

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. 1397UN	EXPIRY: 2023-04-28	

INTENDED USE

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

DEVICE DESCRIPTION

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

SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY

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

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

LIMITATIONS

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

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

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

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

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

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

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

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

MATERIALS PROVIDED

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

® All trademarks recognised.

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

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Dungloe, Donegal,
F94 TV06, Ireland

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Abbott Alinity/ Architect c/ci Systems®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	
	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Purple
	g/dl	4.30	3.65	4.95	0.33	0.65	
Alkaline Phosphatase	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	168	143	193	12.50	25.00	AMP non-optimised 37°C
	U/l	163	138	188	12.50	25.00	Colorimetric 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	103	88	118	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	99	84	114	7.50	15.00	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	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	22.5	17.7	27.3	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.32	1.04	1.60	0.14	0.28	
	µmol/l	21.6	17.0	26.2	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	

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Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
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	
Chloride	mmol/l	102	93.6	110	4.20	8.40	ISE indirect
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Dehydrogenase
	mg/dl	159	138	180	10.50	21.00	
Cholinesterase	U/l	6971	5577	8365	697.00	1394.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC serum start (DGKC) 37°C
	U/l	174	143	205	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	182	149	215	16.50	33.00	Monothioglycerol 37°C
	U/l	181	148	214	16.50	33.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	12.2	9.77	14.6	1.22	2.43	Colorimetric
	µg/dl	77.6	62.1	93.1	7.75	15.50	
Creatinine	µmol/l	127	101	153	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	



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Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked
	mg/dl	1.45	1.15	1.75	0.15	0.30	
µmol/l	126	101	151	12.50	25.00	IDMS traceable	
mg/dl	1.42	1.14	1.70	0.14	0.28		
Free T4	pmol/l	16.1	12.1	20.1	2.00	4.00	Abbott Architect
	ng/dl	1.26	0.944	1.58	0.16	0.32	
	pg/ml	12.6	9.44	15.8	1.58	3.16	Abbott Architect
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	48	41	55	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.17	5.25	7.09	0.46	0.92	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL PPD
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	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 Clearance Method
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	


Abbott Alinity/ Architect c/ci Systems®
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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	21.0	17.2	24.8	1.90	3.80	Colorimetric with ppt.
	µg/dl	117	96.1	138	10.45	20.90	
	µmol/l	20.8	17.0	24.6	1.90	3.80	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.8	11.4	16.2	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	31	25	37	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Arsenazo III
	mg/dl	2.01	1.77	2.25	0.12	0.24	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.05	1.80	2.30	0.13	0.25	
	mmol/l	0.83	0.73	0.93	0.05	0.10	Enzymatic
	mg/dl	2.02	1.78	2.26	0.12	0.24	
Osmolality	mOsm/kg	304	243	365	30.50	61.00	Calculated
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.22	3.57	4.87	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	4.01	3.69	4.33	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	



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Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
PSA Total	ng/ml =	8.50	6.38	10.6	1.06	2.12	Abbott Architect
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.11	0.23	Abbott Architect
TIBC	µmol/l	40.0	31.6	48.4	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	224	177	271	23.50	47.00	
	µmol/l	40.6	32.1	49.1	4.25	8.50	Calculated from Transferrin
	µg/dl	227	179	275	24.00	48.00	
Total T4	nmol/l	92.1	69.1	115	11.50	23.00	Abbott Architect
	µg/dl	7.18	5.39	8.97	0.90	1.79	
	ng/ml	71.8	53.9	89.7	8.95	17.90	Abbott Architect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	86.4	120	8.30	16.60	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.9	117	8.05	16.10	
UIBC	µmol/l	19.1	15.7	22.5	1.70	3.40	Direct Colorimetric
	µg/dl	107	87.8	126	9.60	19.20	
Urea	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease end point
	mg/dl	43.8	37.2	50.4	3.30	6.60	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

ABX Pentra 400®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	23.5	18.6	28.4	2.45	4.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
Bilirubin Total	µmol/l	29.4	23.3	35.5	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.72	1.36	2.08	0.18	0.36	
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	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	103	95.1	111	3.95	7.90	ISE direct
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	179	147	211	16.00	32.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	104	154	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.18	1.74	0.14	0.28	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.09	5.17	7.01	0.46	0.92	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct HDL PPD
	mg/dl	51.7	44.0	59.4	3.85	7.70	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.03	1.79	2.27	0.12	0.24	
Phosphate Inorganic	mmol/l	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Potassium	mmol/l	3.88	3.57	4.19	0.16	0.31	ISE method - direct
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.16	0.98	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.3	120	8.35	16.70	
Urea	mmol/l	6.64	5.64	7.64	0.50	1.00	Urease kinetic
	mg/dl	39.9	33.9	45.9	3.00	6.00	
	mmol/l	6.64	5.64	7.64	0.50	1.00	BUN
	mg/dl	18.6	15.8	21.4	1.40	2.80	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	

Beckman Coulter AU Series®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Purple
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	200	170	230	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	182	154	210	14.00	28.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	95	80	110	7.50	15.00	pNP Maltotrioxide substrates 37°C
	U/l	97	83	111	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	41	33	49	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.983	1.52	0.13	0.27	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.30	1.03	1.57	0.14	0.27	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	30.3	23.9	36.7	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	30.7	24.2	37.2	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazonium ion
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	30.6	24.1	37.1	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.79	1.41	2.17	0.19	0.38	
	µmol/l	30.6	24.2	37.0	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.79	1.42	2.16	0.19	0.37	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.31	2.08	2.54	0.12	0.23	Ion selective electrode
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Chloride	mmol/l	103	95.2	111	3.90	7.80	Colorimetric
	mmol/l	100	92.1	108	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	



Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Dehydrogenase
	mg/dl	156	135	177	10.50	21.00	
Cholinesterase	U/l	5643	4515	6771	564.00	1128.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	186	153	219	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	187	153	221	17.00	34.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	123	98.0	148	12.50	25.00	Alkaline picrate with deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	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	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	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	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	120	96.1	144	11.95	23.90	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.36	1.09	1.63	0.14	0.27	
µmol/l	125	99.8	150	12.60	25.20	IDMS traceable	
mg/dl	1.41	1.13	1.69	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	42	58	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	48	41	55	3.50	7.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	GOD/02-Beckman method
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.10	5.18	7.02	0.46	0.92	Glucose dehydrogenase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PPD
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.5	40.5	54.5	3.50	7.00	
	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL PEGME
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.25	1.06	1.44	0.10	0.19	HDL - Ultra
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct HDL Roche 4th Generation
	mg/dl	47.9	40.9	54.9	3.50	7.00	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric with ppt.
	µg/dl	115	93.9	136	10.55	21.10	
	µmol/l	20.8	17.0	24.6	1.90	3.80	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	197	168	226	14.50	29.00	L->P 37°C
	U/l	424	361	487	31.50	63.00	P->L Scandinavian & Dutch 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	205	174	236	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Ion selective electrode
	mg/dl	0.729	0.640	0.818	0.04	0.09	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
Magnesium	mg/dl	0.715	0.631	0.799	0.04	0.08	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.84	0.74	0.95	0.05	0.10	Methylthymol blue
Magnesium	mg/dl	2.05	1.81	2.29	0.12	0.24	
	mmol/l	0.84	0.74	0.95	0.05	0.10	Methylthymol blue
Osmolality	mOsm/kg	297	238	356	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	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	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Beckman PHOSm (365nm)
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
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	
	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction kinetic
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.4	34.3	52.5	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	243	192	294	25.50	51.00	
	µmol/l	43.1	34.1	52.1	4.50	9.00	Direct Colorimetric
	µg/dl	241	191	291	25.00	50.00	
	µmol/l	39.5	31.2	47.8	4.15	8.30	
Total T4	µg/dl	221	174	268	23.50	47.00	Microgenics DRI assay
	nmol/l	108	80.8	135	13.60	27.20	
	µg/dl	8.42	6.30	10.5	1.06	2.12	
Triglycerides	ng/ml	84.2	63.0	105	10.60	21.20	Microgenics DRI assay
	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.3	121	8.35	16.70	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.7	117	8.15	16.30	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
mg/dl	99.1	83.1	115	8.00	16.00		

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	102	85.8	118	8.10	16.20		
UIBC	µmol/l	22.8	18.7	26.9	2.05	4.10	Direct Colorimetric	
	µg/dl	127	105	149	11.00	22.00		
Urea	mmol/l	7.50	6.38	8.62	0.56	1.12	Beckman-Conductivity	
	mg/dl	45.1	38.3	51.9	3.40	6.80		
	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease end point	
	mg/dl	44.5	37.8	51.2	3.35	6.70		
	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease kinetic	
	mg/dl	44.7	37.9	51.5	3.40	6.80		
	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease hypochlorite	
	mg/dl	42.6	36.2	49.0	3.20	6.40		
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN	
	mg/dl	20.9	17.8	24.0	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		0.35	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	Spectrophotometric at 280-290	
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		5.93	5.16	6.70	0.39	0.77		

