ion
	mg/dl	4.89	3.86	5.92	0.52	1.03	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.14	2.83	3.45	0.16	0.31	NM-BAPTA
mg/dl	12.6	11.3	13.9	0.65	1.30		
Chloride	mmol/l	109	100	118	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.32	6.37	8.27	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	
Cholinesterase	U/l	5138	4110	6166	514.00	1028.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	602	494	710	54.00	108.00	CK-NAC substrate start (DGKC) 37°C
	U/l	377	309	445	34.00	68.00	CK-NAC substrate start (DGKC) 30°C
	U/l	256	210	302	23.00	46.00	CK-NAC substrate start (DGKC) 25°C
	U/l	604	495	713	54.50	109.00	CK-NAC (IFCC) 37°C
	U/l	378	310	446	34.00	68.00	CK-NAC (IFCC) 30°C
	U/l	257	210	304	23.50	47.00	CK-NAC (IFCC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	382	305	459	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	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	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked
	mg/dl	4.25	3.40	5.10	0.43	0.85	
Free T4	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	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	
Free T4	pmol/l	65.9	49.4	82.4	8.25	16.50	Roche Cobas 6000/8000
	ng/dl	5.14	3.85	6.43	0.65	1.29	
	pg/ml	51.4	38.5	64.3	6.45	12.90	Roche Cobas 6000/8000
gamma-GT	U/l	148	125	171	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	91	77	105	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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
GLDH	U/l	29	23	35	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	18	26	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose dehydrogenase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	4.31	3.66	4.96	0.33	0.65	Direct HDL Roche 3rd generation
	mg/dl	166	141	191	12.50	25.00	
Iron	µmol/l	36.8	30.2	43.4	3.30	6.60	Colorimetric with ppt.
	µg/dl	206	169	243	18.50	37.00	
	µmol/l	37.0	30.4	43.6	3.30	6.60	Colorimetric without ppt.
	µg/dl	207	170	244	18.50	37.00	
Lactate	mmol/l	5.46	4.48	6.44	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.2	40.4	58.0	4.40	8.80	
LD (LDH)	U/l	721	613	829	54.00	108.00	P->L German methods 37°C
	U/l	521	443	599	39.00	78.00	P->L German methods 30°C
	U/l	366	311	421	27.50	55.00	P->L German methods 25°C
	U/l	380	323	437	28.50	57.00	L->P IFCC 37°C
	U/l	274	233	315	20.50	41.00	L->P IFCC 30°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	51	41	61	5.00	10.00	Roche Colorimetric 37°C
	U/l	51	41	61	5.00	10.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.26	1.62	0.09	0.18	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.73	1.53	1.93	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.20	3.72	4.68	0.24	0.48	
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	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	6.15	5.66	6.64	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.8	35.0	52.6	4.40	8.80	Biuret reaction CX4/5/7
	g/dl	4.38	3.50	5.26	0.44	0.88	
	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	44.5	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 =	36.3	27.2	45.4	4.55	9.10	Roche Cobas 6000/8000
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.24	1.00	1.49	0.12	0.25	Roche Cobas 6000/8000
TIBC	µmol/l	63.1	49.9	76.3	6.60	13.20	FE+UIBC(saturation with iron)
	µg/dl	353	279	427	37.00	74.00	
	µmol/l	42.3	33.4	51.2	4.45	8.90	Calculated from Transferrin
	µg/dl	236	187	285	24.50	49.00	
Total T3	nmol/l	4.40	3.30	5.50	0.55	1.10	Roche Cobas 6000/8000
	ng/ml	2.86	2.15	3.57	0.36	0.71	
	ng/dl	286	215	357	35.50	71.00	Roche Cobas 6000/8000

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	166	125	207	20.50	41.00	Roche Cobas 6000/8000
	µg/dl	12.9	9.75	16.1	1.58	3.15	
	ng/ml	129	97.5	161	15.75	31.50	Roche Cobas 6000/8000
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	
	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.90	2.43	3.37	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	257	215	299	21.00	42.00	
UIBC	µmol/l	25.8	21.1	30.5	2.35	4.70	Direct Colorimetric
	µg/dl	144	118	170	13.00	26.00	
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	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	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	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.99	7.83	10.2	0.58	1.16	
	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	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.00	7.83	10.2	0.59	1.17	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

