

PRODUCT INFORMATION

Radox Acusera should be aliquoted into suitable containers **without rubber stoppers** and stored at 2-8°C **to ensure stable Zinc Levels** throughout the stability period.

REC526 OCC37296

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. 1489UN	EXPIRY: 2024-05-28	

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.

Due to the zinc content in some batches of rubber stoppers, the QC material should be aliquoted into suitable containers without rubber stoppers and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

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.

EC	REP
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Dungloe, Donegal,
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Abbott Alinity/ Architect c/ci Systems®
ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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	43.1	36.6	49.6	3.25	6.50	Bromocresol Purple
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	173	147	199	13.00	26.00	AMP non-optimised 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	60	51	69	4.50	9.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	92	79	105	6.50	13.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.6	10.0	15.2	1.30	2.60	Enzymatic
Bile Acids	µmol/l	25.0	20.0	30.0	2.50	5.00	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.2	16.0	24.4	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.18	0.936	1.42	0.12	0.24	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.29	1.99	0.18	0.35	

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Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	25.9	20.5	31.3	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Cholinesterase	U/l	6788	5430	8146	679.00	1358.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	197	162	232	17.50	35.00	Abbott CK-NAC (IFCC) 37°C
Copper	µmol/l	13.0	10.4	15.6	1.30	2.60	Colorimetric
	µg/dl	82.7	66.1	99.3	8.30	16.60	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.82	4.95	6.69	0.44	0.87	Hexokinase
	mg/dl	105	89.2	121	7.90	15.80	


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Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	5.81	4.94	6.68	0.44	0.87	Glucose oxidase
	mg/dl	105	89.0	121	8.00	16.00	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct Clearance Method
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	mmol/l	1.42	1.21	1.63	0.11	0.21	HDL - Ultra
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	µmol/l	20.3	16.7	23.9	1.80	3.60	Colorimetric with ppt.
	µg/dl	113	93.4	133	9.80	19.60	
Lactate	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	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	197	168	226	14.50	29.00	L->P 37°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.646	0.826	0.05	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Arsenazo III
	mg/dl	2.12	1.86	2.38	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Osmolality	mOsm/kg	299	240	358	29.50	59.00	Calculated

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Phosphate Inorganic	mmol/l	1.35	1.14	1.56	0.11	0.21	Phosphomolybdate enzymatic	
	mg/dl	4.19	3.53	4.85	0.33	0.66		
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV	
	mg/dl	4.15	3.53	4.77	0.31	0.62		
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect	
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		
	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction kinetic	
	g/dl	5.94	4.75	7.13	0.60	1.19		
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect	
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	47.2	37.3	57.1	4.95	9.90	Calculated from Transferrin	
	μg/dl	264	209	319	27.50	55.00		
Triglycerides	mmol/l	1.02	0.86	1.19	0.08	0.17	Lipase/GPO-PAP no correction	
	mg/dl	90.3	75.7	105	7.30	14.60		
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction	
	mg/dl	89.4	75.3	104	7.05	14.10		
UIBC	mmol/l	1.04	0.88	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase	
	mg/dl	92.0	77.4	107	7.30	14.60		
	UIBC	μmol/l	18.6	15.3	21.9	1.65	3.30	Direct Colorimetric
		μg/dl	104	85.5	123	9.25	18.50	
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease end point	
	mg/dl	42.6	36.2	49.0	3.20	6.40		
	mmol/l	7.16	6.08	8.24	0.54	1.08	Urease kinetic	
	mg/dl	43.0	36.5	49.5	3.25	6.50		

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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	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	5.83	5.07	6.59	0.38	0.76	

ABX Pentra 400®

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
Alkaline Phosphatase	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase - Abell Kendall
	mg/dl	165	144	186	10.50	21.00	
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	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	5.78	4.91	6.65	0.44	0.87	Glucose oxidase
	mg/dl	104	88.5	120	7.75	15.50	
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease end point
	mg/dl	42.4	36.0	48.8	3.20	6.40	

**ABX Pentra 400®**

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Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	6.87	5.84	7.90	0.52	1.03	Urease kinetic
	mg/dl	41.3	35.1	47.5	3.10	6.20	
	mmol/l	6.87	5.84	7.90	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.53	4.82	6.24	0.36	0.71	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.31	0.61	
	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Purple
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	206	175	237	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	76	64	88	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bile Acids	µmol/l	24.4	19.6	29.2	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.19	0.936	1.44	0.13	0.25	
Bilirubin Total	µmol/l	33.4	26.4	40.4	3.50	7.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.95	1.54	2.36	0.21	0.41	
	µmol/l	32.9	26.0	39.8	3.45	6.90	DPD (Beckman AU)
	mg/dl	1.92	1.52	2.32	0.20	0.40	
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	