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	43.5	37.0	50.0	3.25	6.50	Bromocresol Purple
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	179	152	206	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	177	150	204	13.50	27.00	AMP non-optimised 37°C
	U/l	181	154	208	13.50	27.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Differential rate pH change
Bilirubin Total	µmol/l	30.8	24.3	37.3	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Ion selective electrode
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	100	92.4	108	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.80	3.31	4.29	0.25	0.49	Cholesterol Oxidase - Abell Kendall
	mg/dl	147	128	166	9.50	19.00	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5892	4714	7070	589.00	1178.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	186	153	219	16.50	33.00	Monothioglycerol 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	33	43	2.50	5.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	mmol/l	6.09	5.18	7.00	0.46	0.91	GOD/02-Beckman method
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	5.95	5.06	6.84	0.45	0.89	Hexokinase
	mg/dl	107	91.2	123	7.90	15.80	
	mmol/l	5.93	5.04	6.82	0.45	0.89	Oxygen electrode
mg/dl	107	90.8	123	8.10	16.20		
HDL - Cholesterol	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	mmol/l	1.50	1.27	1.73	0.12	0.23	HDL - Ultra
	mg/dl	57.9	49.0	66.8	4.45	8.90	
Iron	µmol/l	19.8	16.3	23.3	1.75	3.50	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	163	138	188	12.50	25.00	L->P 37°C
	U/l	512	435	589	38.50	77.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	248	211	285	18.50	37.00	L->P IFCC 37°C
Lithium	mmol/l	1.02	0.89	1.15	0.06	0.13	Spectrophotometric
	mg/dl	0.708	0.620	0.796	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Calmagite
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	304	243	365	30.50	61.00	Calculated
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	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction kinetic
	g/dl	5.69	4.55	6.83	0.57	1.14	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.4	33.5	51.3	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	237	187	287	25.00	50.00	
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.23	1.03	1.43	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	109	91.2	127	8.90	17.80	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Beckman-Conductivity
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.56	6.43	8.69	0.57	1.13	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

BIOSYSTEMS A15

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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	184	156	212	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
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	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	

BIOSYSTEMS A15

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	76.2	104	7.05	14.10	
Urea	mmol/l	6.79	5.77	7.81	0.51	1.02	Urease end point
	mg/dl	40.8	34.7	46.9	3.05	6.10	
	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.33	5.51	7.15	0.41	0.82	

BIOSYSTEMS A25

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Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	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
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Calcium	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	
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.22	5.29	7.15	0.47	0.93	Glucose oxidase
	mg/dl	112	95.3	129	8.35	16.70	
HDL - Cholesterol	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.5	40.5	54.5	3.50	7.00	

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Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point	
	g/dl	5.95	4.76	7.14	0.60	1.19		
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	97.4	81.5	113	7.95	15.90		
	mmol/l	1.16	0.98	1.34	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	103	86.5	120	8.25	16.50		
Urea	mmol/l	6.96	5.92	8.00	0.52	1.04	Urease end point	
	mg/dl	41.8	35.6	48.0	3.10	6.20		
	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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	6.20	5.39	7.01	0.41	0.81	
mmol/l		0.39	0.34	0.44	0.03	0.05	Uricase peroxidase no ascorbate oxidase	
mg/dl		6.47	5.63	7.31	0.42	0.84		
mmol/l		0.40	0.35	0.45	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		6.75	5.88	7.62	0.44	0.87		

Biotechnica/Wiener BT and CB Series

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.31	0.61	
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	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Chloride	mmol/l	104	95.3	113	4.35	8.70	Colorimetric
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	134	172	9.50	19.00	
	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5878	4702	7054	588.00	1176.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	45	39	51	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	35	31	39	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	24	32	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.14	5.22	7.06	0.46	0.92	Glucose oxidase
	mg/dl	111	94.1	128	8.45	16.90	
HDL - Cholesterol	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL PPD
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric with ppt.
	µg/dl	113	92.8	133	10.10	20.20	
	µmol/l	20.3	16.6	24.0	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
LD (LDH)	U/l	361	307	415	27.00	54.00	P->L Scandinavian & Dutch 37°C
	U/l	261	222	300	19.50	39.00	P->L Scandinavian & Dutch 30°C
	U/l	183	156	210	13.50	27.00	P->L Scandinavian & Dutch 25°C
	U/l	388	330	446	29.00	58.00	P->L SFBC 37°C
	U/l	280	238	322	21.00	42.00	P->L SFBC 30°C
	U/l	197	167	227	15.00	30.00	P->L SFBC 25°C

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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	1.86	2.38	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - direct
Protein Total	g/l	62.1	49.6	74.6	6.25	12.50	Biuret reaction end point
	g/dl	6.21	4.96	7.46	0.63	1.25	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.94	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	7.49	6.36	8.62	0.57	1.13	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.49	6.37	8.61	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	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.01	5.22	6.80	0.40	0.79	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
	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	40.4	34.3	46.5	3.05	6.10	Turbidimetric Assays
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	149	128	174	11.50	23.00	Colorimetric 37°C
	U/l	118	100	136	9.00	18.00	Colorimetric 30°C
	U/l	96	82	110	7.00	14.00	Colorimetric 25°C
	U/l	151	128	174	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	96	82	110	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	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	20.7	16.4	25.0	2.15	4.30	Roche JG factored
	mg/dl	1.21	0.959	1.46	0.13	0.25	
Bilirubin Total	µmol/l	20.1	15.9	24.3	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	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	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	101	92.5	110	4.25	8.50	ISE indirect
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	

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Range

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Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	174	143	205	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	109	90	128	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C
	U/l	175	144	206	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	168	138	198	15.00	30.00	CK-NAC serum start (DGKC) 37°C
	U/l	105	86	124	9.50	19.00	CK-NAC serum start (DGKC) 30°C
Creatinine	U/l	71	59	83	6.00	12.00	CK-NAC serum start (DGKC) 25°C
	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	124	99.4	149	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	123	98.8	147	12.10	24.20	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	124	98.8	149	12.60	25.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	IDMS traceable
mg/dl	1.38	1.10	1.66	0.14	0.28		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
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	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	20.8	17.1	24.5	1.85	3.70	Colorimetric with ppt.
	µg/dl	116	95.6	136	10.20	20.40	
	µmol/l	21.2	17.3	25.1	1.95	3.90	Colorimetric without ppt.
	µg/dl	119	96.7	141	11.15	22.30	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	386	328	444	29.00	58.00	P->L German methods 37°C
	U/l	279	237	321	21.00	42.00	P->L German methods 30°C
	U/l	196	166	226	15.00	30.00	P->L German methods 25°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	216	184	248	16.00	32.00	L->P 37°C
	U/l	156	133	179	11.50	23.00	L->P 30°C
	U/l	110	93	127	8.50	17.00	L->P 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.02	0.89	1.15	0.06	0.13	Ion selective electrode
	mg/dl	0.708	0.621	0.795	0.04	0.09	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.85	2.37	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction end point
	g/dl	5.53	4.42	6.64	0.56	1.11	
	g/l	55.3	44.2	66.4	5.55	11.10	Biuret reaction kinetic
	g/dl	5.53	4.42	6.64	0.56	1.11	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	175	269	23.50	47.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP no correction	
	mg/dl	104	87.3	121	8.35	16.70		
	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	102	85.8	118	8.10	16.20		
	mmol/l	1.18	0.99	1.37	0.09	0.19	L/G Kinase EP. no correction	
	mg/dl	104	87.9	120	8.05	16.10		
Urea	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	105	88.5	122	8.25	16.50		
	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/Glycerol Dehydrogenase	
	mg/dl	105	88.5	122	8.25	16.50		
	Urea	mmol/l	7.15	6.07	8.23	0.54	1.08	Urease end point
		mg/dl	43.0	36.5	49.5	3.25	6.50	
mmol/l		7.00	5.95	8.05	0.53	1.05	Urease kinetic	
mg/dl		42.1	35.8	48.4	3.15	6.30		
Uric Acid (Urate)	mmol/l	7.00	5.95	8.05	0.53	1.05	BUN	
	mg/dl	19.6	16.7	22.5	1.45	2.90		
	Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.96	5.17	6.75	0.40	0.79	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.93	5.16	6.70	0.39	0.77		
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	5.90	5.14	6.66	0.38	0.76		

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	266	226	306	20.00	40.00	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	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	137	179	10.50	21.00	
Creatinine	μmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	μmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.51	5.54	7.48	0.49	0.97	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.30	1.11	1.49	0.10	0.19	HDL - Ultra
	mg/dl	50.2	42.8	57.6	3.70	7.40	

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Protein Total	g/l	60.7	48.6	72.8	6.05	12.10	Biuret reaction end point
	g/dl	6.07	4.86	7.28	0.61	1.21	
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.9	121	8.55	17.10	
	mmol/l	1.18	1.00	1.37	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	88.1	120	7.95	15.90	
Urea	mmol/l	7.50	6.38	8.62	0.56	1.12	Urease end point
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.41	0.35	0.46	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.80	5.91	7.69	0.45	0.89	
	mmol/l	0.40	0.35	0.45	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.67	5.81	7.53	0.43	0.86	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	11.3	7.57	15.0	1.87	3.73	1-Naphthyl Phosphate substrate Kinetic 37°C
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	157	133	181	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	100	85	115	7.50	15.00	AMP optimised to IFCC 25°C
	U/l	196	167	225	14.50	29.00	Randox AMP 37°C
	U/l	153	130	176	11.50	23.00	Randox AMP 30°C
	U/l	125	107	143	9.00	18.00	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	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	