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	201	171	231	15.00	30.00	Roche Integra AMP buffer 37°C
	U/l	157	133	181	12.00	24.00	Roche Integra AMP buffer 30°C
	U/l	128	109	147	9.50	19.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	121	96	146	12.50	25.00	Colorimetric 37°C
	U/l	90	71	109	9.50	19.00	Colorimetric 30°C
	U/l	68	54	82	7.00	14.00	Colorimetric 25°C
	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	279	237	321	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	288	245	331	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	20.6	16.3	24.9	2.15	4.30	Enzymatic
Bilirubin Direct	µmol/l	29.5	23.3	35.7	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	29.2	23.0	35.4	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	82.6	65.2	100	8.70	17.40	Diazo with Sulphanilic Acid
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	83.3	65.8	101	8.75	17.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.87	3.85	5.89	0.51	1.02	
Calcium	µmol/l	79.7	62.9	96.5	8.40	16.80	Diazonium ion
	mg/dl	4.66	3.68	5.64	0.49	0.98	
	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	
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	
	mmol/l	3.15	2.83	3.47	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	114	105	123	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	
CK Total	U/l	618	507	729	55.50	111.00	CK-NAC (IFCC) 37°C
	U/l	387	317	457	35.00	70.00	CK-NAC (IFCC) 30°C
	U/l	263	215	311	24.00	48.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	338	270	406	34.00	68.00	Alkaline picrate with deproteinization
	mg/dl	3.82	3.05	4.59	0.39	0.77	
	µmol/l	345	276	414	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.90	3.12	4.68	0.39	0.78	
	µmol/l	386	309	463	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.36	3.49	5.23	0.44	0.87	
Creatinine	µmol/l	356	285	427	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.02	3.22	4.82	0.40	0.80	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	126	107	145	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	99	84	114	7.50	15.00	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	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	4.15	3.52	4.78	0.32	0.63	Direct HDL Roche 3rd generation
	mg/dl	160	136	184	12.00	24.00	
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	
LD (LDH)	U/l	393	334	452	29.50	59.00	L->P IFCC 37°C
	U/l	284	241	327	21.50	43.00	L->P IFCC 30°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 25°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	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	6.00	5.52	6.48	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.4	35.6	53.2	4.40	8.80	Biuret reaction end point
	g/dl	4.44	3.56	5.32	0.44	0.88	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	211	291	20.00	40.00	
Urea	mmol/l	17.5	14.8	20.2	1.35	2.70	Urease end point
	mg/dl	105	88.9	121	8.05	16.10	
	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease kinetic
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease hypochlorite
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	17.8	15.1	20.5	1.35	2.70	BUN
	mg/dl	50.0	42.5	57.5	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.00	7.85	10.2	0.58	1.15	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	26.5	22.5	30.5	2.00	4.00	Bromocresol Purple
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	207	176	238	15.50	31.00	Roche Integra AMP buffer 37°C
	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 30°C
	U/l	132	112	152	10.00	20.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	123	98	148	12.50	25.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	263	224	302	19.50	39.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	280	238	322	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
	U/l	103	83	123	10.00	20.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.2	15.2	23.2	2.00	4.00	Enzymatic
Bilirubin Direct	µmol/l	28.5	22.5	34.5	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.76	1.39	2.13	0.19	0.37	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	84.7	66.9	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.95	3.91	5.99	0.52	1.04	
	µmol/l	84.0	66.4	102	8.80	17.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.91	3.88	5.94	0.52	1.03	
Calcium	µmol/l	86.6	68.4	105	9.10	18.20	Diazonium ion
	mg/dl	5.07	4.00	6.14	0.54	1.07	
	mmol/l	3.18	2.86	3.50	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.15	2.84	3.46	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Chloride	mmol/l	109	101	117	4.00	8.00	ISE indirect
Cholesterol	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase
	mg/dl	286	249	323	18.50	37.00	
CK Total	U/l	603	495	711	54.00	108.00	CK-NAC (IFCC) 37°C
	U/l	377	310	444	33.50	67.00	CK-NAC (IFCC) 30°C
	U/l	256	210	302	23.00	46.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	387	310	464	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	399	319	479	40.00	80.00	Enzymatic UV method (340nm)
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	401	321	481	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.53	3.63	5.43	0.45	0.90	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	385	308	462	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.35	3.48	5.22	0.44	0.87	
gamma-GT	U/l	151	128	174	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	119	101	137	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	93	79	107	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	144	196	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	113	155	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	4.11	3.49	4.73	0.31	0.62	Direct HDL Roche 3rd generation
	mg/dl	159	135	183	12.00	24.00	
Iron	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.56	4.56	6.56	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.1	41.1	59.1	4.50	9.00	
LD (LDH)	U/l	719	611	827	54.00	108.00	P->L German methods 37°C
	U/l	519	441	597	39.00	78.00	P->L German methods 30°C
	U/l	365	310	420	27.50	55.00	P->L German methods 25°C
	U/l	379	322	436	28.50	57.00	L->P IFCC 37°C
	U/l	274	232	316	21.00	42.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	52	42	62	5.00	10.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
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	6.16	5.67	6.65	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.2	35.4	53.0	4.40	8.80	Biuret reaction end point
	g/dl	4.42	3.54	5.30	0.44	0.88	
	g/l	44.7	35.8	53.6	4.45	8.90	Biuret reaction kinetic
	g/dl	4.47	3.58	5.36	0.45	0.89	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	63.6	50.3	76.9	6.65	13.30	FE+UIBC(saturation with iron)
	µg/dl	356	281	431	37.50	75.00	
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	2.85	2.40	3.30	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	252	212	292	20.00	40.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	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	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.54	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	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	140	119	161	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
	U/l	92	73	111	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
Amylase Total	U/l	279	238	320	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.8	15.7	23.9	2.05	4.10	Enzymatic
Bilirubin Direct	µmol/l	30.4	24.0	36.8	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Bilirubin Total	µmol/l	82.6	65.2	100	8.70	17.40	Diazo with Sulphanilic Acid
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	81.2	64.1	98.3	8.55	17.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.75	3.75	5.75	0.50	1.00	
	µmol/l	81.2	64.2	98.2	8.50	17.00	Diazonium ion
mg/dl	4.75	3.76	5.74	0.50	0.99		

