

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

CAT. NO. HNI530	GTIN: 05055273203783	SIZE: 20 x 5ml
CAT. NO. HS2611	GTIN: 05055273203813	SIZE: 5 x 5ml
LOT NO. 1255UN	EXPIRY: 2021-10-28	

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 2 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

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

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

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

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

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

MATERIALS PROVIDED

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

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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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	11.7	7.84	15.6	1.93	3.86	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Purple
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	152	129	175	11.50	23.00	AMP non-optimised 37°C
	U/l	146	124	168	11.00	22.00	Colorimetric 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	63	54	72	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	95	81	109	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.3	12.2	18.4	1.55	3.10	Colorimetric
	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.7	21.3	32.1	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.10	0.866	1.33	0.12	0.23	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
µmol/l	27.0	21.3	32.7	2.85	5.70	Nitrobenzenediazonium salt	
mg/dl	1.58	1.25	1.91	0.17	0.33		
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Arsenazo III
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Chloride	mmol/l	97.6	89.8	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Cholinesterase	U/l	6828	5462	8194	683.00	1366.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC serum start (DGKC) 37°C
	U/l	212	173	251	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	211	173	249	19.00	38.00	Monothioglycerol 37°C
	U/l	223	183	263	20.00	40.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
mg/dl	1.51	1.21	1.81	0.15	0.30		

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Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	52	45	59	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	U/l	53	45	61	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL PPD
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Direct Clearance Method
	mg/dl	53.7	45.9	61.5	3.90	7.80	
Iron	mmol/l	1.37	1.17	1.57	0.10	0.20	HDL - Ultra
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.7	132	10.15	20.30	
	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.44	1.18	1.70	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.0	10.6	15.4	1.20	2.40	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P 37°C
	U/l	197	167	227	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Other Colorimetric 37°C
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.686	0.603	0.769	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Osmolality	mOsm/kg	303	242	364	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.09	3.47	4.71	0.31	0.62	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.06	3.44	4.68	0.31	0.62	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	57.2	45.8	68.6	5.70	11.40	Biuret reaction kinetic
	g/dl	5.72	4.58	6.86	0.57	1.14	
PSA Total	ng/ml =	10.2	7.64	12.8	1.28	2.56	Abbott Architect

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	77.8	108	7.55	15.10	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.7	109	7.55	15.10	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase	
mg/dl	91.2	76.7	106	7.25	14.50		
UIBC	μmol/l	25.3	20.7	29.9	2.30	4.60	Direct Colorimetric
	μg/dl	141	116	166	12.50	25.00	
Urea	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease end point
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.11	6.04	8.18	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	

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Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	
Zinc	µmol/l	21.2	16.9	25.5	2.15	4.30	Colorimetric with deproteinisation
	µg/dl	138	110	166	14.00	28.00	

ABX Pentra 400®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	20.8	16.5	25.1	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
Bilirubin Total	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE direct
Cholesterol	mmol/l	4.29	3.73	4.85	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
CK Total	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	145	116	174	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.64	1.31	1.97	0.17	0.33	
	µmol/l	141	112	170	14.50	29.00	Jaffe rate blanked
	mg/dl	1.59	1.27	1.91	0.16	0.32	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.49	5.51	7.47	0.49	0.98	Hexokinase
	mg/dl	117	99.3	135	8.85	17.70	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
	mg/dl	52.5	44.8	60.2	3.85	7.70	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
LD (LDH)	U/l	378	321	435	28.50	57.00	P->L German methods 37°C
	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.94	3.62	4.26	0.16	0.32	ISE method - direct
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
Urea	mmol/l	6.84	5.81	7.87	0.52	1.03	Urease kinetic
	mg/dl	41.1	34.9	47.3	3.10	6.20	
	mmol/l	6.84	5.81	7.87	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	

Arkray Spotchem EZ/EL®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.0	48.0	3.10	6.20	ARKRAY Spotchem EZ
	g/dl	4.10	3.40	4.80	0.31	0.62	
Alkaline Phosphatase	U/l	310	238	382	35.70	71.30	ARKRAY Spotchem EZ 37°C
ALT (GPT)	U/l	36	28	44	3.80	7.60	ARKRAY Spotchem EZ 37°C
Amylase Total	U/l	68	51	85	8.50	17.00	ARKRAY Spotchem EZ 37°C
AST (GOT)	U/l	36	28	44	3.60	7.20	ARKRAY Spotchem EZ 37°C
Bilirubin Total	µmol/l	23.9	17.1	30.7	3.40	6.80	ARKRAY Spotchem EZ
	mg/dl	1.40	1.00	1.80	0.20	0.40	
Bun Urea	mmol/l	7.86	6.79	8.93	0.54	1.07	ARKRAY Spotchem EZ
	mg/dl	22.0	19.0	25.0	1.10	2.20	
Calcium	mmol/l	2.07	1.75	2.39	0.16	0.32	ARKRAY Spotchem EZ
	mg/dl	8.30	7.00	9.60	0.63	1.25	
Chloride	mmol/l	107	101	113	2.70	5.40	ARKRAY Spotchem EL
Cholesterol	mmol/l	4.02	3.47	4.57	0.28	0.55	ARKRAY Spotchem EZ
	mg/dl	155	134	176	10.10	20.20	
CK Total	U/l	186	139	233	23.30	46.50	ARKRAY Spotchem EZ 37°C
Creatinine	µmol/l	133	97.5	169	17.75	35.50	ARKRAY Spotchem EZ (creatinine)
	mg/dl	1.50	1.10	1.90	0.16	0.32	
	µmol/l	97.3	79.6	115	8.85	17.70	ARKRAY Spotchem EZ (creatinine2)
	mg/dl	1.10	0.900	1.30	0.08	0.15	
gamma-GT	U/l	70	56	84	7.00	14.00	ARKRAY Spotchem EZ 37°C

Arkray Spotchem EZ/EL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.16	5.22	7.10	0.47	0.94	ARKRAY Spotchem EZ
	mg/dl	111	94.0	128	8.40	16.70	
HDL - Cholesterol	mmol/l	0.93	0.70	1.17	0.12	0.23	ARKRAY Spotchem EZ
	mg/dl	36.0	27.0	45.0	4.50	9.00	
LD (LDH)	U/l	342	259	425	41.10	82.10	ARKRAY Spotchem EZ 37°C
Magnesium	mmol/l	0.91	0.74	1.07	0.08	0.17	ARKRAY Spotchem EZ
	mg/dl	2.20	1.80	2.60	0.17	0.33	
Phosphate Inorganic	mmol/l	1.29	1.13	1.45	0.08	0.16	ARKRAY Spotchem EZ
	mg/dl	4.00	3.50	4.50	0.24	0.48	
Potassium	mmol/l	3.90	3.60	4.20	0.15	0.30	ARKRAY Spotchem EL
Protein Total	g/l	57.0	49.0	65.0	3.70	7.40	ARKRAY Spotchem EZ
	g/dl	5.70	4.90	6.50	0.37	0.74	
Sodium	mmol/l	139	133	145	2.80	5.60	ARKRAY Spotchem EL
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	ARKRAY Spotchem EZ
	mg/dl	95.0	80.0	110	7.20	14.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	ARKRAY Spotchem EZ
	mg/dl	5.50	4.80	6.20	0.31	0.61	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	62	53	71	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	63	53	73	5.00	10.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	81	69	93	6.00	12.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.5	15.4	23.6	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	
mg/dl	1.13	0.889	1.37	0.12	0.24	Diazo with Dichloroaniline (DCA)	
Bilirubin Total	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	

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Bilirubin Total	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	28.9	22.8	35.0	3.05	6.10	Diazonium ion	
	mg/dl	1.69	1.33	2.05	0.18	0.36		
	µmol/l	29.7	23.5	35.9	3.10	6.20	DPD (Beckman AU)	
	mg/dl	1.74	1.37	2.11	0.19	0.37		
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.50	7.66	9.34	0.42	0.84		
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III	
	mg/dl	8.70	7.82	9.58	0.44	0.88		
	Chloride	mmol/l	96.3	88.6	104	3.85	7.70	Colorimetric
		mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase	
	mg/dl	160	139	181	10.50	21.00		
Cholinesterase	U/l	5430	4344	6516	543.00	1086.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C	
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate with deproteinization	
	mg/dl	1.50	1.20	1.80	0.15	0.30		
	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization	
	mg/dl	1.49	1.20	1.78	0.15	0.29		
	µmol/l	131	104	158	13.50	27.00	Enzymatic UV method	
	mg/dl	1.48	1.18	1.78	0.15	0.30		
	µmol/l	128	103	153	12.50	25.00	Creatinine PAP method	
	mg/dl	1.45	1.16	1.74	0.15	0.29		
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.49	1.20	1.78	0.15	0.29		