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Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	5614	4491	6737	561.50	1123.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	175	144	206	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C
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	Creatinine PAP 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	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	50	43	57	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.31	5.37	7.25	0.47	0.94	Glucose dehydrogenase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
HDL - Cholesterol	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.6	41.3	55.9	3.65	7.30	
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	376	320	432	28.00	56.00	P->L German methods 37°C
	U/l	271	231	311	20.00	40.00	P->L German methods 30°C
	U/l	191	162	220	14.50	29.00	P->L German methods 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
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	
	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.21	1.01	1.41	0.10	0.20	Lipase/Glycerol Dehydrogenase
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.86	5.09	6.63	0.39	0.77	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	261	222	300	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	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	93	79	107	7.00	14.00	I.L. 2-chloro-pNPG3 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
Bilirubin Direct	µmol/l	15.4	12.2	18.6	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	32.1	25.4	38.8	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.27	1.93	0.17	0.33	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	98.1	90.2	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	6015	4812	7218	601.50	1203.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	162	133	191	14.50	29.00	CK-NAC (IFCC) 37°C
	U/l	101	83	119	9.00	18.00	CK-NAC (IFCC) 30°C
	U/l	69	57	81	6.00	12.00	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	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	28	24	32	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	1.24	1.05	1.43	0.10	0.19	HDL - Ultra
	mg/dl	47.9	40.5	55.3	3.70	7.40	
Iron	µmol/l	20.7	17.0	24.4	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
LD (LDH)	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
	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
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	143	136	150	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	88.5	122	8.25	16.50	
	mmol/l	1.18	0.99	1.37	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.5	121	8.25	16.50	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.35	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	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Bromocresol Green
	g/dl	4.03	3.42	4.64	0.31	0.61	
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	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	29	23	35	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	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	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.47	1.16	1.78	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	104	95.5	113	4.25	8.50	ISE direct
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
Glucose	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PEGME
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct Clearance Method
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	µmol/l	22.7	18.6	26.8	2.05	4.10	Colorimetric without ppt.
	µg/dl	127	104	150	11.50	23.00	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
LD (LDH)	U/l	449	382	516	33.50	67.00	P->L Scandinavian & Dutch 37°C	
	U/l	324	276	372	24.00	48.00	P->L Scandinavian & Dutch 30°C	
	U/l	228	194	262	17.00	34.00	P->L Scandinavian & Dutch 25°C	
	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C	
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C	
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue	
	mg/dl	2.17	1.91	2.43	0.13	0.26		
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV	
	mg/dl	4.40	3.75	5.05	0.33	0.65		
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct	
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point	
	g/dl	5.96	4.77	7.15	0.60	1.19		
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - direct	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction	
	mg/dl	105	88.5	122	8.25	16.50		
Urea	mmol/l	7.09	6.03	8.15	0.53	1.06	Urease end point	
	mg/dl	42.6	36.2	49.0	3.20	6.40		
	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic	
	mg/dl	43.5	36.9	50.1	3.30	6.60		
	mmol/l	7.23	6.15	8.31	0.54	1.08		BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00		
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
	mg/dl	6.00	5.22	6.78	0.39	0.78		
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	6.25	5.44	7.06	0.41	0.81		



Konelab 20/30/60®/Thermo Scientific Indiko Plus		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1397UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.13	5.33	6.93	0.40	0.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	216	171	261	22.50	45.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	163	129	197	17.00	34.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	122	97	147	12.50	25.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	11.3	7.57	15.0	1.87	3.73	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	8.30	5.56	11.0	1.37	2.74	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
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	
	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	40.3	34.2	46.4	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.03	3.42	4.64	0.31	0.61	
	g/l	40.4	34.4	46.4	3.00	6.00	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.04	3.44	4.64	0.30	0.60	
	U/l	153	130	176	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	250	213	287	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	160	136	184	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	182	155	209	13.50	27.00	AMP non-optimised 37°C
U/l	142	121	163	10.50	21.00	AMP non-optimised 30°C	
U/l	116	99	133	8.50	17.00	AMP non-optimised 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	43	34	52	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	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	39	31	47	4.00	8.00	Phosphate buffer DGKC 37°C
	U/l	29	23	35	3.00	6.00	Phosphate buffer DGKC 30°C
	U/l	22	17	27	2.50	5.00	Phosphate buffer DGKC 25°C
	U/l	37	30	44	3.50	7.00	Tris buffer SCE 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer SCE 30°C
U/l	21	17	25	2.00	4.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	57	79	5.50	11.00	Roche EPS Liquid 37°C
	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	95	81	109	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	93	79	107	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	70	60	80	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	95	80	110	7.50	15.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	96	82	110	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	95	81	109	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	103	88	118	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	92	78	106	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.11	0.91	1.31	0.10	0.20	Immunoturbidimetric
	mg/dl	111	91.0	131	10.00	20.00	
Apolipoprotein B	g/l	0.63	0.52	0.75	0.06	0.11	Immunoturbidimetric
	mg/dl	63.2	51.8	74.6	5.70	11.40	
AST (GOT)	U/l	39	31	47	4.00	8.00	Colorimetric 37°C
	U/l	26	21	31	2.50	5.00	Colorimetric 30°C
	U/l	19	15	23	2.00	4.00	Colorimetric 25°C
	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	34	28	40	3.00	6.00	Tris buffer with P5P 30°C
	U/l	24	20	28	2.00	4.00	Tris buffer with P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer with P5P NVKC 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer with P5P NVKC 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	39	31	47	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Colorimetric
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	13.9	11.0	16.8	1.45	2.90	Differential rate pH change
	mmol/l	14.7	11.6	17.8	1.55	3.10	Enzymatic
Bile Acids	µmol/l	24.0	19.2	28.9	2.42	4.83	4th Generation Colorimetric
	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.2	16.7	25.7	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.977	1.50	0.13	0.26	
	µmol/l	19.7	15.5	23.9	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	14.4	11.4	17.4	1.50	3.00	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
	µmol/l	18.3	14.4	22.1	1.93	3.87	Modified Jendrassik
	mg/dl	1.07	0.842	1.30	0.11	0.23	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	37.9	29.9	45.9	4.00	8.00	Diazo with Dichloroaniline (DCA)
	mg/dl	2.22	1.75	2.69	0.24	0.47	
	µmol/l	30.0	23.7	36.3	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	26.9	21.2	32.6	2.85	5.70	Diazonium ion
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	31.1	24.5	37.7	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.82	1.43	2.21	0.20	0.39	
	µmol/l	30.6	24.2	37.0	3.20	6.40	DPD (Beckman AU)
	mg/dl	1.79	1.42	2.16	0.19	0.37	
µmol/l	36.8	29.1	44.5	3.85	7.70	Modified Jendrassik	
mg/dl	2.15	1.70	2.60	0.23	0.45		
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.24	2.01	2.47	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.06	9.90	0.46	0.92	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ion selective electrode
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Methylthymol blue
	mg/dl	8.54	7.70	9.38	0.42	0.84	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Arsenazo III	
	mg/dl	8.98	8.06	9.90	0.46	0.92		
	mmol/l	2.24	2.01	2.47	0.12	0.23	Phosphonazo	
	mg/dl	8.98	8.06	9.90	0.46	0.92		
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA	
	mg/dl	8.82	7.94	9.70	0.44	0.88		
	Chloride	mmol/l	102	94.1	110	4.09	8.18	Colorimetric
		mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
mmol/l		99.7	91.7	108	4.00	8.00	ISE indirect	
mmol/l		101	93.3	109	3.85	7.70	ISE direct	
mmol/l		113	104	122	4.50	9.00	Optical Fluorescence	
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems	
	mg/dl	149	129	169	10.00	20.00		
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - Abell Kendall	
	mg/dl	155	135	175	10.00	20.00		
	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - IDMS	
	mg/dl	155	135	175	10.00	20.00		
Cholinesterase	U/l	5515	4412	6618	551.50	1103.00	Colorimetric Benzoylcholine 37°C	
	U/l	5773	4618	6928	577.45	1154.89	Colorimetric Butyrylthiocholine 37°C	
	U/l	5596	4477	6715	559.50	1119.00	Ortho Vitros Microslide Systems 37°C	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC serum start (DGKC) 37°C	
	U/l	114	93	135	10.50	21.00	CK-NAC serum start (DGKC) 30°C	
	U/l	77	63	91	7.00	14.00	CK-NAC serum start (DGKC) 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	176	144	208	16.00	32.00	CK-NAC substrate start (DGKC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	75	61	89	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	U/l	178	146	210	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	111	91	131	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
	U/l	185	152	218	16.50	33.00	Monothioglycerol 37°C
	U/l	116	95	137	10.50	21.00	Monothioglycerol 30°C
	U/l	79	65	93	7.00	14.00	Monothioglycerol 25°C
	U/l	178	146	210	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C
U/l	111	91	131	10.00	20.00	Dithioerythritol (DTE) IFCC correlated 30°C	
U/l	76	62	90	7.00	14.00	Dithioerythritol (DTE) IFCC correlated 25°C	
Copper	µmol/l	16.2	12.9	19.5	1.65	3.30	Atomic absorption
	µg/dl	103	82.0	124	10.50	21.00	
	µmol/l	16.3	13.0	19.5	1.63	3.26	Colorimetric
	µg/dl	103	82.7	123	10.15	20.30	
Cortisol	nmol/l	460	345	575	57.50	115.00	Roche Cobas E411
	µg/dl	16.6	12.4	20.8	2.10	4.20	
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	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	103	153	12.50	25.00	Enzymatic UV method
mg/dl	1.45	1.16	1.74	0.15	0.29		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	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	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	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	128	103	153	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	123	98.2	148	12.40	24.80	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.3	148	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
µmol/l	122	97.6	146	12.20	24.40	Vitros IDMS Traceable	
mg/dl	1.38	1.10	1.66	0.14	0.28		
µmol/l	127	102	152	12.50	25.00	IDMS traceable	
mg/dl	1.44	1.15	1.73	0.15	0.29		
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.19	1.75	2.63	0.22	0.44	Immunoturbidimetric
	ng/ml	1.71	1.37	2.05	0.17	0.34	
Folate	nmol/l	47.1	35.8	58.5	5.67	11.34	Roche Cobas 6000/8000
	ng/ml	20.8	15.8	25.8	2.50	5.00	
Free T4	pmol/l	16.1	12.1	20.1	2.00	4.00	Abbott Architect
	ng/dl	1.26	0.944	1.58	0.16	0.32	
	pg/ml	12.6	9.44	15.8	1.58	3.16	Abbott Architect
	pmol/l	17.7	13.2	22.2	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/dl	1.38	1.03	1.73	0.18	0.35	
	pg/ml	13.8	10.3	17.3	1.75	3.50	Siemens Centaur XP/XPT/Classic