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	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	109	101	117	4.00	8.00	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	559	458	660	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	350	287	413	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	238	195	281	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	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	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
gamma-GT	U/l	141	120	162	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	111	95	127	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	87	74	100	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	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	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	4.20	3.57	4.83	0.32	0.63	Direct HDL Roche 3rd generation
	mg/dl	162	138	186	12.00	24.00	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
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	377	320	434	28.50	57.00	L->P IFCC 37°C
	U/l	272	231	313	20.50	41.00	L->P IFCC 30°C
	U/l	191	162	220	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	50	40	60	5.00	10.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
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	
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Potassium	mmol/l	6.15	5.66	6.64	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.7	35.0	52.4	4.35	8.70	Biuret reaction end point
	g/dl	4.37	3.50	5.24	0.44	0.87	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	62.3	49.2	75.4	6.55	13.10	FE+UIBC(saturation with iron)
	µg/dl	348	275	421	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	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	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	0.51	0.45	0.58	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.64	7.51	9.77	0.57	1.13	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.52	0.46	0.59	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.80	7.66	9.94	0.57	1.14	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

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	527	448	606	39.50	79.00	Diethanolamine buffer DEA 37°C
	U/l	323	275	371	24.00	48.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	297	252	342	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	320	272	368	24.00	48.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	157	126	188	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	21.9	17.4	26.4	2.25	4.50	Enzymatic
Bile Acids	µmol/l	50.5	40.4	60.6	5.05	10.10	5th Generation Colorimetric
Bilirubin Direct	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	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	94.6	74.7	115	9.95	19.90	Diazo with Sulphanilic Acid
	mg/dl	5.53	4.37	6.69	0.58	1.16	
	µmol/l	97.7	77.2	118	10.25	20.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.72	4.52	6.92	0.60	1.20	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	7.60	6.61	8.59	0.50	0.99	Cholesterol Oxidase
	mg/dl	293	255	331	19.00	38.00	
CK Total	U/l	593	486	700	53.50	107.00	CK-NAC substrate start (DGKC) 37°C
	U/l	640	525	755	57.50	115.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	324	259	389	32.50	65.00	Alkaline picrate no deproteinization
	mg/dl	3.66	2.93	4.39	0.37	0.73	
	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	
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	16.3	13.9	18.7	1.20	2.40	Glucose oxidase
	mg/dl	294	250	338	22.00	44.00	
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	5.33	4.37	6.29	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.0	39.4	56.6	4.30	8.60	
LD (LDH)	U/l	793	674	912	59.50	119.00	P->L German methods 37°C
	U/l	379	322	436	28.50	57.00	L->P IFCC 37°C
Lipase	U/l	80	64	96	8.00	16.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Colorimetric
	mg/dl	1.47	1.29	1.65	0.09	0.18	
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	
Phosphate Inorganic	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	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.03	5.55	6.51	0.24	0.48	ISE method - direct
	mmol/l	6.12	5.63	6.61	0.25	0.49	Enzymatic
Protein Total	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	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
	mmol/l	161	153	169	4.00	8.00	Enzymatic
TIBC	µmol/l	62.4	49.3	75.5	6.55	13.10	Direct Colorimetric
	µg/dl	349	276	422	36.50	73.00	
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	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	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.32	8.11	10.5	0.61	1.21	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.2	23.9	32.5	2.15	4.30	Bromocresol Green
	g/dl	2.82	2.39	3.25	0.22	0.43	
	g/l	26.6	22.6	30.6	2.00	4.00	Bromocresol Purple
	g/dl	2.66	2.26	3.06	0.20	0.40	
Alkaline Phosphatase	U/l	432	367	497	32.50	65.00	Diethanolamine buffer DEA 37°C
	U/l	259	220	298	19.50	39.00	AMP optimised to IFCC 37°C
	U/l	253	215	291	19.00	38.00	AMP non-optimised 37°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	270	229	311	20.50	41.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	286	243	329	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	161	129	193	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	22.7	18.0	27.4	2.35	4.70	Enzymatic