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Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	125	99.6	150	12.70	25.40	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	128	103	153	12.50	25.00	IDMS traceable
	mg/dl	1.45	1.16	1.74	0.15	0.29	
D-3-Hydroxybutyrate	mmol/l	0.30	0.26	0.35	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	52	44	60	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.42	5.46	7.38	0.48	0.96	GOD/02-Beckman method
	mg/dl	116	98.4	134	8.80	17.60	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Glucose dehydrogenase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.25	5.31	7.19	0.47	0.94	Hexokinase
	mg/dl	113	95.7	130	8.65	17.30	
HDL - Cholesterol	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct HDL PPD
	mg/dl	52.9	44.8	61.0	4.05	8.10	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.3	43.6	59.0	3.85	7.70	

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HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Roche 3rd generation	
	mg/dl	51.7	44.0	59.4	3.85	7.70		
	mmol/l	1.36	1.16	1.56	0.10	0.20	HDL - Ultra	
	mg/dl	52.5	44.8	60.2	3.85	7.70		
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.	
	µg/dl	111	91.1	131	9.95	19.90		
	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.	
	µg/dl	110	90.6	129	9.70	19.40		
	Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
		mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P 37°C	
	U/l	394	335	453	29.50	59.00	P->L German methods 37°C	
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C	
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C	
Lithium	mmol/l	0.98	0.86	1.09	0.06	0.12	Ion selective electrode	
	mg/dl	0.677	0.596	0.758	0.04	0.08		
	mmol/l	0.97	0.86	1.09	0.06	0.12	Spectrophotometric	
	mg/dl	0.674	0.594	0.754	0.04	0.08		
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III	
	mg/dl	2.24	1.97	2.51	0.14	0.27		
	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue	
	mg/dl	2.24	1.97	2.51	0.14	0.27		
	mmol/l	0.90	0.80	1.01	0.05	0.11	Methylthymol blue	
	mg/dl	2.20	1.93	2.47	0.14	0.27		

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Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction kinetic
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.1	37.2	57.0	4.95	9.90	FE+UIBC(saturation with iron)
	μg/dl	263	208	318	27.50	55.00	
	μmol/l	48.7	38.5	58.9	5.10	10.20	Direct Colorimetric
	μg/dl	272	215	329	28.50	57.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	83.7	116	8.15	16.30	
UIBC	μmol/l	28.0	23.0	33.0	2.50	5.00	Direct Colorimetric
	μg/dl	157	129	185	14.00	28.00	

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Urea	mmol/l	7.32	6.23	8.41	0.55	1.09	Beckman-Conductivity	
	mg/dl	44.0	37.4	50.6	3.30	6.60		
	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease end point	
	mg/dl	43.9	37.3	50.5	3.30	6.60		
	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic	
	mg/dl	43.6	37.0	50.2	3.30	6.60		
	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease hypochlorite	
	mg/dl	44.7	37.9	51.5	3.40	6.80		
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN	
	mg/dl	20.3	17.3	23.3	1.50	3.00		
	Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	6.05	5.28	6.82	0.39	0.77	
mmol/l		0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		6.00	5.21	6.79	0.40	0.79		
mmol/l		0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		6.01	5.24	6.78	0.39	0.77		

Beckman CX4/5/7/9/LX20®/DxC600/800®

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Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	43.4	36.9	49.9	3.25	6.50	Bromocresol Purple
	g/dl	4.34	3.69	4.99	0.33	0.65	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	164	139	189	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	58	49	67	4.50	9.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	91	78	104	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Differential rate pH change
Bilirubin Direct	µmol/l	13.5	10.6	16.4	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.790	0.620	0.960	0.09	0.17	
Bilirubin Total	µmol/l	28.4	22.5	34.3	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.32	2.00	0.17	0.34	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	


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Chloride	mmol/l	96.6	88.8	104	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5674	4539	6809	567.50	1135.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	211	173	249	19.00	38.00	Monothioglycerol 37°C
	U/l	205	168	242	18.50	37.00	Creatinine phosphate substrate Start 37°C
Copper	µmol/l	17.2	13.8	20.6	1.70	3.40	Colorimetric
	µg/dl	109	87.8	130	10.60	21.20	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	GOD/02-Beckman method
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	5.97	5.08	6.86	0.45	0.89	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.02	5.11	6.93	0.46	0.91	Oxygen electrode
	mg/dl	108	92.1	124	7.95	15.90	
	mmol/l	6.05	5.15	6.95	0.45	0.90	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	

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HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	HDL - Ultra
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.42	1.17	1.67	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	167	142	192	12.50	25.00	L->P 37°C
	U/l	517	440	594	38.50	77.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	239	203	275	18.00	36.00	L->P IFCC 37°C
Lithium	mmol/l	0.91	0.80	1.02	0.06	0.11	Spectrophotometric
	mg/dl	0.635	0.558	0.712	0.04	0.08	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Beckman PHOSm (365nm)
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction CX4/5/7
	g/dl	5.90	4.72	7.08	0.59	1.18	

Beckman CX4/5/7/9/LX20®/DxC600/800®

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Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction kinetic
	g/dl	5.63	4.50	6.76	0.57	1.13	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	μmol/l	42.1	33.2	51.0	4.45	8.90	Removal of excess free iron
	μg/dl	235	186	284	24.50	49.00	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.4	120	8.30	16.60	
Urea	mmol/l	6.97	5.93	8.01	0.52	1.04	Beckman-Conductivity
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
Alkaline Phosphatase	U/l	169	144	194	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	108	92	124	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.0	15.8	24.2	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.17	0.924	1.42	0.12	0.25	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.0	46.2	3.05	6.10	Bromocresol Green
	g/dl	4.01	3.40	4.62	0.31	0.61	
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Creatinine	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct Clearance Method
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease end point
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	6.90	5.87	7.93	0.52	1.03	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.90	5.87	7.93	0.52	1.03	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.18	5.38	6.98	0.40	0.80	
	mmol/l	0.38	0.33	0.43	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.42	5.58	7.26	0.42	0.84	
	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.37	5.54	7.20	0.42	0.83	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	263	223	303	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	205	174	236	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	168	142	194	13.00	26.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.6	13.1	20.1	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.971	0.766	1.18	0.10	0.21	
Bilirubin Total	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.28	2.06	2.50	0.11	0.22	Arsenazo III
	mg/dl	9.14	8.26	10.0	0.44	0.88	



Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	Colorimetric
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	141	181	10.00	20.00	
Cholinesterase	U/l	5479	4383	6575	548.00	1096.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	229	187	271	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	143	117	169	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	97	79	115	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	55	46	64	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Glucose oxidase
	mg/dl	111	94.8	127	8.10	16.20	
LD (LDH)	U/l	332	282	382	25.00	50.00	P->L Scandinavian & Dutch 37°C
	U/l	240	204	276	18.00	36.00	P->L Scandinavian & Dutch 30°C
	U/l	168	143	193	12.50	25.00	P->L Scandinavian & Dutch 25°C
	U/l	394	335	453	29.50	59.00	P->L German methods 37°C
	U/l	284	242	326	21.00	42.00	P->L German methods 30°C
	U/l	200	170	230	15.00	30.00	P->L German methods 25°C
	U/l	408	347	469	30.50	61.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - direct
Protein Total	g/l	61.8	49.4	74.2	6.20	12.40	Biuret reaction end point
	g/dl	6.18	4.94	7.42	0.62	1.24	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
Urea	mmol/l	7.48	6.36	8.60	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.22	5.41	7.03	0.41	0.81	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.0	36.6	49.4	3.20	6.40	Bromocresol Green
	g/dl	4.30	3.66	4.94	0.32	0.64	
	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
	g/l	40.9	34.8	47.0	3.05	6.10	Turbidimetric Assays
	g/dl	4.09	3.48	4.70	0.31	0.61	
Alkaline Phosphatase	U/l	135	115	155	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	105	90	120	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	35	28	42	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	19	29	2.50	5.00	Phosphate buffer DGKC 30°C
	U/l	17	13	21	2.00	4.00	Phosphate buffer DGKC 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	17.8	14.1	21.5	1.85	3.70	Roche JG factored
	mg/dl	1.04	0.825	1.26	0.11	0.22	
Bilirubin Total	µmol/l	18.3	14.4	22.2	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.07	0.842	1.30	0.11	0.23	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.13	1.92	2.34	0.11	0.21	NM-BAPTA
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5518	4414	6622	552.00	1104.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	203	167	239	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	127	105	149	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	210	173	247	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	74	104	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	214	175	253	19.50	39.00	Creatinine phosphate substrate Start 37°C
	U/l	134	110	158	12.00	24.00	Creatinine phosphate substrate Start 30°C
	U/l	91	74	108	8.50	17.00	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Alkaline picrate with deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	124	99.6	148	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.13	1.67	0.14	0.27	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	1.45	1.15	1.75	0.15	0.30		
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.18	5.26	7.10	0.46	0.92	Glucose dehydrogenase	
	mg/dl	111	94.8	127	8.10	16.20		
	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase	
	mg/dl	112	95.0	129	8.50	17.00		
	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase	
	mg/dl	112	94.8	129	8.60	17.20		
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME	
	mg/dl	51.0	43.2	58.8	3.90	7.80		
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Roche 3rd generation	
	mg/dl	51.7	44.0	59.4	3.85	7.70		
	Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric with ppt.
		µg/dl	108	88.9	127	9.55	19.10	
µmol/l		19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.	
µg/dl		111	90.6	131	10.20	20.40		
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.4	11.0	15.8	1.20	2.40		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	391	333	449	29.00	58.00	P->L German methods 37°C
	U/l	282	240	324	21.00	42.00	P->L German methods 30°C
	U/l	198	169	227	14.50	29.00	P->L German methods 25°C
	U/l	210	179	241	15.50	31.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	91	121	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	40	32	48	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	0.98	0.87	1.10	0.06	0.12	Ion selective electrode
	mg/dl	0.683	0.601	0.765	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.5	45.2	67.8	5.65	11.30	Biuret reaction end point
	g/dl	5.65	4.52	6.78	0.57	1.13	
	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction kinetic
	g/dl	5.63	4.50	6.76	0.57	1.13	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.7	34.6	52.8	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	244	193	295	25.50	51.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	96.5	80.8	112	7.85	15.70	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	100	84.0	116	8.00	16.00	
UIBC	µmol/l	23.9	19.6	28.2	2.15	4.30	Direct Colorimetric
	µg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	6.83	5.80	7.86	0.52	1.03	Urease end point
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.80	5.78	7.82	0.51	1.02	Urease kinetic
	mg/dl	40.9	34.7	47.1	3.10	6.20	
	mmol/l	6.80	5.78	7.82	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.11	6.61	0.38	0.75	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	247	210	284	18.50	37.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	Colorimetric
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	114	91.0	137	11.50	23.00	Creatinine PAP method
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Hexokinase
	mg/dl	108	91.9	124	8.05	16.10	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct Clearance Method
	mg/dl	47.9	40.9	54.9	3.50	7.00	
LD (LDH)	U/l	198	169	227	14.50	29.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.7	121	8.65	17.30	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	85.0	117	8.00	16.00	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	124	106	142	9.00	18.00	Roche Integra AMP buffer 37°C
	U/l	97	83	111	7.00	14.00	Roche Integra AMP buffer 30°C
	U/l	79	68	90	5.50	11.00	Roche Integra AMP buffer 25°C
	U/l	173	147	199	13.00	26.00	Randox AMP 37°C
	U/l	135	115	155	10.00	20.00	Randox AMP 30°C
	U/l	111	94	128	8.50	17.00	Randox AMP 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	81	69	93	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.9	14.2	21.6	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	20.0	15.8	24.2	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.17	0.924	1.42	0.12	0.25	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Chloride	mmol/l	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	94.0	86.5	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.20	3.65	4.75	0.28	0.55	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
Cholinesterase	U/l	5543	4434	6652	554.50	1109.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	229	188	270	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	143	118	168	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	97	80	114	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	1.49	1.20	1.78	0.15	0.29		