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	18.7	14.0	23.4	2.35	4.70	Siemens Immulite 2000/2500
	ng/dl	1.46	1.09	1.83	0.19	0.37	
	pg/ml	14.6	10.9	18.3	1.85	3.70	Siemens Immulite 2000/2500
	pmol/l	20.2	15.2	25.2	2.50	5.00	Siemens Immulite 1000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Siemens Immulite 1000
	pmol/l	16.4	12.3	20.5	2.05	4.10	Beckman Dxl800
	ng/dl	1.28	0.959	1.60	0.16	0.32	
	pg/ml	12.8	9.59	16.0	1.61	3.21	Beckman Dxl800
	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Elecsys
	ng/dl	1.64	1.23	2.05	0.21	0.41	
	pg/ml	16.4	12.3	20.5	2.05	4.10	Roche Elecsys
	pmol/l	16.7	12.5	20.9	2.10	4.20	Beckman Access
	ng/dl	1.30	0.975	1.63	0.16	0.33	
	pg/ml	13.0	9.75	16.3	1.63	3.25	Beckman Access
	pmol/l	22.8	17.1	28.5	2.85	5.70	Tosoh Series
	ng/dl	1.78	1.33	2.23	0.23	0.45	
	pg/ml	17.8	13.3	22.3	2.25	4.50	Tosoh Series
	pmol/l	34.0	25.5	42.5	4.25	8.50	Vitros ECi
	ng/dl	2.65	1.99	3.31	0.33	0.66	
pg/ml	26.5	19.9	33.1	3.30	6.60	Vitros ECi	
pmol/l	20.6	15.5	25.7	2.55	5.10	Roche Cobas E411	
ng/dl	1.61	1.21	2.01	0.20	0.40		
pg/ml	16.1	12.1	20.1	2.00	4.00	Roche Cobas E411	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	20.2	15.2	25.2	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas 6000/8000
	pmol/l	21.3	16.0	26.6	2.65	5.30	SNIBE Maglumi Analysers
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	SNIBE Maglumi Analysers
	pmol/l	19.0	14.2	23.8	2.40	4.80	Biomerieux Vidas FT4N Kit
	ng/dl	1.48	1.11	1.85	0.19	0.37	
	pg/ml	14.8	11.1	18.5	1.85	3.70	Biomerieux Vidas FT4N Kit
	pmol/l	19.2	14.4	24.0	2.40	4.80	Siemens Centaur CP
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Siemens Centaur CP
Gentamicin	µmol/l	7.49	5.99	8.99	0.75	1.50	Immunoturbidimetric
	µg/ml	3.58	2.86	4.30	0.36	0.72	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	22	32	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	50	43	57	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	39	34	44	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	31	27	35	2.00	4.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	18	14	23	2.14	4.27	Triethanolamine buffer 50 mmol 37°C	
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems	
	mg/dl	108	91.9	124	8.05	16.10		
	mmol/l	6.20	5.27	7.13	0.47	0.93	Glucose dehydrogenase	
	mg/dl	112	95.0	129	8.50	17.00		
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase	
	mg/dl	111	94.2	128	8.40	16.80		
	mmol/l	6.13	5.21	7.05	0.46	0.92	Oxygen electrode	
	mg/dl	110	93.9	126	8.05	16.10		
	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase	
	mg/dl	112	95.1	129	8.45	16.90		
	HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PPD
		mg/dl	51.0	43.2	58.8	3.90	7.80	
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		1.21	1.03	1.39	0.09	0.18	Vitros Magnetic HDL	
mg/dl		46.7	39.8	53.6	3.45	6.90		
mmol/l		1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME	
mg/dl		48.3	40.9	55.7	3.70	7.40		
mmol/l		1.21	1.03	1.39	0.09	0.18	Direct Clearance Method	
mg/dl		46.7	39.8	53.6	3.45	6.90		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	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	
mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation	
mg/dl	50.6	42.8	58.4	3.90	7.80		
Immunoglobulin A	g/l	1.80	1.35	2.26	0.23	0.45	Immunoturbidimetric
	mg/dl	180	135	225	22.50	45.00	
Immunoglobulin G	g/l	7.47	6.13	8.81	0.67	1.34	Immunoturbidimetric
	mg/dl	747	613	881	67.00	134.00	
Immunoglobulin M	g/l	0.85	0.68	1.02	0.09	0.17	Immunoturbidimetric
	mg/dl	85.2	68.2	102	8.50	17.00	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	92.2	132	9.90	19.80	
	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	
	µmol/l	20.3	16.6	24.0	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.3	11.0	15.6	1.15	2.30	
	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lactate	mmol/l	1.47	1.20	1.74	0.14	0.27	Ion selective electrode
	mg/dl	13.2	10.8	15.6	1.20	2.40	
	mmol/l	1.48	1.22	1.74	0.13	0.26	UV LDH
	mg/dl	13.3	11.0	15.6	1.15	2.30	
LAP	U/l	18	15	21	1.53	3.05	NAGEL 37°C
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	192	163	221	14.50	29.00	L->P 37°C
	U/l	139	118	160	10.50	21.00	L->P 30°C
	U/l	97	83	111	7.00	14.00	L->P 25°C
	U/l	404	343	465	30.50	61.00	P->L Scandinavian & Dutch 37°C
	U/l	292	248	336	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	205	174	236	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l	390	332	448	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	168	228	15.00	30.00	P->L German methods 25°C
	U/l	390	332	448	29.00	58.00	P->L SFBC 37°C
	U/l	282	240	324	21.00	42.00	P->L SFBC 30°C
	U/l	198	168	228	15.00	30.00	P->L SFBC 25°C
	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
U/l	147	125	169	11.00	22.00	L->P IFCC 30°C	
U/l	103	88	118	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	32	26	38	3.00	6.00	Other Colorimetric 37°C
	U/l	185	149	221	18.00	36.00	Ortho Vitros Microslide Systems 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.07	0.13	Atomic absorption
	mg/dl	0.750	0.658	0.842	0.05	0.09	
	mmol/l	1.28	1.12	1.44	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.889	0.778	1.00	0.06	0.11	
	mmol/l	1.05	0.92	1.18	0.07	0.13	Flame photometry
	mg/dl	0.729	0.639	0.819	0.05	0.09	
	mmol/l	1.03	0.91	1.15	0.06	0.12	Ion selective electrode
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	1.06	0.93	1.19	0.07	0.13	Spectrophotometric
	mg/dl	0.736	0.645	0.827	0.05	0.09	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Randox Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
	mmol/l	0.83	0.73	0.93	0.05	0.10	Arsenazo III
	mg/dl	2.02	1.78	2.26	0.12	0.24	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.80	2.30	0.13	0.25	
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Atomic absorption
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.87	0.77	0.97	0.05	0.10	Calmagite
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.87	0.77	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Methylthymol blue
	mg/dl	2.03	1.79	2.27	0.12	0.24	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.84	0.74	0.94	0.05	0.10	Enzymatic
	mg/dl	2.03	1.79	2.27	0.12	0.24	
Osmolality	mOsm/kg	297	237	357	30.00	60.00	Calculated
	mOsm/kg	305	244	366	30.50	61.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.8	9.38	14.2	1.21	2.42	
Phosphate Inorganic	mmol/l	1.45	1.24	1.66	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	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	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.07	3.74	4.40	0.17	0.33	Enzymatic
	mmol/l	4.05	3.73	4.37	0.16	0.32	Flame photometry
	mmol/l	3.97	3.66	4.28	0.16	0.31	ISE method - direct
	mmol/l	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
	mmol/l	3.99	3.67	4.31	0.16	0.32	Optical Fluorescence
	mmol/l	3.90	3.58	4.22	0.16	0.32	Colorimetric
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.87	4.70	7.04	0.59	1.17	
	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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 =	12.6	9.47	15.7	1.57	3.13	Roche Elecsys Modular E170
	ng/ml =	12.9	9.68	16.1	1.61	3.22	Beckman Access standardised to Hybritech
	ng/ml =	10.3	7.75	12.9	1.28	2.55	bioMerieux VIDAS TPSA
	ng/ml =	9.71	7.28	12.1	1.22	2.43	Siemens Centaur XP/XPT/Classic
	ng/ml =	8.97	6.73	11.2	1.12	2.24	Abbott Architect
	ng/ml =	8.66	6.49	10.8	1.09	2.17	Siemens Dimension
	ng/ml =	12.4	9.33	15.5	1.54	3.07	Cobas E411
	ng/ml =	12.4	9.32	15.5	1.54	3.08	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	146	139	153	3.58	7.16	Enzymatic
	mmol/l	142	135	149	3.50	7.00	Flame photometry
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
	mmol/l	140	133	147	3.50	7.00	Optical Fluorescence
	mmol/l	143	136	150	3.50	7.00	Colorimetric
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 =	1.14	0.91	1.37	0.11	0.23	Abbott Architect
	µU/ml =	1.54	1.23	1.85	0.16	0.31	bioMerieux VIDAS TSH
	µU/ml =	1.51	1.21	1.81	0.15	0.30	bioMerieux VIDAS TSH3 Ultrasensitive