Bilirubin Direct	µmol/l	28.2	22.3	34.1	2.95	5.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Bilirubin Total	µmol/l	95.3	75.3	115	10.00	20.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.58	4.41	6.75	0.59	1.17	
Calcium	mmol/l	3.21	2.89	3.53	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.07	2.77	3.37	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.51	6.54	8.48	0.49	0.97	Cholesterol Oxidase
	mg/dl	290	252	328	19.00	38.00	
CK Total	U/l	587	481	693	53.00	106.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	394	315	473	39.50	79.00	Enzymatic UV method (340nm)
	mg/dl	4.45	3.56	5.34	0.45	0.89	
	µmol/l	373	298	448	37.50	75.00	Jaffe rate blanked
	mg/dl	4.21	3.37	5.05	0.42	0.84	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	mg/dl	4.17	3.33	5.01	0.42	0.84	
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.19	1.86	2.52	0.17	0.33	Direct Clearance Method
	mg/dl	84.5	71.8	97.2	6.35	12.70	
Iron	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.50	39.00	
Lactate	mmol/l	5.53	4.54	6.52	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.8	40.9	58.7	4.45	8.90	
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P 37°C
	U/l	731	621	841	55.00	110.00	P->L German methods 37°C
	U/l	380	323	437	28.50	57.00	L->P IFCC 37°C
Lipase	U/l	71	57	85	7.00	14.00	Other Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.20	1.54	0.09	0.17	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

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	
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	6.15	5.65	6.65	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.2	37.0	55.4	4.60	9.20	Biuret reaction end point
	g/dl	4.62	3.70	5.54	0.46	0.92	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	60.6	47.9	73.3	6.35	12.70	Direct Colorimetric
	µg/dl	339	268	410	35.50	71.00	
Triglycerides	mmol/l	3.08	2.59	3.57	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	273	229	317	22.00	44.00	
	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	
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	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	8.15	10.6	0.61	1.22	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	26.5	22.6	30.4	1.95	3.90	Bromocresol Purple
	g/dl	2.65	2.26	3.04	0.20	0.39	
Alkaline Phosphatase	U/l	257	218	296	19.50	39.00	Siemens Dimension AMP buffer 37°C
	U/l	253	215	291	19.00	38.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer with P5P 37°C
	U/l	140	112	168	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	358	304	412	27.00	54.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	209	167	251	21.00	42.00	Tris buffer with P5P 37°C
	U/l	213	171	255	21.00	42.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	21.2	16.8	25.6	2.20	4.40	Enzymatic
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	88.2	69.7	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.16	4.08	6.24	0.54	1.08	
Calcium	mmol/l	3.05	2.74	3.36	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.01	6.10	7.92	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	235	307	18.00	36.00	
	mmol/l	7.01	6.10	7.92	0.46	0.91	Dimension-Siemens reagents
	mg/dl	271	235	307	18.00	36.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	567	465	669	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	552	453	651	49.50	99.00	Dithioerythritol (DTE) IFCC correlated 37°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	373	299	447	37.00	74.00	Enzymatic UV method (340nm)
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	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	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	201	170	232	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	4.23	3.60	4.86	0.32	0.63	Direct HDL PPD
	mg/dl	163	139	187	12.00	24.00	
	mmol/l	4.08	3.46	4.70	0.31	0.62	Direct HDL PEGME
	mg/dl	157	134	180	11.50	23.00	
Iron	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric with ppt.
	µg/dl	202	165	239	18.50	37.00	
	µmol/l	36.2	29.7	42.7	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	166	238	18.00	36.00	
Lactate	mmol/l	5.52	4.53	6.51	0.50	0.99	UV LDH
	mg/dl	49.7	40.8	58.6	4.45	8.90	
LD (LDH)	U/l	363	309	417	27.00	54.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	232	186	278	23.00	46.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Methylthymol blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	
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	6.07	5.59	6.55	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.1	36.8	55.4	4.65	9.30	Biuret reaction end point
	g/dl	4.61	3.68	5.54	0.47	0.93	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.1	41.1	63.1	5.50	11.00	Removal of excess free iron
	µg/dl	291	230	352	30.50	61.00	
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	
	mmol/l	2.92	2.46	3.38	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	258	218	298	20.00	40.00	
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	0.54	0.47	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.99	7.83	10.2	0.58	1.16	
	mmol/l	0.54	0.47	0.60	0.03	0.07	Spectrophotometric at 280-290
	mg/dl	8.99	7.83	10.2	0.58	1.16	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