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.32	5.38	7.26	0.47	0.94	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	397	337	457	30.00	60.00	P->L German methods 37°C
	U/l	287	243	331	22.00	44.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.26	3.92	4.60	0.17	0.34	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Urea	mmol/l	7.63	6.49	8.77	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Green
	g/dl	4.10	3.48	4.72	0.31	0.62	
Alkaline Phosphatase	U/l	164	139	189	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	128	108	148	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	105	89	121	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	12.5	9.90	15.1	1.30	2.60	Diazo with Sulphanilic Acid
	mg/dl	0.731	0.579	0.883	0.08	0.15	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	93.8	86.3	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholinesterase	U/l	5758	4607	6909	575.50	1151.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	81	67	95	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	142	114	170	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	Glucose	mmol/l	6.45	5.48	7.42	0.49	0.97
mg/dl		116	98.7	133	8.65	17.30	
mmol/l		6.07	5.16	6.98	0.46	0.91	Glucose oxidase
mg/dl		109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.16	0.98	1.34	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	44.8	37.9	51.7	3.45	6.90	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.08	0.92	1.24	0.08	0.16	Direct HDL PEGME
	mg/dl	41.7	35.6	47.8	3.05	6.10	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.6	129	9.70	19.40	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
LD (LDH)	U/l	394	334	454	30.00	60.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	200	169	231	15.50	31.00	P->L German methods 25°C
	U/l	387	329	445	29.00	58.00	P->L SFBC 37°C
	U/l	279	238	320	20.50	41.00	P->L SFBC 30°C
	U/l	196	167	225	14.50	29.00	P->L SFBC 25°C
Lipase	U/l	44	35	53	4.50	9.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.95	0.84	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.14	0.28	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.4	118	8.30	16.60	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	100	84.0	116	8.00	16.00		
Urea	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease end point	
	mg/dl	43.9	37.3	50.5	3.30	6.60		
	mmol/l	7.35	6.24	8.46	0.56	1.11	Urease kinetic	
	mg/dl	44.2	37.5	50.9	3.35	6.70		
Uric Acid (Urate)	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN	
	mg/dl	20.6	17.5	23.7	1.55	3.10		
	Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.75	4.99	6.51	0.38	0.76	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.59	4.86	6.32	0.37	0.73		

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.4	33.5	45.3	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.94	3.35	4.53	0.30	0.59	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	11.5	9.09	13.9	1.21	2.41	BuBc Vitros Slide
	mg/dl	0.673	0.532	0.814	0.07	0.14	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	97.0	89.3	105	3.85	7.70	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	5725	4580	6870	572.50	1145.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	200	164	236	18.00	36.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	121	96.8	145	12.10	24.20	Vitros IDMS Traceable
mg/dl	1.37	1.09	1.65	0.14	0.28		


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

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.97	5.08	6.86	0.45	0.89	Ortho Vitros Microslide Systems
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros Magnetic HDL
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	571	486	656	42.50	85.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	292	234	350	29.00	58.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.11	0.98	1.24	0.07	0.13	Ortho Vitros Microslide Systems
	mg/dl	0.771	0.681	0.861	0.05	0.09	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	

JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	11.5	8.65	14.4	1.43	2.85	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	μmol/l	49.2	38.9	59.5	5.15	10.30	Ortho Vitros Microslide Systems
	μg/dl	275	217	333	29.00	58.00	
Triglycerides	mmol/l	1.24	1.05	1.43	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	110	92.9	127	8.55	17.10	
Urea	mmol/l	6.84	5.82	7.86	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	41.1	35.0	47.2	3.05	6.10	
	mmol/l	6.84	5.81	7.87	0.52	1.03	BUN
	mg/dl	19.2	16.3	22.1	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.92	6.36	0.36	0.72	

Konelab 20/30/60®/Thermo Scientific Indiko Plus®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Green
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	121	103	139	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	99	84	114	7.50	15.00	AMP optimised to IFCC 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.5	13.0	20.0	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Bilirubin Total	µmol/l	23.2	18.3	28.1	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.36	1.07	1.65	0.15	0.29	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	101	93.1	109	3.95	7.90	Colorimetric
	mmol/l	99.8	91.8	108	4.00	8.00	ISE direct
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	138	113	163	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C



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

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	145	116	174	14.50	29.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.64	1.31	1.97	0.17	0.33	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	6.16	5.23	7.09	0.47	0.93	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PEGME
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	20.9	17.1	24.7	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	95.6	138	10.70	21.40	
LD (LDH)	U/l	438	372	504	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	316	269	363	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	222	189	255	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
	U/l	156	133	179	11.50	23.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C

Konelab 20/30/60®/Thermo Scientific Indiko Plus®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue	
	mg/dl	2.12	1.87	2.37	0.13	0.25		
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV	
	mg/dl	4.37	3.72	5.02	0.33	0.65		
Potassium	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - direct	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point	
	g/dl	5.86	4.69	7.03	0.59	1.17		
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	100	84.2	116	7.90	15.80		
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	98.2	82.4	114	7.90	15.80		
Urea	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease end point	
	mg/dl	43.5	37.0	50.0	3.25	6.50		
	mmol/l	7.24	6.15	8.33	0.55	1.09	Urease kinetic	
	mg/dl	43.5	37.0	50.0	3.25	6.50		
	mmol/l	7.24	6.15	8.33	0.55	1.09	BUN	
	mg/dl	20.3	17.3	23.3	1.50	3.00		
	Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	6.01	5.24	6.78	0.39	0.77	
mmol/l		0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		6.00	5.22	6.78	0.39	0.78		
mmol/l		0.38	0.33	0.43	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		6.40	5.56	7.24	0.42	0.84		

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.2	61.4	75.0	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.7	4.3	7.1	0.69	1.37	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
beta-globulin		9.4	7.1	11.7	1.13	2.26	% of total Protein (Beckman Capillary)
gamma-globulin		10.7	8.1	13.3	1.29	2.57	% of total Protein (Beckman Capillary)