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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	
Chloride	mmol/l	96.9	89.1	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.18	3.64	4.72	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	141	181	10.00	20.00	
	mmol/l	4.31	3.75	4.87	0.28	0.56	Cholesterol Oxidase - IDMS
	mg/dl	166	145	187	10.50	21.00	
Cholinesterase	U/l	5549	4439	6659	555.00	1110.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	192	157	227	17.50	35.00	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	14.8	11.9	17.7	1.45	2.90	Colorimetric
	µg/dl	94.1	75.7	113	9.20	18.40	
Creatinine	µmol/l	125	99.9	150	12.55	25.10	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	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	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	121	96.6	145	12.20	24.40	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	123	98.4	148	12.30	24.60	IDMS traceable
	mg/dl	1.39	1.11	1.67	0.14	0.28	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	52	44	60	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
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	6.05	5.15	6.95	0.45	0.90	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL PPD
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	55.2	46.7	63.7	4.25	8.50	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct Clearance Method
	mg/dl	56.4	47.9	64.9	4.25	8.50	
	mmol/l	1.47	1.25	1.69	0.11	0.22	HDL - Ultra
	mg/dl	56.7	48.3	65.1	4.20	8.40	
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	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P 37°C

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	427	363	491	32.00	64.00	P->L Scandinavian & Dutch 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	185	158	212	13.50	27.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	44	35	53	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.3	34.2	52.4	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	242	191	293	25.50	51.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
UIBC	µmol/l	23.2	19.1	27.3	2.05	4.10	Direct Colorimetric
	µg/dl	130	107	153	11.50	23.00	
Urea	mmol/l	7.56	6.43	8.69	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.5	37.8	51.2	3.35	6.70	Bromocresol Purple
	g/dl	4.45	3.78	5.12	0.34	0.67	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	182	155	209	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.5	9.91	15.1	1.30	2.59	Differential rate pH change
Bilirubin Direct	µmol/l	14.3	11.3	17.3	1.50	3.00	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.837	0.661	1.01	0.09	0.18	
Bilirubin Total	µmol/l	33.3	26.3	40.3	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.95	1.54	2.36	0.21	0.41	
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	
Chloride	mmol/l	98.1	90.3	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	140	182	10.50	21.00	
	mmol/l	4.11	3.57	4.65	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	159	138	180	10.50	21.00	
Cholinesterase	U/l	5862	4690	7034	586.00	1172.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	Monothioglycerol 37°C

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	125	99.8	150	12.60	25.20	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	IDMS traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.88	5.00	6.76	0.44	0.88	Hexokinase
	mg/dl	106	90.1	122	7.95	15.90	
	mmol/l	5.77	4.91	6.63	0.43	0.86	Glucose oxidase
	mg/dl	104	88.5	120	7.75	15.50	
HDL - Cholesterol	mmol/l	1.46	1.25	1.67	0.11	0.21	HDL - Ultra
	mg/dl	56.4	48.3	64.5	4.05	8.10	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	166	141	191	12.50	25.00	L->P 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Calmagite
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.86	3.55	4.17	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.5	109	7.65	15.30	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
Urea	mmol/l	7.80	6.63	8.97	0.59	1.17	Urease kinetic
	mg/dl	46.9	39.8	54.0	3.55	7.10	
	mmol/l	7.80	6.63	8.97	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°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
Calcium	mmol/l	2.26	2.04	2.48	0.11	0.22	Arsenazo III
	mg/dl	9.06	8.18	9.94	0.44	0.88	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
Glucose	mmol/l	5.82	4.95	6.69	0.44	0.87	Glucose oxidase
	mg/dl	105	89.2	121	7.90	15.80	
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
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	
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.7	106	7.25	14.50	
Urea	mmol/l	7.58	6.44	8.72	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.7	52.5	3.45	6.90	
	mmol/l	7.58	6.44	8.72	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.54	4.82	6.26	0.36	0.72	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	39.4	33.5	45.3	2.95	5.90	Turbidimetric Assays
	g/dl	3.94	3.35	4.53	0.30	0.59	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	100	85	115	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	81	69	93	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	81	69	93	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.7	10.8	16.6	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Roche JG factored
	mg/dl	1.09	0.860	1.32	0.12	0.23	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
µmol/l	27.9	22.0	33.8	2.95	5.90	Diazonium ion	
mg/dl	1.63	1.29	1.97	0.17	0.34		
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	2.18	1.96	2.40	0.11	0.22	NM-BAPTA
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.02	3.50	4.54	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	
CK Total	U/l	187	153	221	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate with deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	100	152	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.13	1.71	0.15	0.29	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus	
	mg/dl	1.41	1.13	1.69	0.14	0.28		
	µmol/l	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		
	µmol/l	125	100	150	12.50	25.00	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		52	45	59	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		32	28	36	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase	
	mg/dl	110	93.3	127	8.35	16.70		
HDL - Cholesterol	mmol/l	1.61	1.37	1.85	0.12	0.24	Direct HDL PEGME	
	mg/dl	62.1	52.9	71.3	4.60	9.20		
	mmol/l	1.62	1.38	1.86	0.12	0.24	Direct HDL Roche 4th Generation	
Iron	mg/dl	62.5	53.3	71.7	4.60	9.20		
	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	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.	
	µg/dl	111	91.1	131	9.95	19.90		
	Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
mg/dl		14.5	11.9	17.1	1.30	2.60		
LD (LDH)	U/l	378	321	435	28.50	57.00	P->L German methods 37°C	
	U/l	273	232	314	20.50	41.00	P->L German methods 30°C	
	U/l	192	163	221	14.50	29.00	P->L German methods 25°C	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
	U/l	150	128	172	11.00	22.00	L->P IFCC 30°C
	U/l	105	90	120	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.07	0.13	Ion selective electrode
	mg/dl	0.729	0.639	0.819	0.05	0.09	
Magnesium	mmol/l	0.91	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.90	0.80	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	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	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.4	31.1	47.7	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	220	174	266	23.00	46.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
UIBC	µmol/l	19.6	16.0	23.2	1.80	3.60	Direct Colorimetric
	µg/dl	110	89.4	131	10.30	20.60	
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.0	48.8	3.20	6.40	