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.30	1.04	1.56	0.13	0.26	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.46	1.17	1.75	0.15	0.29	Siemens Immulite 2000/2500
	µU/ml =	1.36	1.09	1.63	0.14	0.27	Siemens Immulite 1000
	µU/ml =	1.63	1.31	1.95	0.16	0.32	Roche Elecsys
	µU/ml =	1.30	1.04	1.56	0.13	0.26	Beckman Access Fast TSH
	µU/ml =	1.34	1.08	1.60	0.13	0.26	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Vitros ECi
	µU/ml =	1.62	1.30	1.94	0.16	0.32	Roche Cobas E411
	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.51	1.21	1.81	0.15	0.30	SNIBE Maglumi Analysers
µU/ml =	1.31	1.05	1.57	0.13	0.26	Beckman Dxl 600/800 Access (3rd IS)	
TIBC	µmol/l	43.8	34.6	53.0	4.60	9.20	Ortho Vitros Microslide Systems
	µg/dl	245	193	297	26.00	52.00	
	µmol/l	38.1	30.1	46.1	4.00	8.00	Removal of excess free iron
	µg/dl	213	168	258	22.50	45.00	
	µmol/l	40.5	32.0	49.0	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	226	179	273	23.50	47.00	
	µmol/l	39.6	31.3	47.9	4.15	8.30	Direct Colorimetric
	µg/dl	221	175	267	23.00	46.00	
	µmol/l	42.0	33.2	50.8	4.40	8.80	Calculated from Transferrin
µg/dl	235	186	284	24.50	49.00		
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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	1.89	1.42	2.36	0.24	0.47	Abbott Architect
	ng/ml	1.23	0.924	1.54	0.15	0.31	
	ng/dl	123	92.4	154	15.30	30.60	Abbott Architect
	nmol/l	2.11	1.58	2.64	0.27	0.53	BioMerieux Vidas
	ng/ml	1.37	1.03	1.71	0.17	0.34	
	ng/dl	137	103	171	17.00	34.00	BioMerieux Vidas
	nmol/l	2.29	1.72	2.86	0.29	0.57	Siemens Centaur XP/XPT/Classic
	ng/ml	1.49	1.12	1.86	0.19	0.37	
	ng/dl	149	112	186	18.50	37.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.02	1.51	2.53	0.26	0.51	Siemens Immulite 1000
	ng/ml	1.32	0.983	1.66	0.17	0.34	
	ng/dl	132	98.3	166	16.85	33.70	Siemens Immulite 1000
	nmol/l	2.25	1.69	2.81	0.28	0.56	Roche Elecsys
	ng/ml	1.46	1.10	1.82	0.18	0.36	
	ng/dl	146	110	182	18.00	36.00	Roche Elecsys
	nmol/l	2.21	1.66	2.76	0.28	0.55	Beckman Access
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	Beckman Access
	nmol/l	2.49	1.87	3.11	0.31	0.62	Vitros ECi
	ng/ml	1.62	1.22	2.02	0.20	0.40	
ng/dl	162	122	202	20.00	40.00	Vitros ECi	
nmol/l	2.22	1.66	2.78	0.28	0.56	Roche Cobas E411	
ng/ml	1.45	1.08	1.82	0.19	0.37		
ng/dl	145	108	182	18.50	37.00	Roche Cobas E411	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.18	1.64	2.72	0.27	0.54	Roche Cobas 6000/8000
	ng/ml	1.42	1.07	1.77	0.18	0.35	
	ng/dl	142	107	177	17.50	35.00	Roche Cobas 6000/8000
	nmol/l	2.39	1.79	2.99	0.30	0.60	Siemens Centaur CP
	ng/ml	1.56	1.17	1.95	0.20	0.39	
	ng/dl	156	117	195	19.50	39.00	Siemens Centaur CP
Total T4	nmol/l	90.4	67.8	113	11.30	22.60	Abbott Architect
	µg/dl	7.05	5.29	8.81	0.88	1.76	
	ng/ml	70.5	52.9	88.1	8.80	17.60	Abbott Architect
	nmol/l	83.9	62.9	105	10.50	21.00	BioMerieux Vidas
	µg/dl	6.54	4.91	8.17	0.82	1.63	
	ng/ml	65.4	49.1	81.7	8.15	16.30	BioMerieux Vidas
	nmol/l	82.6	62.0	103	10.30	20.60	Siemens Centaur XP/XPT/Classic
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Siemens Centaur XP/XPT/Classic
	nmol/l	79.3	59.5	99.1	9.90	19.80	Tosoh Series
	µg/dl	6.19	4.64	7.74	0.78	1.55	
	ng/ml	61.9	46.4	77.4	7.75	15.50	Tosoh Series
	nmol/l	82.6	62.0	103	10.30	20.60	Vitros ECi
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Vitros ECi
	nmol/l	87.7	65.8	110	10.95	21.90	Roche Cobas E411
	µg/dl	6.84	5.13	8.55	0.86	1.71	
	ng/ml	68.4	51.3	85.5	8.55	17.10	Roche Cobas E411
nmol/l	84.2	63.1	105	10.55	21.10	Roche Cobas 6000/8000	
µg/dl	6.57	4.92	8.22	0.83	1.65		
ng/ml	65.7	49.2	82.2	8.25	16.50	Roche Cobas 6000/8000	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	108	80.8	135	13.60	27.20	Microgenics DRI assay
	µg/dl	8.42	6.30	10.5	1.06	2.12	
	ng/ml	84.2	63.0	105	10.60	21.20	Microgenics DRI assay
	nmol/l	95.4	71.6	119	11.90	23.80	SNIBE Maglumi Analysers
	µg/dl	7.44	5.58	9.30	0.93	1.86	
	ng/ml	74.4	55.8	93.0	9.30	18.60	SNIBE Maglumi Analysers
	nmol/l	95.7	71.8	120	11.95	23.90	Siemens Centaur CP
	µg/dl	7.46	5.60	9.32	0.93	1.86	
Transferrin	ng/ml	74.6	56.0	93.2	9.30	18.60	Siemens Centaur CP
	g/l	1.88	1.51	2.26	0.19	0.37	Immunoturbidimetric
Triglycerides	mg/dl	188	151	225	18.50	37.00	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	86.0	120	8.50	17.00	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	86.1	120	8.45	16.90	
	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	103	85.9	120	8.55	17.10	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	102	85.6	118	8.20	16.40	
	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	103	85.9	120	8.55	17.10	
	mmol/l	1.34	1.12	1.56	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	119	99.1	139	9.95	19.90	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.30	6.21	8.39	0.55	1.09	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease hypochlorite
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	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	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Reduction methods
	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
	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 no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	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	
	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	
Vitamin B12	pmol/l	461	369	553	46.00	92.00	Roche Cobas E411
	pg/ml	625	500	750	62.50	125.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	23.0	18.4	27.6	2.30	4.60	Colorimetric with deproteinisation
	µg/dl	150	120	180	15.00	30.00	



MEAN OF ALL INSTRUMENTS (Elec.)			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)				
Lot. No. 1397UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2023-04-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		67.0	60.4	73.6	3.30	6.60	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.8	4.4	7.2	0.70	1.39	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.1	5.4	8.8	0.85	1.70	% of total Protein (Beckman Capillary)
beta-globulin		9.6	7.3	11.9	1.15	2.30	% of total Protein (Beckman Capillary)
gamma-globulin		10.5	8.0	13.0	1.26	2.52	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 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	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
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	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	28.6	22.6	34.6	3.00	6.00	
mg/dl	1.67	1.32	2.02	0.18	0.35	Oxidation to Biliverdin/Vanadate	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Ion selective electrode
	mg/dl	8.98	8.10	9.86	0.44	0.88	