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	225	178	272	23.50	47.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	170	134	206	18.00	36.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	127	101	153	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.7	7.17	14.2	1.77	3.53	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Green
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Purple
	g/dl	4.22	3.58	4.86	0.32	0.64	
	g/l	39.4	33.5	45.3	2.95	5.90	Ortho Vitros Microslide Systems
	g/dl	3.94	3.35	4.53	0.30	0.59	
	g/l	41.6	35.3	47.9	3.15	6.30	Turbidimetric Assays
g/dl	4.16	3.53	4.79	0.32	0.63		
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Ortho Vitros Microslide Systems 37°C
	U/l	290	247	333	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	226	192	260	17.00	34.00	Diethanolamine buffer DEA 30°C
	U/l	185	158	212	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	106	90	122	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	151	128	174	11.50	23.00	AMP non-optimised 37°C
	U/l	118	100	136	9.00	18.00	AMP non-optimised 30°C
U/l	96	82	110	7.00	14.00	AMP non-optimised 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	48	39	57	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	36	28	44	4.00	8.00	Phosphate buffer DGKC 37°C
	U/l	27	21	33	3.00	6.00	Phosphate buffer DGKC 30°C
	U/l	20	16	24	2.00	4.00	Phosphate buffer DGKC 25°C
	U/l	37	29	45	4.00	8.00	Tris buffer SCE 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer SCE 30°C
U/l	21	16	26	2.50	5.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	70	60	80	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	82	70	94	6.00	12.00	Saccharogenic 37°C
	U/l	81	69	93	6.00	12.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	87	74	100	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	80	68	92	6.00	12.00	Agappe - CNPG3 37°C
	U/l	89	75	103	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	95	81	109	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
Apolipoprotein A-1	g/l	1.14	0.94	1.35	0.10	0.21	Immunoturbidimetric
	mg/dl	114	93.5	135	10.25	20.50	
Apolipoprotein B	g/l	0.56	0.46	0.67	0.05	0.10	Immunoturbidimetric
	mg/dl	56.4	46.2	66.6	5.10	10.20	
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer with P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer with P5P 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
	U/l	39	32	46	3.50	7.00	Tris buffer SCE 37°C
	U/l	26	22	30	2.00	4.00	Tris buffer SCE 30°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Colorimetric
	mmol/l	17.1	13.6	20.6	1.75	3.50	Ortho Vitros Microslide Systems



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Differential rate pH change
	mmol/l	16.2	12.8	19.6	1.70	3.40	Enzymatic
	mmol/l	16.2	12.9	19.5	1.65	3.30	Ion selective electrode
Bile Acids	µmol/l	27.8	22.2	33.4	2.80	5.60	4th Generation Colorimetric
	µmol/l	23.7	19.0	28.4	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.8	14.9	22.7	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.10	0.872	1.33	0.11	0.23	
	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.10	0.866	1.33	0.12	0.23	
	µmol/l	16.9	13.3	20.5	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	0.989	0.778	1.20	0.11	0.21	
Bilirubin Total	µmol/l	16.0	12.6	19.4	1.70	3.40	Modified Jendrassik
	mg/dl	0.936	0.737	1.14	0.10	0.20	
	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	32.5	25.7	39.3	3.40	6.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	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	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	24.6	19.4	29.8	2.60	5.20	Nitrobenzenediazonium salt
	mg/dl	1.44	1.13	1.75	0.16	0.31	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	32.9	26.0	39.8	3.45	6.90	Modified Jendrassik
	mg/dl	1.92	1.52	2.32	0.20	0.40	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Ion selective electrode
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.15	1.93	2.37	0.11	0.22	Methylthymol blue
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.04	1.84	2.24	0.10	0.20	Phosphonazo
	mg/dl	8.18	7.37	8.99	0.41	0.81	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	Colorimetric
	mmol/l	97.0	89.3	105	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	95.5	87.8	103	3.85	7.70	ISE indirect
	mmol/l	97.3	89.6	105	3.85	7.70	ISE direct
Cholesterol	mmol/l	3.94	3.42	4.46	0.26	0.52	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Dehydrogenase
	mg/dl	152	133	171	9.50	19.00	
Cholinesterase	U/l	5537	4430	6644	553.50	1107.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	Ortho Vitros Microslide Systems 37°C
	U/l	216	177	255	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC serum start (DGKC) 25°C
	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	214	175	253	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	134	110	158	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	91	74	108	8.50	17.00	CK-NAC (IFCC) 25°C
	U/l	211	173	249	19.00	38.00	Monothioglycerol 37°C
	U/l	132	108	156	12.00	24.00	Monothioglycerol 30°C
	U/l	90	74	106	8.00	16.00	Monothioglycerol 25°C
	U/l	214	175	253	19.50	39.00	Dithioerythritol (DTE) IFCC correlated 37°C
U/l	134	110	158	12.00	24.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	91	74	108	8.50	17.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	16.8	13.4	20.2	1.70	3.40	Atomic absorption
	µg/dl	107	85.2	129	10.90	21.80	
	µmol/l	15.9	12.7	19.1	1.60	3.20	Colorimetric
	µg/dl	101	80.8	121	10.10	20.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cortisol	nmol/l	528	396	660	66.00	132.00	Roche Cobas E411
	µg/dl	19.0	14.3	23.7	2.35	4.70	
Creatinine	µmol/l	131	104	158	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	129	104	154	12.50	25.00	Enzymatic UV method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
µmol/l	121	97.0	145	12.00	24.00	Vitros IDMS Traceable	
mg/dl	1.37	1.10	1.64	0.14	0.27		
µmol/l	131	105	157	13.00	26.00	IDMS traceable	
mg/dl	1.48	1.19	1.77	0.15	0.29		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.05	1.64	2.46	0.21	0.41	Gravimetric
	ng/ml	1.60	1.28	1.92	0.16	0.32	
Folate	nmol/l	39.0	29.6	48.4	4.70	9.40	Roche Cobas E411
	ng/ml	17.2	13.1	21.3	2.05	4.10	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	17.1	12.8	21.4	2.15	4.30	Abbott Architect
	ng/dl	1.33	0.998	1.66	0.17	0.33	Abbott Architect
	pg/ml	13.3	9.98	16.6	1.66	3.32	Abbott Architect
	pmol/l	19.0	14.3	23.7	2.35	4.70	Beckman Access/LXi725
	ng/dl	1.48	1.12	1.84	0.18	0.36	Beckman Access/LXi725
	pg/ml	14.8	11.2	18.4	1.80	3.60	Beckman Access/LXi725
	pmol/l	18.4	13.8	23.0	2.30	4.60	Beckman Dxl 600/800
	ng/dl	1.44	1.08	1.80	0.18	0.36	Beckman Dxl 600/800
	pg/ml	14.4	10.8	18.0	1.80	3.60	Beckman Dxl 600/800
	pmol/l	21.1	15.8	26.4	2.65	5.30	Biomerieux Vidas FT4N Kit
	ng/dl	1.65	1.23	2.07	0.21	0.42	Biomerieux Vidas FT4N Kit
	pg/ml	16.5	12.3	20.7	2.10	4.20	Biomerieux Vidas FT4N Kit
	pmol/l	18.3	13.7	22.9	2.30	4.60	Diasorin Liaison
	ng/dl	1.43	1.07	1.79	0.18	0.36	Diasorin Liaison
	pg/ml	14.3	10.7	17.9	1.80	3.60	Diasorin Liaison
	pmol/l	35.4	26.6	44.2	4.40	8.80	Ortho Vitros 3600/5600/ECi
	ng/dl	2.76	2.07	3.45	0.35	0.69	Ortho Vitros 3600/5600/ECi
	pg/ml	27.6	20.7	34.5	3.45	6.90	Ortho Vitros 3600/5600/ECi
	pmol/l	22.2	16.7	27.7	2.75	5.50	Roche Cobas 4000/E411
	ng/dl	1.73	1.30	2.16	0.22	0.43	Roche Cobas 4000/E411
	pg/ml	17.3	13.0	21.6	2.15	4.30	Roche Cobas 4000/E411
	pmol/l	21.9	16.4	27.4	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.71	1.28	2.14	0.22	0.43	Roche Cobas 6000/8000
	pg/ml	17.1	12.8	21.4	2.15	4.30	Roche Cobas 6000/8000