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	26.7	22.7	30.7	2.00	4.00	Bromocresol Purple
	g/dl	2.67	2.27	3.07	0.20	0.40	
Alkaline Phosphatase	U/l	256	218	294	19.00	38.00	Siemens Dimension AMP buffer 37°C
	U/l	254	216	292	19.00	38.00	AMP optimised to IFCC 37°C
	U/l	266	226	306	20.00	40.00	Randox AMP 37°C
ALT (GPT)	U/l	139	112	166	13.50	27.00	Tris buffer with P5P 37°C
	U/l	139	111	167	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	355	302	408	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	212	169	255	21.50	43.00	Tris buffer with P5P 37°C
	U/l	213	170	256	21.50	43.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	21.5	17.0	26.0	2.25	4.50	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	89.0	70.3	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.21	4.11	6.31	0.55	1.10	
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Dimension-Siemens reagents
	mg/dl	273	237	309	18.00	36.00	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	567	465	669	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	563	462	664	50.50	101.00	Dithioerythritol 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	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	401	321	481	40.00	80.00	Jaffe rate blanked
	mg/dl	4.53	3.63	5.43	0.45	0.90	
IDMS traceable	µmol/l	398	318	478	40.00	80.00	IDMS traceable
	mg/dl	4.50	3.59	5.41	0.46	0.91	
gamma-GT	U/l	175	148	202	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	204	174	234	15.00	30.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	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	4.16	3.54	4.78	0.31	0.62	Direct HDL PPD
	mg/dl	161	137	185	12.00	24.00	
	mmol/l	4.14	3.52	4.76	0.31	0.62	Direct HDL PEGME
	mg/dl	160	136	184	12.00	24.00	
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric with ppt.
	µg/dl	200	164	236	18.00	36.00	
	µmol/l	35.8	29.3	42.3	3.25	6.50	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.59	4.58	6.60	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.4	41.3	59.5	4.55	9.10	
	mmol/l	5.45	4.47	6.43	0.49	0.98	UV LDH
	mg/dl	49.1	40.3	57.9	4.40	8.80	
LD (LDH)	U/l	370	314	426	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	365	310	420	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	227	182	272	22.50	45.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Methylthymol blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.01	5.95	8.07	0.53	1.06	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.05	5.57	6.53	0.24	0.48	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	159	151	167	4.00	8.00	ISE method - indirect
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	
	mmol/l	2.96	2.48	3.44	0.24	0.48	L/G Kinase EP. no 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	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease end point
	mg/dl	112	95.0	129	8.50	17.00	

**SIEMENS DIMENSION RxL/Max/Xpand®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase catalase 340nm
	mg/dl	8.72	7.59	9.85	0.57	1.13	
	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	0.53	0.46	0.60	0.03	0.07	Spectrophotometric at 280-290
	mg/dl	8.94	7.78	10.1	0.58	1.16	
	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	

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.3	25.7	34.9	2.30	4.60	Bromocresol Green
	g/dl	3.03	2.57	3.49	0.23	0.46	
Alkaline Phosphatase	U/l	476	405	547	35.50	71.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	26.7	21.1	32.3	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Bilirubin Total	µmol/l	87.7	69.3	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.13	4.05	6.21	0.54	1.08	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Cholesterol	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	
Creatinine	µmol/l	354	283	425	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.00	3.20	4.80	0.40	0.80	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
Protein Total	g/l	46.8	37.5	56.1	4.65	9.30	Biuret reaction end point
	g/dl	4.68	3.75	5.61	0.47	0.93	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	

**VITALAB FLEXOR®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 875UE Cat. No. HE1532 / HS2611

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

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	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	0.54	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	