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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.04	3.51	4.57	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
CK Total	U/l	179	146	212	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	112	91	133	10.50	21.00	CK-NAC (IFCC) 30°C
Creatinine	U/l	76	62	90	7.00	14.00	CK-NAC (IFCC) 25°C
	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	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
mg/dl	1.47	1.18	1.76	0.15	0.29		
gamma-GT	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct Clearance Method
	mg/dl	49.4	42.1	56.7	3.65	7.30	
mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra	
mg/dl	51.3	43.6	59.0	3.85	7.70		
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
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	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
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	
TIBC	µmol/l	43.9	34.7	53.1	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	245	194	296	25.50	51.00	
Triglycerides	mmol/l	1.17	0.99	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.2	121	8.40	16.80	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	103	86.2	120	8.40	16.80	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.3	116	7.85	15.70	
Urea	mmol/l	7.24	6.16	8.32	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.37	6.26	8.48	0.56	1.11	Urease kinetic
	mg/dl	44.3	37.6	51.0	3.35	6.70	
	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease hypochlorite
	mg/dl	46.6	39.7	53.5	3.45	6.90	
Uric Acid (Urate)	mmol/l	7.37	6.26	8.48	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
	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	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.99	6.47	0.37	0.74	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.3	34.2	46.4	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.03	3.42	4.64	0.31	0.61	
Alkaline Phosphatase	U/l	153	130	176	11.50	23.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	70	60	80	5.00	10.00	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	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	11.1	8.77	13.4	1.17	2.33	BuBc Vitros Slide
	mg/dl	0.649	0.513	0.785	0.07	0.14	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.8	10.9	16.7	1.45	2.90	BuBc Vitros Slide
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Chloride	mmol/l	102	93.4	111	4.30	8.60	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	149	129	169	10.00	20.00	
Cholinesterase	U/l	5596	4477	6715	559.50	1119.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	158	130	186	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	123	98.2	148	12.40	24.80	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.39	1.11	1.67	0.14	0.28	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	122	97.6	146	12.20	24.40	Vitros IDMS Traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
Free T4	pmol/l	34.0	25.5	42.5	4.25	8.50	Vitros ECi
	ng/dl	2.65	1.99	3.31	0.33	0.66	
	pg/ml	15.0	11.2	18.8	1.90	3.80	
gamma-GT	U/l	60	51	69	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.00	5.10	6.90	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros Magnetic HDL
	mg/dl	46.7	39.8	53.6	3.45	6.90	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	20.3	16.6	24.0	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Ortho Vitros Microslide Systems
	mg/dl	12.6	10.4	14.8	1.10	2.20	
LD (LDH)	U/l	573	487	659	43.00	86.00	Ortho Vitros Microslide Systems 37°C
	U/l	231	196	266	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	185	149	221	18.00	36.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.28	1.12	1.44	0.08	0.16	Ortho Vitros Microslide Systems
	mg/dl	0.889	0.778	1.00	0.06	0.11	
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.05	1.80	2.30	0.13	0.25	


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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.45	1.24	1.66	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	mmol/l	1.42	1.20	1.64	0.11	0.22	Vitros DT60/DT60 II
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.03	3.70	4.36	0.17	0.33	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Ortho Vitros Microslide Systems
	g/dl	5.87	4.70	7.04	0.59	1.17	
PSA Total	ng/ml =	11.7	8.74	14.7	1.48	2.96	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.43	1.14	1.72	0.15	0.29	Vitros ECi
TIBC	µmol/l	43.8	34.6	53.0	4.60	9.20	Ortho Vitros Microslide Systems
	µg/dl	245	193	297	26.00	52.00	
Total T3	nmol/l	2.49	1.87	3.11	0.31	0.62	Vitros ECi
	ng/ml	1.62	1.22	2.02	0.20	0.40	
	ng/dl	162	122	202	20.00	40.00	Vitros ECi
Total T4	nmol/l	82.6	62.0	103	10.30	20.60	Vitros ECi
	µg/dl	6.44	4.84	8.04	0.80	1.60	
	ng/ml	64.4	48.4	80.4	8.00	16.00	Vitros ECi
Triglycerides	mmol/l	1.34	1.12	1.56	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	119	99.1	139	9.95	19.90	
	mmol/l	1.23	1.03	1.43	0.10	0.20	Vitros DT60/DT60 II
	mg/dl	109	91.2	127	8.90	17.80	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Ortho Vitros Microslide Systems
	mg/dl	42.0	35.7	48.3	3.15	6.30	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	29	23	35	3.00	6.00	Tris buffer without P5P 30°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	75	64	86	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
Bilirubin Direct	µmol/l	19.3	15.3	23.3	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.895	1.37	0.12	0.24	
Bilirubin Total	µmol/l	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.87	1.47	2.27	0.20	0.40	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	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	
Cholesterol	mmol/l	4.13	3.60	4.66	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	95	135	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	123	98.2	148	12.40	24.80	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
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
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct Clearance Method
	mg/dl	47.5	40.1	54.9	3.70	7.40	
Iron	μmol/l	20.3	16.6	24.0	1.85	3.70	Colorimetric without ppt.
	μg/dl	113	92.8	133	10.10	20.20	
LD (LDH)	U/l	422	359	485	31.50	63.00	P->L German methods 37°C
	U/l	305	259	351	23.00	46.00	P->L German methods 30°C
	U/l	214	182	246	16.00	32.00	P->L German methods 25°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Xylidyl Blue
	mg/dl	2.11	1.86	2.36	0.13	0.25	
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	
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.0	116	8.00	16.00	

**PRESTIGE 24i****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	108	90.3	126	8.85	17.70	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	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	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.06	5.28	6.84	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.96	6.46	0.38	0.75	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Acid Phosphatase (Total)	U/l	7.59	5.09	10.1	1.25	2.50	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	7.78	5.21	10.4	1.29	2.57	Naphthyl phosphate substrate End point 37°C
	U/l	8.10	5.42	10.8	1.34	2.68	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Purple
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	39.9	34.0	45.8	2.95	5.90	Turbidimetric Assays
	g/dl	3.99	3.40	4.58	0.30	0.59	
Alkaline Phosphatase	U/l	148	125	171	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	115	97	133	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	95	80	110	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	149	127	171	11.00	22.00	AMP optimised to IFCC 37°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	95	81	109	7.00	14.00	AMP optimised to IFCC 25°C
	U/l	149	126	172	11.50	23.00	Colorimetric 37°C
	U/l	116	98	134	9.00	18.00	Colorimetric 30°C
	U/l	95	81	109	7.00	14.00	Colorimetric 25°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	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

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	78	104	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	89	76	102	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Colorimetric
	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bile Acids	µmol/l	23.3	18.7	27.9	2.30	4.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	21.2	16.7	25.7	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.977	1.50	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.3	16.8	25.8	2.25	4.50	Roche JG factored
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	25.6	20.2	31.0	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	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	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.95	3.43	4.47	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.00	20.00	
Cholinesterase	U/l	5835	4668	7002	583.50	1167.00	Colorimetric Benzoylcholine 37°C
	U/l	5590	4472	6708	559.00	1118.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	168	138	198	15.00	30.00	CK-NAC serum start (DGKC) 37°C
	U/l	105	86	124	9.50	19.00	CK-NAC serum start (DGKC) 30°C
	U/l	71	59	83	6.00	12.00	CK-NAC serum start (DGKC) 25°C
	U/l	172	141	203	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	108	88	128	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	175	143	207	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	74	61	87	6.50	13.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	122	97.8	146	12.10	24.20	Alkaline picrate with deproteinization
	mg/dl	1.38	1.11	1.65	0.14	0.27	
	μmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	μmol/l	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	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	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Free T4	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	
	μmol/l	129	103	155	13.00	26.00	IDMS traceable
Free T4	mg/dl	1.46	1.16	1.76	0.15	0.30	
	pmol/l	20.2	15.2	25.2	2.50	5.00	Roche Cobas 6000/8000
	ng/dl	1.58	1.19	1.97	0.20	0.39	
gamma-GT	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas 6000/8000
	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose dehydrogenase	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	6.17	5.25	7.09	0.46	0.92	Hexokinase	
	mg/dl	111	94.6	127	8.20	16.40		
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	1.31	1.11	1.51	0.10	0.20	Direct HDL PEGME	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
Iron	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation	
	mg/dl	50.6	42.8	58.4	3.90	7.80		
	Iron	μmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric with ppt.
		μg/dl	115	94.5	136	10.25	20.50	
Iron	μmol/l	20.7	16.9	24.5	1.90	3.80	Colorimetric without ppt.	
	μg/dl	116	94.5	138	10.75	21.50		
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.2	10.9	15.5	1.15	2.30		
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P 37°C	
	U/l	147	125	169	11.00	22.00	L->P 30°C	
	U/l	103	88	118	7.50	15.00	L->P 25°C	
	U/l	391	332	450	29.50	59.00	P->L Scandinavian & Dutch 37°C	
	U/l	282	240	324	21.00	42.00	P->L Scandinavian & Dutch 30°C	
	U/l	198	168	228	15.00	30.00	P->L Scandinavian & Dutch 25°C	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
LD (LDH)	U/l	390	331	449	29.50	59.00	P->L German methods 37°C	
	U/l	282	239	325	21.50	43.00	P->L German methods 30°C	
	U/l	198	168	228	15.00	30.00	P->L German methods 25°C	
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C	
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C	
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C	
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Ion selective electrode	
	mg/dl	0.743	0.651	0.835	0.05	0.09		
	mmol/l	1.05	0.93	1.17	0.06	0.12	Spectrophotometric	
	mg/dl	0.729	0.644	0.814	0.04	0.09		
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Arsenazo III	
	mg/dl	2.11	1.86	2.36	0.13	0.25		
	mmol/l	0.87	0.77	0.98	0.05	0.11	Atomic absorption	
	mg/dl	2.12	1.87	2.37	0.13	0.25		
	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	mmol/l	0.86	0.76	0.96	0.05	0.10	Chlorphosphonazo III	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	mmol/l	0.86	0.75	0.96	0.05	0.10	Enzymatic	
	mg/dl	2.08	1.83	2.33	0.13	0.25		
	Osmolality	mOsm/kg	298	239	357	29.50	59.00	Calculated