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	21.8	16.4	27.2	2.70	5.40	Roche Elecsys
	ng/dl	1.70	1.28	2.12	0.21	0.42	Roche Elecsys
	pg/ml	17.0	12.8	21.2	2.10	4.20	Roche Elecsys
	pmol/l	20.8	15.6	26.0	2.60	5.20	Siemens Centaur CP
	ng/dl	1.62	1.22	2.02	0.20	0.40	Siemens Centaur CP
	pg/ml	16.2	12.2	20.2	2.00	4.00	Siemens Centaur CP
	pmol/l	19.3	14.5	24.1	2.40	4.80	Siemens Centaur XP/XPT/Classic
	ng/dl	1.51	1.13	1.89	0.19	0.38	Siemens Centaur XP/XPT/Classic
	pg/ml	15.1	11.3	18.9	1.90	3.80	Siemens Centaur XP/XPT/Classic
	pmol/l	20.3	15.2	25.4	2.55	5.10	Siemens Dimension Exl LOCI
	ng/dl	1.58	1.19	1.97	0.20	0.39	Siemens Dimension Exl LOCI
	pg/ml	15.8	11.9	19.7	1.95	3.90	Siemens Dimension Exl LOCI
	pmol/l	22.0	16.5	27.5	2.75	5.50	Siemens Immulite 1000
	ng/dl	1.72	1.29	2.15	0.22	0.43	Siemens Immulite 1000
	pg/ml	17.2	12.9	21.5	2.15	4.30	Siemens Immulite 1000
Gentamicin	pmol/l	20.9	15.7	26.1	2.60	5.20	Siemens Immulite 2000/2500
	ng/dl	1.63	1.22	2.04	0.21	0.41	Siemens Immulite 2000/2500
	pg/ml	16.3	12.2	20.4	2.05	4.10	Siemens Immulite 2000/2500
Gentamicin	pmol/l	20.8	15.6	26.0	2.60	5.20	SNIBE Maglumi Analysers
	ng/dl	1.62	1.22	2.02	0.20	0.40	SNIBE Maglumi Analysers
	pg/ml	16.2	12.2	20.2	2.00	4.00	SNIBE Maglumi Analysers
Gentamicin	µmol/l	7.11	5.69	8.53	0.71	1.42	Gravimetric
	µg/ml	3.40	2.72	4.08	0.34	0.68	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C	
	U/l	47	40	54	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C	
	U/l	37	32	42	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C	
	U/l	29	25	33	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C	
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
	U/l	56	48	64	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	44	38	50	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C		
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	5.97	5.08	6.86	0.45	0.89	Ortho Vitros Microslide Systems	
	mg/dl	108	91.5	125	8.25	16.50		
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose dehydrogenase	
	mg/dl	113	96.2	130	8.40	16.80		
	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase	
	mg/dl	111	94.4	128	8.30	16.60		
	mmol/l	6.01	5.11	6.91	0.45	0.90	Oxygen electrode	
	mg/dl	108	92.1	124	7.95	15.90		
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase	
	mg/dl	111	94.4	128	8.30	16.60		
	HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PPD
		mg/dl	52.5	44.8	60.2	3.85	7.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros Magnetic HDL
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct Clearance Method
	mg/dl	44.4	37.8	51.0	3.30	6.60	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros 5.1 FS microtip assay
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Roche 3rd generation	
mg/dl	51.3	43.6	59.0	3.85	7.70		
mmol/l	1.35	1.15	1.55	0.10	0.20	HDL - Ultra	
mg/dl	52.1	44.4	59.8	3.85	7.70		
Immunoglobulin A	g/l	1.68	1.26	2.10	0.21	0.42	Immunoturbidimetric
	mg/dl	168	126	210	21.00	42.00	
Immunoglobulin G	g/l	6.97	5.72	8.22	0.63	1.25	Immunoturbidimetric
	mg/dl	697	572	822	62.50	125.00	
Immunoglobulin M	g/l	0.72	0.57	0.86	0.07	0.14	Immunoturbidimetric
	mg/dl	71.6	57.3	85.9	7.15	14.30	
Iron	μmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric with ppt.
	μg/dl	107	88.3	126	9.35	18.70	
	μmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	μg/dl	109	89.4	129	9.80	19.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.42	1.17	1.67	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
	mmol/l	1.37	1.12	1.62	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.3	10.1	14.5	1.10	2.20	
	mmol/l	1.39	1.14	1.64	0.13	0.25	Enzymatic Electrode
	mg/dl	12.5	10.3	14.7	1.10	2.20	
mmol/l	1.43	1.17	1.69	0.13	0.26	UV LDH	
mg/dl	12.9	10.5	15.3	1.20	2.40		
LAP	U/l	16	14	18	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	571	486	656	42.50	85.00	Ortho Vitros Microslide Systems 37°C
	U/l	186	158	214	14.00	28.00	L->P 37°C
	U/l	134	114	154	10.00	20.00	L->P 30°C
	U/l	94	80	108	7.00	14.00	L->P 25°C
	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	146	124	168	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	44	35	53	4.50	9.00	Other Colorimetric 37°C
	U/l	292	234	350	29.00	58.00	Ortho Vitros Microslide Systems 37°C
	U/l	37	29	45	4.00	8.00	Roche Colorimetric 37°C
	U/l	207	166	248	20.50	41.00	Randox Turbidimetric with colipase 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.11	0.98	1.24	0.07	0.13	Ortho Vitros Microslide Systems
	mg/dl	0.771	0.681	0.861	0.05	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Flame photometry
	mg/dl	0.708	0.624	0.792	0.04	0.08	
	mmol/l	0.99	0.87	1.11	0.06	0.12	Ion selective electrode
	mg/dl	0.686	0.604	0.768	0.04	0.08	
	mmol/l	0.99	0.87	1.11	0.06	0.12	Spectrophotometric
	mg/dl	0.686	0.603	0.769	0.04	0.08	
mmol/l	1.03	0.91	1.15	0.06	0.12	Randox Colorimetric	
mg/dl	0.715	0.629	0.801	0.04	0.09		
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Arsenazo III
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Atomic absorption
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
mmol/l	0.91	0.81	1.02	0.05	0.11	Chlorphosphonazo III	
mg/dl	2.22	1.96	2.48	0.13	0.26		



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Enzymatic
	mg/dl	2.14	1.88	2.40	0.13	0.26	
NEFA	mmol/l	1.63	1.39	1.87	0.12	0.24	Colorimetric
Osmolality	mOsm/kg	295	236	354	29.50	59.00	Calculated
	mOsm/kg	308	246	370	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Gravimetric
	mg/l	13.0	10.4	15.6	1.30	2.60	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.03	3.71	4.35	0.16	0.32	Enzymatic
	mmol/l	4.01	3.69	4.33	0.16	0.32	Flame photometry
	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - direct
	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction kinetic
	g/dl	5.79	4.63	6.95	0.58	1.16	
PSA Total	ng/ml =	8.36	6.27	10.5	1.05	2.09	Tosoh Series

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	10.5	7.91	13.1	1.30	2.59	Siemens Immulite 1000
	ng/ml =	13.5	10.2	16.8	1.65	3.30	Roche Elecsys Modular E170
	ng/ml =	11.4	8.56	14.2	1.42	2.84	bioMerieux VIDAS TPSA
	ng/ml =	10.6	7.93	13.3	1.34	2.67	Siemens Centaur XP/XPT/Classic
	ng/ml =	10.5	7.90	13.1	1.30	2.60	Abbott Architect
	ng/ml =	12.6	9.46	15.7	1.57	3.14	Cobas E411
	ng/ml =	11.8	8.87	14.7	1.47	2.93	Roche Cobas 6000/8000
	ng/ml =	11.0	8.25	13.8	1.38	2.75	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.44	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	Flame photometry
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.17	0.94	1.40	0.12	0.23	Abbott Architect
	µU/ml =	1.22	0.98	1.46	0.12	0.24	Beckman Access FastTSH 2nd Generation
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Beckman Dxl800 Hyper TSH
	µU/ml =	1.28	1.02	1.54	0.13	0.26	Beckman Dxl 600/800 Access (3rd IS)
	µU/ml =	1.52	1.22	1.82	0.15	0.30	bioMerieux VIDAS TSH
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Ortho Vitros 3600/5600/ECi
	µU/ml =	1.52	1.22	1.82	0.15	0.30	Roche Cobas 4000/E411

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.52	1.22	1.82	0.15	0.30	Roche Cobas 6000/8000
	µU/ml =	1.26	1.01	1.51	0.13	0.25	Siemens Dimension Exl LOCI
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.61	1.29	1.93	0.16	0.32	SNIBE Maglumi Analysers
TIBC	µmol/l	49.2	38.9	59.5	5.15	10.30	Ortho Vitros Microslide Systems
	µg/dl	275	217	333	29.00	58.00	
	µmol/l	42.1	33.3	50.9	4.40	8.80	Removal of excess free iron
	µg/dl	235	186	284	24.50	49.00	
	µmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	198	302	26.00	52.00	
	µmol/l	42.6	33.7	51.5	4.45	8.90	Direct Colorimetric
	µg/dl	238	188	288	25.00	50.00	
	µmol/l	43.2	34.1	52.3	4.55	9.10	Calculated from Transferrin
	µg/dl	241	191	291	25.00	50.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	2.35	1.76	2.94	0.30	0.59	Abbott Architect
	ng/ml	1.53	1.15	1.91	0.19	0.38	Abbott Architect
	ng/dl	153	115	191	19.00	38.00	Abbott Architect
	nmol/l	3.24	2.43	4.05	0.41	0.81	Ortho Vitros 3600/5600/ECi
	ng/ml	2.11	1.58	2.64	0.27	0.53	Ortho Vitros 3600/5600/ECi
	ng/dl	211	158	264	26.50	53.00	Ortho Vitros 3600/5600/ECi
	nmol/l	2.76	2.07	3.45	0.35	0.69	Roche Cobas 4000/E411
	ng/ml	1.80	1.35	2.25	0.23	0.45	Roche Cobas 4000/E411
ng/dl	180	135	225	22.50	45.00	Roche Cobas 4000/E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.65	1.99	3.31	0.33	0.66	Siemens Centaur XP/XPT/Classic
	ng/ml	1.73	1.30	2.16	0.22	0.43	Siemens Centaur XP/XPT/Classic
	ng/dl	173	130	216	21.50	43.00	Siemens Centaur XP/XPT/Classic
Total T4	nmol/l	90.6	68.0	113	11.30	22.60	Abbott Architect
	µg/dl	7.07	5.30	8.84	0.89	1.77	Abbott Architect
	ng/ml	70.7	53.0	88.4	8.85	17.70	Abbott Architect
	nmol/l	90.3	67.7	113	11.30	22.60	Beckman Access/LXi725
	µg/dl	7.04	5.28	8.80	0.88	1.76	Beckman Access/LXi725
	ng/ml	70.4	52.8	88.0	8.80	17.60	Beckman Access/LXi725
	nmol/l	91.7	68.8	115	11.45	22.90	Beckman Dxl 600/800
	µg/dl	7.15	5.37	8.93	0.89	1.78	Beckman Dxl 600/800
	ng/ml	71.5	53.7	89.3	8.90	17.80	Beckman Dxl 600/800
	nmol/l	88.3	66.2	110	11.05	22.10	BioMerieux Vidas
	µg/dl	6.89	5.16	8.62	0.87	1.73	BioMerieux Vidas
	ng/ml	68.9	51.6	86.2	8.65	17.30	BioMerieux Vidas
	nmol/l	88.1	66.1	110	11.00	22.00	Ortho Vitros 3600/5600/ECi
	µg/dl	6.87	5.16	8.58	0.86	1.71	Ortho Vitros 3600/5600/ECi
	ng/ml	68.7	51.6	85.8	8.55	17.10	Ortho Vitros 3600/5600/ECi
	nmol/l	96.9	72.7	121	12.10	24.20	Roche Cobas 4000/E411
	µg/dl	7.56	5.67	9.45	0.95	1.89	Roche Cobas 4000/E411
	ng/ml	75.6	56.7	94.5	9.45	18.90	Roche Cobas 4000/E411
nmol/l	91.5	68.6	114	11.45	22.90	Roche Cobas 6000/8000	
µg/dl	7.14	5.35	8.93	0.90	1.79	Roche Cobas 6000/8000	
ng/ml	71.4	53.5	89.3	8.95	17.90	Roche Cobas 6000/8000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	98.7	74.0	123	12.35	24.70	Roche Elecsys
	µg/dl	7.70	5.77	9.63	0.97	1.93	Roche Elecsys
	ng/ml	77.0	57.7	96.3	9.65	19.30	Roche Elecsys
	nmol/l	93.6	70.2	117	11.70	23.40	Siemens Centaur CP
	µg/dl	7.30	5.48	9.12	0.91	1.82	Siemens Centaur CP
	ng/ml	73.0	54.8	91.2	9.10	18.20	Siemens Centaur CP
	nmol/l	89.0	66.8	111	11.10	22.20	Siemens Centaur XP/XPT/Classic
	µg/dl	6.94	5.21	8.67	0.87	1.73	Siemens Centaur XP/XPT/Classic
	ng/ml	69.4	52.1	86.7	8.65	17.30	Siemens Centaur XP/XPT/Classic
	nmol/l	86.9	65.2	109	10.85	21.70	Siemens Immulite 2000/2500
	µg/dl	6.78	5.09	8.47	0.85	1.69	Siemens Immulite 2000/2500
	ng/ml	67.8	50.9	84.7	8.45	16.90	Siemens Immulite 2000/2500
Transferrin	g/l	1.93	1.54	2.32	0.20	0.39	Immunoturbidimetric
	mg/dl	193	154	232	19.50	39.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.1	113	7.65	15.30	
	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	95.6	80.5	111	7.55	15.10	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	80.8	112	7.85	15.70	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.24	1.05	1.43	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	110	92.9	127	8.55	17.10	
UIBC	μmol/l	25.4	20.8	30.0	2.30	4.60	Direct Colorimetric
	μg/dl	142	116	168	13.00	26.00	
Urea	mmol/l	6.84	5.82	7.86	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	41.1	35.0	47.2	3.05	6.10	
	mmol/l	7.16	6.08	8.24	0.54	1.08	Urease end point
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.6	49.4	3.20	6.40	
	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease hypochlorite
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.16	6.09	8.23	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.64	4.92	6.36	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	5.85	5.09	6.61	0.38	0.76		

**MEAN OF ALL INSTRUMENTS**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Vitamin B12	pmol/l	451	361	541	45.00	90.00	Roche Cobas E411
	pg/ml	611	489	733	61.00	122.00	
Zinc	µmol/l	23.1	18.5	27.7	2.30	4.60	Atomic absorption
	µg/dl	151	121	181	15.00	30.00	
	µmol/l	24.8	19.8	29.8	2.50	5.00	Colorimetric with deproteinisation
	µg/dl	162	129	195	16.50	33.00	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	242	205	279	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	189	160	218	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	155	131	179	12.00	24.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.936	0.743	1.13	0.10	0.19	
	µmol/l	16.8	13.3	20.3	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Calcium	mmol/l	2.10	1.89	2.31	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.42	7.58	9.26	0.42	0.84	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	


MINDRAY BS-200/300/400
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Creatinine PAP method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Agappe - Jaffe Kinetic
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Hexokinase
	mg/dl	107	90.6	123	8.20	16.40	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL PPD
	mg/dl	53.3	45.5	61.1	3.90	7.80	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.7	132	10.15	20.30	
LD (LDH)	U/l	399	339	459	30.00	60.00	P->L SFBC 37°C
	U/l	288	245	331	21.50	43.00	P->L SFBC 30°C
	U/l	202	172	232	15.00	30.00	P->L SFBC 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Biuret reaction end point
	g/dl	5.97	4.77	7.17	0.60	1.20	
TIBC	µmol/l	45.6	36.0	55.2	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	255	201	309	27.00	54.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.5	115	7.80	15.60	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
Urea	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease end point
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.30	6.20	8.40	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.26	6.80	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.16	6.66	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.02	6.50	0.37	0.74	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	109	93	125	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	22	30	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	17.9	14.1	21.7	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
	µmol/l	17.1	13.5	20.7	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	27.5	21.8	33.2	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	29.3	23.2	35.4	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.36	2.06	0.18	0.35	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.18	1.97	2.39	0.11	0.21	Arsenazo III
	mg/dl	8.74	7.90	9.58	0.42	0.84	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	Colorimetric
Cholesterol	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	225	184	266	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	141	115	167	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	96	78	114	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.42	5.46	7.38	0.48	0.96	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.37	1.16	1.58	0.11	0.21	
Iron	µg/dl	52.9	44.8	61.0	4.05	8.10	Colorimetric without ppt.
	µmol/l	20.3	16.7	23.9	1.80	3.60	
LD (LDH)	U/l	113	93.4	133	9.80	19.60	P->L German methods 37°C
	U/l	377	321	433	28.00	56.00	
	U/l	272	232	312	20.00	40.00	
	U/l	191	163	219	14.00	28.00	P->L German methods 25°C

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Protein Total	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
Urea	mmol/l	7.25	6.17	8.33	0.54	1.08	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.5	36.2	48.8	3.15	6.30	Bromocresol Green
	g/dl	4.25	3.62	4.88	0.32	0.63	
	g/l	41.8	35.6	48.0	3.10	6.20	Bromocresol Purple
	g/dl	4.18	3.56	4.80	0.31	0.62	
	g/l	42.4	36.1	48.7	3.15	6.30	Turbidimetric Assays
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	131	111	151	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	102	86	118	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	84	71	97	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	132	112	152	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	103	87	119	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	84	72	96	6.00	12.00	AMP optimised to IFCC 25°C
	U/l	133	113	153	10.00	20.00	Colorimetric 37°C
	U/l	104	88	120	8.00	16.00	Colorimetric 30°C
	U/l	85	72	98	6.50	13.00	Colorimetric 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	63	54	72	4.50	9.00	Roche liquid stable pNPG7 37°C
Amylase Total	U/l	84	71	97	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	83	71	95	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	84	71	97	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Colorimetric
	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	18.4	14.6	22.2	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Roche JG factored
	mg/dl	1.08	0.854	1.31	0.11	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.0	19.8	30.2	2.60	5.20	Nitrobenzenediazonium salt
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	91.8	84.4	99.2	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5426	4341	6511	542.50	1085.00	Colorimetric Benzoylcholine 37°C
	U/l	5408	4326	6490	541.00	1082.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC serum start (DGKC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC serum start (DGKC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	129	106	152	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	211	173	249	19.00	38.00	Creatinine phosphate substrate Start 37°C
	U/l	132	108	156	12.00	24.00	Creatinine phosphate substrate Start 30°C
	U/l	90	74	106	8.00	16.00	Creatinine phosphate substrate Start 25°C
Copper	µmol/l	16.5	13.2	19.8	1.65	3.30	Colorimetric
	µg/dl	105	84.0	126	10.50	21.00	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	μmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	μmol/l	135	108	162	13.50	27.00	Creatinine PAP method
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	μmol/l	132	106	158	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	132	106	158	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	μmol/l	133	106	160	13.50	27.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
μmol/l	129	103	155	13.00	26.00	IDMS traceable	
mg/dl	1.46	1.16	1.76	0.15	0.30		
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose dehydrogenase	
	mg/dl	109	93.0	125	8.00	16.00		
	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase	
	mg/dl	110	93.5	127	8.25	16.50		
HDL - Cholesterol	mmol/l	1.31	1.12	1.50	0.10	0.19	Direct HDL Immunoseparation	
	mg/dl	50.6	43.2	58.0	3.70	7.40		
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PEGME	
	mg/dl	51.0	43.2	58.8	3.90	7.80		
Iron	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Roche 3rd generation	
	mg/dl	51.3	43.6	59.0	3.85	7.70		
	Iron	μmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
		μg/dl	111	91.1	131	9.95	19.90	
μmol/l		19.7	16.1	23.3	1.80	3.60	Colorimetric without ppt.	
μg/dl		110	90.0	130	10.00	20.00		
Lactate	mmol/l	1.41	1.15	1.67	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	12.7	10.4	15.0	1.15	2.30		
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P 37°C	
	U/l	144	122	166	11.00	22.00	L->P 30°C	
	U/l	101	86	116	7.50	15.00	L->P 25°C	
	U/l	388	330	446	29.00	58.00	P->L Scandinavian & Dutch 37°C	
	U/l	280	238	322	21.00	42.00	P->L Scandinavian & Dutch 30°C	
	U/l	197	167	227	15.00	30.00	P->L Scandinavian & Dutch 25°C	
	U/l	389	331	447	29.00	58.00	P->L German methods 37°C	
	U/l	281	239	323	21.00	42.00	P->L German methods 30°C	
U/l	197	168	226	14.50	29.00	P->L German methods 25°C		