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.4	46.8	70.0	5.80	11.60	Biuret reaction end point
	g/dl	5.84	4.68	7.00	0.58	1.16	
	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction kinetic
	g/dl	5.86	4.69	7.03	0.59	1.17	
PSA Total	ng/ml =	12.4	9.32	15.5	1.54	3.08	Roche Cobas 6000/8000
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.66	1.33	1.99	0.17	0.33	Roche Cobas 6000/8000
TIBC	µmol/l	39.0	30.8	47.2	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	218	172	264	23.00	46.00	
	µmol/l	39.3	31.1	47.5	4.10	8.20	Direct Colorimetric
	µg/dl	220	174	266	23.00	46.00	
	µmol/l	45.3	35.8	54.8	4.75	9.50	
µg/dl	253	200	306	26.50	53.00		
Total T3	nmol/l	2.18	1.64	2.72	0.27	0.54	Roche Cobas 6000/8000
	ng/ml	1.42	1.07	1.77	0.18	0.35	
	ng/dl	142	107	177	17.50	35.00	Roche Cobas 6000/8000
Total T4	nmol/l	84.2	63.1	105	10.55	21.10	Roche Cobas 6000/8000
	µg/dl	6.57	4.92	8.22	0.83	1.65	
	ng/ml	65.7	49.2	82.2	8.25	16.50	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.1	122	8.45	16.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	86.8	121	8.60	17.20	
	mmol/l	1.18	0.99	1.37	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	88.0	120	8.00	16.00	
	mmol/l	1.20	1.01	1.39	0.10	0.19	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	106	89.4	123	8.30	16.60	
mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/Glycerol Dehydrogenase	
mg/dl	105	88.1	122	8.45	16.90		
UIBC	µmol/l	18.2	15.0	21.4	1.60	3.20	Direct Colorimetric
	µg/dl	102	83.9	120	9.05	18.10	
Urea	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease end point
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Zinc	µmol/l	22.8	18.2	27.4	2.30	4.60	Colorimetric with deproteinisation
	µg/dl	149	119	179	15.00	30.00	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
	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	
Alkaline Phosphatase	U/l	149	126	172	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	116	98	134	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	95	81	109	7.00	14.00	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 Total	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.6	16.3	24.9	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	20.2	15.9	24.5	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Roche JG factored
	mg/dl	1.18	0.930	1.43	0.13	0.25	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	20.2	15.9	24.5	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	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	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	102	93.5	111	4.25	8.50	ISE indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	133	171	9.50	19.00	
CK Total	U/l	173	142	204	15.50	31.00	CK-NAC (IFCC) 37°C
	U/l	108	89	127	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	74	60	88	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.8	150	12.60	25.20	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.23	5.30	7.16	0.47	0.93	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
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	1.31	1.12	1.50	0.10	0.19	Direct HDL Roche 4th Generation
Iron	µmol/l	21.3	17.5	25.1	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.8	140	10.60	21.20	
LD (LDH)	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
	U/l	156	132	180	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.1	46.4	69.8	5.85	11.70	Biuret reaction end point
	g/dl	5.81	4.64	6.98	0.59	1.17	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.4	121	8.30	16.60	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.2	119	8.40	16.80	
	mmol/l	1.21	1.02	1.40	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	107	90.3	124	8.35	16.70	
	mmol/l	1.18	1.00	1.37	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	88.1	120	7.95	15.90	
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	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	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	0.30	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. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	
	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	
Alkaline Phosphatase	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	113	96	130	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	79	107	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	111	95	127	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	91	78	104	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	90	76	104	7.00	14.00	Immunoinhibition EPS substrate 37°C
	U/l	68	57	79	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	91	77	105	7.00	14.00	BM/Roche Colorimetric 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

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Roche JG factored
	mg/dl	1.26	0.995	1.53	0.13	0.27	
Bilirubin Total	µmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	27.3	21.5	33.1	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	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	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	134	172	9.50	19.00	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - IDMS	
	mg/dl	154	134	174	10.00	20.00		
Cholinesterase	U/l	5545	4436	6654	554.50	1109.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	171	140	202	15.50	31.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	107	88	126	9.50	19.00	CK-NAC substrate start (DGKC) 30°C	
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C	
	U/l	176	144	208	16.00	32.00	CK-NAC (IFCC) 37°C	
	U/l	110	90	130	10.00	20.00	CK-NAC (IFCC) 30°C	
	U/l	75	61	89	7.00	14.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	µmol/l	133	106	160	13.50	27.00	Roche Creatinine Plus	
	mg/dl	1.50	1.20	1.80	0.15	0.30		
	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	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	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	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase	
	mg/dl	112	94.8	129	8.60	17.20		
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase	
	mg/dl	111	94.4	128	8.30	16.60		
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	51.0	43.2	58.8	3.90	7.80		
	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		
Iron	mmol/l	1.30	1.11	1.49	0.10	0.19	Direct HDL Roche 4th Generation	
	mg/dl	50.2	42.8	57.6	3.70	7.40		
	Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric with ppt.
		µg/dl	114	93.4	135	10.30	20.60	
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		
Lactate	mmol/l	1.48	1.22	1.74	0.13	0.26	Colorimetric Lactate Oxidase	
	mg/dl	13.3	11.0	15.6	1.15	2.30		
LD (LDH)	U/l	385	327	443	29.00	58.00	P->L German methods 37°C	
	U/l	278	236	320	21.00	42.00	P->L German methods 30°C	
	U/l	195	166	224	14.50	29.00	P->L German methods 25°C	
	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C	
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C	
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C	
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C	
Magnesium	mmol/l	0.85	0.75	0.95	0.05	0.10	Atomic absorption	
	mg/dl	2.06	1.81	2.31	0.13	0.25		

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.10	1.85	2.35	0.13	0.25	
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	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.10	3.77	4.43	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction kinetic
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	μmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	222	175	269	23.50	47.00	
	μmol/l	40.4	31.9	48.9	4.25	8.50	Direct Colorimetric
	μg/dl	226	178	274	24.00	48.00	
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.5	122	8.25	16.50	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.3	121	8.35	16.70	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.4	122	8.30	16.60	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	88.0	120	8.00	16.00	
UIBC	μmol/l	19.3	15.8	22.8	1.75	3.50	Direct Colorimetric
	μg/dl	108	88.3	128	9.85	19.70	
Urea	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
Uric Acid (Urate)	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	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.85	5.09	6.61	0.38	
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	0.35	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. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	
Alkaline Phosphatase	U/l	139	118	160	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	108	92	124	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	75	103	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	77	103	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
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	21.7	17.2	26.2	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Roche JG factored
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	26.6	21.1	32.1	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	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	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.19	1.97	2.41	0.11	0.22	NM-BAPTA
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	98.2	90.3	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	3.93	3.42	4.44	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	5641	4513	6769	564.00	1128.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	172	141	203	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	108	88	128	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC substrate start (DGKC) 25°C
	U/l	171	141	201	15.00	30.00	CK-NAC (IFCC) 37°C
	U/l	107	88	126	9.50	19.00	CK-NAC (IFCC) 30°C
	U/l	73	60	86	6.50	13.00	CK-NAC (IFCC) 25°C
	U/l	73	60	86	6.50	13.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Enzymatic UV method
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	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	
gamma-GT	U/l	43	37	49	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	34	29	39	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	32	46	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL Roche 4th Generation
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	19.8	16.3	23.3	1.75	3.50	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.46	1.20	1.72	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	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	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.91	1.17	0.06	0.13	Spectrophotometric
	mg/dl	0.722	0.634	0.810	0.04	0.09	
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.86	0.76	0.97	0.05	0.10	Chlorphosphonazo III
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
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	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.4	32.0	48.8	4.20	8.40	FE+UIBC(saturation with iron)
	μg/dl	226	179	273	23.50	47.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.7	120	8.15	16.30	
	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	87.0	121	8.50	17.00	
UIBC	μmol/l	19.3	15.8	22.8	1.75	3.50	Direct Colorimetric
	μg/dl	108	88.3	128	9.85	19.70	
Urea	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	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	298	253	343	22.50	45.00	Diethanolamine buffer DEA 37°C
	U/l	196	167	225	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	79	67	91	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	104	88	120	8.00	16.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.3	13.0	19.6	1.65	3.30	Enzymatic
Bile Acids	µmol/l	24.4	19.5	29.3	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	17.4	13.8	21.0	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	33.9	26.8	41.0	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.98	1.57	2.39	0.21	0.41	
	µmol/l	30.6	24.2	37.0	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.79	1.42	2.16	0.19	0.37	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	100	92.4	108	3.80	7.60	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.40	3.83	4.97	0.29	0.57	Cholesterol Oxidase - Abell Kendall
	mg/dl	170	148	192	11.00	22.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	96.8	145	12.10	24.20	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.74	5.73	7.75	0.51	1.01	Hexokinase
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	6.56	5.58	7.54	0.49	0.98	Glucose oxidase
	mg/dl	118	101	135	8.50	17.00	
Iron	µmol/l	20.7	17.0	24.4	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.0	137	10.50	21.00	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	393	334	452	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	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Colorimetric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.96	2.48	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1397UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	Enzymatic
	mmol/l	4.04	3.72	4.36	0.16	0.32	ISE method - direct
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - direct
	mmol/l	146	139	153	3.50	7.00	Enzymatic
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	Direct Colorimetric
	µg/dl	267	211	323	28.00	56.00	
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	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.23	5.43	7.03	0.40	0.80	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.08	5.29	6.87	0.40	0.79	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	
	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Purple
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	70	60	80	5.00	10.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	96	81	111	7.50	15.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	26.4	21.2	31.6	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	32.6	25.8	39.4	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.91	1.51	2.31	0.20	0.40	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	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	