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Other Colorimetric 37°C
	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Ion selective electrode
	mg/dl	0.694	0.612	0.776	0.04	0.08	
	mmol/l	0.98	0.87	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.683	0.601	0.765	0.04	0.08	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.11	Arsenazo III
	mg/dl	2.11	1.85	2.37	0.13	0.26	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Atomic absorption
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mmol/l	0.91	0.80	1.02	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mOsm/kg	300	240	360	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	
Potassium	mmol/l	4.15	3.81	4.49	0.17	0.34	ISE method - indirect
Protein Total	g/l	58.6	46.8	70.4	5.90	11.80	Biuret reaction end point
	g/dl	5.86	4.68	7.04	0.59	1.18	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	
PSA Total	ng/ml =	11.9	8.94	14.9	1.48	2.96	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	43.5	34.4	52.6	4.55	9.10	FE+UIBC(saturation with iron)
	μg/dl	243	192	294	25.50	51.00	
	μmol/l	43.7	34.5	52.9	4.60	9.20	Direct Colorimetric
	μg/dl	244	193	295	25.50	51.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	102	85.7	118	8.15	16.30	
mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase	
mg/dl	95.6	80.4	111	7.60	15.20		
UIBC	μmol/l	24.0	19.7	28.3	2.15	4.30	Direct Colorimetric
	μg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	6.92	5.88	7.96	0.52	1.04	Urease end point
	mg/dl	41.6	35.3	47.9	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.97	6.49	0.38	0.76	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green	
	g/dl	4.27	3.63	4.91	0.32	0.64		
Alkaline Phosphatase	U/l	135	115	155	10.00	20.00	Roche Integra AMP buffer 37°C	
	U/l	105	90	120	7.50	15.00	Roche Integra AMP buffer 30°C	
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C	
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C	
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C	
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C	
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C	
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C	
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C	
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C	
Bilirubin Direct	µmol/l	17.8	14.1	21.5	1.85	3.70	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.04	0.825	1.26	0.11	0.22		
	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid	
	mg/dl	1.03	0.813	1.25	0.11	0.22		
	µmol/l	17.6	13.9	21.3	1.85	3.70	Roche JG factored	
	mg/dl	1.03	0.813	1.25	0.11	0.22		
	µmol/l	17.4	13.8	21.0	1.80	3.60	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.02	0.807	1.23	0.11	0.21		
	Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Diazo with Sulphanilic Acid
		mg/dl	1.46	1.15	1.77	0.16	0.31	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	98.6	90.7	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	125	99.9	150	12.55	25.10	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	



Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.29	7.17	0.47	0.94	Hexokinase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PEGME
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Roche 3rd generation
	mg/dl	50.2	42.8	57.6	3.70	7.40	
Iron	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.
	µg/dl	115	93.9	136	10.55	21.10	
LD (LDH)	U/l	210	178	242	16.00	32.00	L->P IFCC 37°C
	U/l	152	129	175	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	39	31	47	4.00	8.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/Glycerol Dehydrogenase
mg/dl	100	84.3	116	7.85	15.70		
Urea	mmol/l	6.82	5.80	7.84	0.51	1.02	Urease kinetic
	mg/dl	41.0	34.9	47.1	3.05	6.10	
	mmol/l	6.82	5.80	7.84	0.51	1.02	BUN
	mg/dl	19.1	16.2	22.0	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.85	5.09	6.61	0.38	0.76		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
	g/l	41.9	35.6	48.2	3.15	6.30	Turbidimetric Assays
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	130	110	150	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	83	70	96	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	135	115	155	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	105	90	120	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	86	73	99	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	84	71	97	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	18.7	14.7	22.7	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazo with Sulphanilic Acid
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.19	1.81	0.16	0.31	
	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.21	1.83	0.16	0.31	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	92.1	84.7	99.5	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Cholinesterase	U/l	5368	4295	6441	536.50	1073.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	220	180	260	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	138	113	163	12.50	25.00	CK-NAC substrate start (DGKC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC substrate start (DGKC) 25°C



Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	110	160	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	208	171	245	18.50	37.00	Creatinine phosphate substrate Start 37°C
	U/l	130	107	153	11.50	23.00	Creatinine phosphate substrate Start 30°C
	U/l	88	73	103	7.50	15.00	Creatinine phosphate substrate Start 25°C
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PEGME
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.29	1.09	1.49	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	49.8	42.1	57.5	3.85	7.70	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	88.3	126	9.35	18.70	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.42	1.16	1.68	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.8	10.5	15.1	1.15	2.30	
LD (LDH)	U/l	397	337	457	30.00	60.00	P->L Scandinavian & Dutch 37°C
	U/l	287	243	331	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	201	171	231	15.00	30.00	P->L Scandinavian & Dutch 25°C
	U/l	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	283	240	326	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Atomic absorption
	mg/dl	2.22	1.96	2.48	0.13	0.26	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction kinetic
	g/dl	5.87	4.69	7.05	0.59	1.18	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.1	115	8.00	16.00	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.0	115	8.05	16.10	
UIBC	µmol/l	24.5	20.1	28.9	2.20	4.40	Direct Colorimetric
	µg/dl	137	112	162	12.50	25.00	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.20	6.12	8.28	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.11	6.61	0.38	0.75	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	127	108	146	9.50	19.00	Roche Integra AMP buffer 37°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	84	72	96	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	24.1	19.1	29.1	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.41	1.12	1.70	0.15	0.29	
	µmol/l	24.9	19.7	30.1	2.60	5.20	Diazonium ion
	mg/dl	1.46	1.15	1.77	0.16	0.31	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.15	1.93	2.37	0.11	0.22	NM-BAPTA
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	92.0	84.6	99.4	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5333	4266	6400	533.50	1067.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	202	165	239	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.55	1.24	1.86	0.16	0.31	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Hexokinase
	mg/dl	111	94.1	128	8.45	16.90	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
LD (LDH)	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
	U/l	147	126	168	10.50	21.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.13	3.80	4.46	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.2	34.1	52.3	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.8	113	7.80	15.60	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.11	0.94	1.28	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	98.2	82.8	114	7.70	15.40	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	81.7	113	7.85	15.70	
UIBC	µmol/l	23.8	19.5	28.1	2.15	4.30	Direct Colorimetric
	µg/dl	133	109	157	12.00	24.00	
Urea	mmol/l	6.98	5.93	8.03	0.53	1.05	Urease kinetic
	mg/dl	41.9	35.6	48.2	3.15	6.30	
	mmol/l	6.98	5.93	8.03	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.61	4.89	6.33	0.36	0.72	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	290	247	333	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.8	14.1	21.5	1.85	3.70	Enzymatic
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	16.4	13.0	19.8	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.959	0.761	1.16	0.10	0.20	
Bilirubin Total	µmol/l	31.5	24.9	38.1	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.46	2.22	0.19	0.38	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	94.7	87.1	102	3.80	7.60	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.21	3.66	4.76	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	141	185	11.00	22.00	
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	246	202	290	22.00	44.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	131	104	158	13.50	27.00	Enzymatic UV method
	mg/dl	1.48	1.18	1.78	0.15	0.30	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.34	1.10	1.58	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.1	9.91	14.3	1.10	2.19	
LD (LDH)	U/l	397	337	457	30.00	60.00	P->L German methods 37°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Colorimetric
	mg/dl	0.715	0.629	0.801	0.04	0.09	
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.01	2.57	0.14	0.28	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.03	3.71	4.35	0.16	0.32	Enzymatic
	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - direct
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	μmol/l	52.9	41.8	64.0	5.55	11.10	Direct Colorimetric
	μg/dl	296	234	358	31.00	62.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.06	5.28	6.84	0.39	0.78	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.7	33.8	45.6	2.95	5.90	Bromocresol Green
	g/dl	3.97	3.38	4.56	0.30	0.59	
Alkaline Phosphatase	U/l	212	180	244	16.00	32.00	Diethanolamine buffer DEA 37°C
	U/l	144	122	166	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	57	79	5.50	11.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.5	14.7	22.3	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	16.4	12.9	19.9	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.959	0.755	1.16	0.10	0.20	
Bilirubin Total	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	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	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	


SIEMENS ADVIA 1200/1650/1800/2400®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	97.2	89.5	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Cholinesterase	U/l	6748	5398	8098	675.00	1350.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	214	175	253	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	124	98.9	149	12.55	25.10	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.03	5.13	6.93	0.45	0.90	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.11	5.20	7.02	0.46	0.91	Glucose oxidase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.11	0.95	1.27	0.08	0.16	Direct HDL Immunoseparation
	mg/dl	42.8	36.6	49.0	3.10	6.20	
	mmol/l	1.15	0.98	1.32	0.09	0.17	Direct Clearance Method
	mg/dl	44.4	37.7	51.1	3.35	6.70	

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.29	1.06	1.52	0.12	0.23	Colorimetric Lactate Oxidase
	mg/dl	11.6	9.55	13.7	1.03	2.05	
LD (LDH)	U/l	202	172	232	15.00	30.00	L->P 37°C
	U/l	390	331	449	29.50	59.00	P->L German methods 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	0.98	0.87	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.683	0.601	0.765	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	50.2	39.7	60.7	5.25	10.50	Removal of excess free iron
	µg/dl	281	222	340	29.50	59.00	
	µmol/l	50.4	39.8	61.0	5.30	10.60	FE+UIBC(saturation with iron)
	µg/dl	282	222	342	30.00	60.00	
	µmol/l	49.0	38.7	59.3	5.15	10.30	Direct Colorimetric
µg/dl	274	216	332	29.00	58.00		

SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.2	120	8.40	16.80	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.5	122	8.25	16.50	
Urea	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.91	5.14	6.68	0.39	0.77	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Purple
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	147	125	169	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	144	123	165	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer with P5P 37°C
	U/l	43	34	52	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	56	44	68	6.00	12.00	Tris buffer with P5P 37°C
	U/l	54	43	65	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.7	14.0	21.4	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	12.2	9.63	14.8	1.29	2.57	Diazo with Sulphanilic Acid
	mg/dl	0.714	0.563	0.865	0.08	0.15	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Calcium	mmol/l	2.04	1.84	2.24	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.18	7.37	8.99	0.41	0.81	
Chloride	mmol/l	96.8	89.0	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.66	3.18	4.14	0.24	0.48	Dimension-Siemens reagents
	mg/dl	141	123	159	9.00	18.00	
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	138	110	166	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.24	1.88	0.16	0.32	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	64	54	74	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PPD
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	163	131	195	16.00	32.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.16	1.91	2.41	0.13	0.25	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	ISE method - indirect	
Protein Total	g/l	60.8	48.7	72.9	6.05	12.10	Biuret reaction end point	
	g/dl	6.08	4.87	7.29	0.61	1.21		
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect	
TIBC	μmol/l	40.7	32.1	49.3	4.30	8.60	FE+UIBC(saturation with iron)	
	μg/dl	228	179	277	24.50	49.00		
	μmol/l	40.3	31.8	48.8	4.25	8.50	Direct Colorimetric	
	μg/dl	225	178	272	23.50	47.00		
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction	
	mg/dl	92.0	77.1	107	7.45	14.90		
	mmol/l	1.04	0.87	1.21	0.09	0.17	L/G Kinase EP. no correction	
	mg/dl	92.0	77.0	107	7.50	15.00		
	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/Glycerol Dehydrogenase	
	mg/dl	94.7	79.8	110	7.45	14.90		
	Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
		mg/dl	43.2	36.7	49.7	3.25	6.50	
mmol/l		7.18	6.10	8.26	0.54	1.08	BUN	
mg/dl		20.2	17.2	23.2	1.50	3.00		
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm	
	mg/dl	5.83	5.07	6.59	0.38	0.76		
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38	0.76		
	mmol/l	0.34	0.30	0.38	0.02	0.04	Spectrophotometric at 280-290	
	mg/dl	5.71	4.97	6.45	0.37	0.74		

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Purple
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	144	122	166	11.00	22.00	Siemens Dimension AMP buffer 37°C
	U/l	144	123	165	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	35	51	4.00	8.00	Tris buffer with P5P 37°C
	U/l	43	34	52	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	57	45	69	6.00	12.00	Tris buffer with P5P 37°C
	U/l	56	45	67	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.8	14.1	21.5	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	12.3	9.74	14.9	1.28	2.56	Diazo with Sulphanilic Acid
	mg/dl	0.720	0.570	0.870	0.08	0.15	
Bilirubin Total	µmol/l	27.8	22.0	33.6	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.07	1.86	2.28	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.30	7.45	9.15	0.43	0.85	
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	


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

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	9754	7803	10000	975.50	1951.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Creatinine PAP method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	µmol/l	138	111	165	13.50	27.00	Jaffe rate blanked
	mg/dl	1.56	1.25	1.87	0.16	0.31	
glucose	U/l	61	52	70	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	
HDL - Cholesterol	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL PPD
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PEGME
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct Clearance Method
	mg/dl	50.2	42.8	57.6	3.70	7.40	
	mmol/l	1.34	1.14	1.54	0.10	0.20	HDL - Ultra
	mg/dl	51.7	44.0	59.4	3.85	7.70	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	85.5	125	9.75	19.50	
	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.38	1.14	1.62	0.12	0.24	UV LDH
	mg/dl	12.4	10.3	14.5	1.05	2.10	
LD (LDH)	U/l	197	168	226	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	165	133	197	16.00	32.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.648	0.824	0.04	0.09	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.3	48.3	72.3	6.00	12.00	Biuret reaction end point
	g/dl	6.03	4.83	7.23	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.2	32.5	49.9	4.35	8.70	Removal of excess free iron
	µg/dl	230	182	278	24.00	48.00	
	µmol/l	41.1	32.5	49.7	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	230	182	278	24.00	48.00	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	41.1	32.5	49.7	4.30	8.60	Direct Colorimetric
	µg/dl	230	182	278	24.00	48.00	
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	77.9	108	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.5	109	7.65	15.30	
Urea	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.6	109	7.60	15.20	
	mmol/l	7.50	6.37	8.63	0.57	1.13	Urease end point
		mg/dl	45.1	38.3	51.9	3.40	
mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic	
	mg/dl	43.2	36.7	49.7	3.25		6.50
mmol/l	7.18	6.10	8.26	0.54	1.08	BUN	
	mg/dl	20.2	17.2	23.2	1.50		3.00
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.80	5.04	6.56	0.38	0.76	

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Purple
	g/dl	4.19	3.56	4.82	0.32	0.63	
Alkaline Phosphatase	U/l	151	129	173	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	13.1	10.3	15.9	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.766	0.603	0.929	0.08	0.16	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Calcium	mmol/l	2.05	1.85	2.25	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.22	7.41	9.03	0.41	0.81	
Chloride	mmol/l	99.8	91.8	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.66	3.19	4.13	0.24	0.47	Dimension-Siemens reagents
	mg/dl	141	123	159	9.00	18.00	
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	65	55	75	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.03	5.13	6.93	0.45	0.90	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL PEGME
	mg/dl	53.3	45.2	61.4	4.05	8.10	

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	UV LDH
	mg/dl	13.8	11.3	16.3	1.25	2.50	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	192	154	230	19.00	38.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Methylthymol blue
	mg/dl	2.34	2.06	2.62	0.14	0.28	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.2	122	8.40	16.80	
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.91	5.14	6.68	0.39	0.77	

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
ALT (GPT)	U/l	41	32	50	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.39	1.10	1.68	0.15	0.29	
Bilirubin Total	µmol/l	26.5	21.0	32.0	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.55	1.23	1.87	0.16	0.32	
Calcium	mmol/l	2.31	2.07	2.55	0.12	0.24	Arsenazo III
	mg/dl	9.26	8.30	10.2	0.48	0.96	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.99	5.09	6.89	0.45	0.90	Glucose oxidase
	mg/dl	108	91.7	124	8.15	16.30	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Protein Total	g/l	57.3	45.9	68.7	5.70	11.40	Biuret reaction end point
	g/dl	5.73	4.59	6.87	0.57	1.14	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.1	117	7.95	15.90	

**VITALAB FLEXOR®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1255UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-10-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.17	5.36	6.98	0.41	0.81	