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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	101	93.2	109	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.99	3.48	4.50	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	6609	5287	7931	661.00	1322.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	173	142	204	15.50	31.00	CK-NAC substrate start (DGKC) 37°C
	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	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	126	100	152	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.13	1.71	0.15	0.29	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	IDMS traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.97	5.08	6.86	0.45	0.89	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.21	5.28	7.14	0.47	0.93	Glucose oxidase
	mg/dl	112	95.1	129	8.45	16.90	
HDL - Cholesterol	mmol/l	1.16	0.99	1.34	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	1.18	1.00	1.36	0.09	0.18	Direct Clearance Method
	mg/dl	45.5	38.6	52.4	3.45	6.90	
Iron	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric without ppt.
	µg/dl	113	92.8	133	10.10	20.20	
Lactate	mmol/l	1.35	1.11	1.59	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.2	10.0	14.4	1.10	2.20	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P 37°C
	U/l	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	203	173	233	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	203	173	233	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	38	31	45	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	
Magnesium	mmol/l	0.86	0.76	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.09	1.84	2.34	0.13	0.25	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.2	45.0	67.4	5.60	11.20	Biuret reaction end point
	g/dl	5.62	4.50	6.74	0.56	1.12	
	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction kinetic
	g/dl	5.58	4.46	6.70	0.56	1.12	



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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	μmol/l	47.2	37.3	57.1	4.95	9.90	Removal of excess free iron
	μg/dl	264	209	319	27.50	55.00	
	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	
	μmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
μg/dl	257	203	311	27.00	54.00		
Triglycerides	mmol/l	1.22	1.02	1.42	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	108	90.3	126	8.85	17.70	
	mmol/l	1.21	1.01	1.41	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.47	6.35	8.59	0.56	1.12	Urease kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mmol/l	7.47	6.35	8.59	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	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	5.86	5.09	6.63	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. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

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	162	137	187	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	42	62	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.807	0.638	0.976	0.08	0.17	
	µmol/l	14.5	11.4	17.6	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.848	0.667	1.03	0.09	0.18	
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	
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	
Chloride	mmol/l	99.2	91.2	107	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.47	3.02	3.92	0.23	0.45	Cholesterol Oxidase - Abell Kendall
	mg/dl	134	117	151	8.50	17.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.45	3.00	3.90	0.23	0.45	Dimension-Siemens reagents
	mg/dl	133	116	150	8.50	17.00	
Cholinesterase	U/l	9793	7834	10000	979.50	1959.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	175	144	206	15.50	31.00	CK-NAC (IFCC) 37°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	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	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	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	53	71	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Hexokinase
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	6.24	5.31	7.17	0.47	0.93	Oxygen electrode
	mg/dl	112	95.7	128	8.15	16.30	
HDL - Cholesterol	mmol/l	1.24	1.05	1.43	0.10	0.19	Direct HDL PPD
	mg/dl	47.9	40.5	55.3	3.70	7.40	
	mmol/l	1.23	1.04	1.42	0.10	0.19	Direct HDL PEGME
	mg/dl	47.5	40.1	54.9	3.70	7.40	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct Clearance Method
	mg/dl	49.0	41.7	56.3	3.65	7.30	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric with ppt.
	µg/dl	109	89.4	129	9.80	19.60	
	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	1.47	1.20	1.74	0.14	0.27	UV LDH
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P 37°C
	U/l	193	164	222	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	135	108	162	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.83	0.73	0.92	0.05	0.10	Methylthymol blue
	mg/dl	2.00	1.76	2.24	0.12	0.24	
Osmolality	mOsm/kg	292	234	350	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.1	48.0	72.2	6.05	12.10	Biuret reaction end point
	g/dl	6.01	4.80	7.22	0.61	1.21	
PSA Total	ng/ml =	8.66	6.49	10.8	1.09	2.17	Siemens Dimension
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	36.5	28.8	44.2	3.85	7.70	FE+UIBC(saturation with iron)
	µg/dl	204	161	247	21.50	43.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	35.2	27.8	42.6	3.70	7.40	Direct Colorimetric
	µg/dl	197	155	239	21.00	42.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Urea	mmol/l	7.55	6.41	8.69	0.57	1.14	Urease end point
	mg/dl	45.4	38.5	52.3	3.45	6.90	
	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	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	160	136	184	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	36	52	4.00	8.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	52	41	63	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.6	19.0	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	14.5	11.4	17.6	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.848	0.667	1.03	0.09	0.18	
Bilirubin Total	µmol/l	29.8	23.6	36.0	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.08	1.87	2.29	0.11	0.21	Arsenazo III
	mg/dl	8.34	7.49	9.19	0.43	0.85	


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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.45	3.00	3.90	0.23	0.45	Cholesterol Oxidase - Abell Kendall
	mg/dl	133	116	150	8.50	17.00	
	mmol/l	3.47	3.02	3.92	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	117	151	8.50	17.00	
Cholinesterase	U/l	9820	7856	10000	982.00	1964.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	175	143	207	16.00	32.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	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	132	106	158	13.00	26.00	IDMS traceable
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.17	5.25	7.09	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.6	127	8.20	16.40	
	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	1.25	1.06	1.44	0.10	0.19	Direct HDL PPD
	mg/dl	48.3	40.9	55.7	3.70	7.40	


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

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	1.25	1.06	1.44	0.10	0.19	Direct HDL PEGME
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	90.6	131	10.20	20.40	
	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	1.43	1.17	1.69	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.9	10.5	15.3	1.20	2.40	
	mmol/l	1.48	1.21	1.75	0.14	0.27	UV LDH
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	191	162	220	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	136	109	163	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.12	0.98	1.26	0.07	0.14	Spectrophotometric
	mg/dl	0.778	0.682	0.874	0.05	0.10	
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Methylthymol blue
	mg/dl	2.03	1.78	2.28	0.13	0.25	
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	1.42	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	3.98	3.66	4.30	0.16	0.32	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	



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)						
Lot. No. 1397UN Cat. No. HN1530 / HS2611								
Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28		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	36.6	28.9	44.3	3.85	7.70	Removal of excess free iron	
	μg/dl	205	162	248	21.50	43.00		
	μmol/l	37.7	29.8	45.6	3.95	7.90	FE+UIBC(saturation with iron)	
	μg/dl	211	167	255	22.00	44.00		
	μmol/l	36.6	28.9	44.3	3.85	7.70	Direct Colorimetric	
μg/dl	205	162	248	21.50	43.00			
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	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	98.2	82.3	114	7.95	15.90		
Urea	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	98.2	82.7	114	7.75	15.50		
	Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease end point
		mg/dl	45.7	38.8	52.6	3.45	6.90	
Urea	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		
Urea	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	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm	
	mg/dl	5.81	5.06	6.56	0.38	0.75		
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38	0.76		
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	5.83	5.07	6.59	0.38	0.76		



SIEMENS DIMENSION RxL/Max/Xpand®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1397UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28		Range					
Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	168	143	193	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer with P5P 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	14.7	11.6	17.8	1.55	3.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.860	0.679	1.04	0.09	0.18	
Bilirubin Total	µmol/l	29.8	23.6	36.0	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.38	2.10	0.18	0.36	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	104	96.1	112	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.62	3.15	4.09	0.24	0.47	Cholesterol Oxidase - Abell Kendall
	mg/dl	140	122	158	9.00	18.00	
	mmol/l	3.46	3.01	3.91	0.23	0.45	Dimension-Siemens reagents
	mg/dl	134	116	152	9.00	18.00	
CK Total	U/l	177	145	209	16.00	32.00	CK-NAC (IFCC) 37°C

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1397UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2023-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	133	107	159	13.00	26.00	Enzymatic UV method
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	59	50	68	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Hexokinase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.30	1.10	1.50	0.10	0.20	Direct HDL PPD
	mg/dl	50.2	42.5	57.9	3.85	7.70	Direct HDL PEGME
	mmol/l	1.31	1.11	1.51	0.10	0.20	
	mg/dl	50.6	42.8	58.4	3.90	7.80	
Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric without ppt.
	µg/dl	114	93.4	135	10.30	20.60	
LD (LDH)	U/l	201	170	232	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	150	121	179	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
Potassium	mmol/l	3.97	3.66	4.28	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.2	49.0	73.4	6.10	12.20	Biuret reaction end point
	g/dl	6.12	4.90	7.34	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.26	1.05	1.47	0.11	0.21	Lipase/GPO-PAP no correction
	mg/dl	112	92.9	131	9.55	19.10	

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Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.97	6.49	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
mg/dl	5.81	5.06	6.56	0.38	0.75		

VITALAB FLEXOR®

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Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	250	212	288	19.00	38.00	Diethanolamine buffer DEA 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Calcium	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	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Glucose	mmol/l	6.51	5.53	7.49	0.49	0.98	Glucose oxidase
	mg/dl	117	99.7	134	8.65	17.30	
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	
Triglycerides	mmol/l	1.20	1.01	1.39	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.39	0.34	0.44	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.59	5.73	7.45	0.43	0.86	