**COBAS INTEGRA®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	
	mmol/l	0.35	0.30	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	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	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. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Green
	g/dl	3.96	3.37	4.55	0.30	0.59	
Alkaline Phosphatase	U/l	258	219	297	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	201	171	231	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	165	140	190	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	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 Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.5	21.7	33.3	2.90	5.80	Nitrobenzenediazonium salt
	mg/dl	1.61	1.27	1.95	0.17	0.34	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Arsenazo III
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	101	92.7	109	4.15	8.30	ISE direct



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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	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	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
	mmol/l	6.10	5.18	7.02	0.46	0.92	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL PEGME
	mg/dl	53.7	45.5	61.9	4.10	8.20	
Iron	µmol/l	20.2	16.5	23.9	1.85	3.70	Colorimetric without ppt.
	µg/dl	113	92.2	134	10.40	20.80	
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	1.36	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	3.82	3.52	4.12	0.15	0.30	ISE method - direct
Protein Total	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	



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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.6	112	7.95	15.90	
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease end point
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.39	6.29	8.49	0.55	1.10	Urease kinetic
	mg/dl	44.4	37.8	51.0	3.30	6.60	
Uric Acid (Urate)	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	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
		mg/dl	5.93	5.17	6.69	0.38	
mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase	
	mg/dl	6.17	5.36	6.98	0.41		0.81

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	218	172	264	23.00	46.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	165	130	200	17.50	35.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	123	97	149	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	16.3	10.9	21.7	2.70	5.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
	g/l	43.2	36.8	49.6	3.20	6.40	Bromocresol Purple
	g/dl	4.32	3.68	4.96	0.32	0.64	
	g/l	41.1	34.9	47.3	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.11	3.49	4.73	0.31	0.62	
	g/l	40.2	34.2	46.2	3.00	6.00	Turbidimetric Assays
g/dl	4.02	3.42	4.62	0.30	0.60		
Alkaline Phosphatase	U/l	157	134	180	11.50	23.00	Ortho Vitros Microslide Systems 37°C
	U/l	271	230	312	20.50	41.00	Diethanolamine buffer DEA 37°C
	U/l	211	179	243	16.00	32.00	Diethanolamine buffer DEA 30°C
	U/l	173	147	199	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	179	152	206	13.50	27.00	AMP optimised to NVKC/SFBC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to NVKC/SFBC 30°C
U/l	114	97	131	8.50	17.00	AMP optimised to NVKC/SFBC 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Alkaline Phosphatase	U/l	173	147	199	13.00	26.00	AMP non-optimised 37°C
	U/l	135	115	155	10.00	20.00	AMP non-optimised 30°C
	U/l	111	94	128	8.50	17.00	AMP non-optimised 25°C
	U/l	162	138	186	12.00	24.00	Colorimetric 37°C
	U/l	126	108	144	9.00	18.00	Colorimetric 30°C
	U/l	104	88	120	8.00	16.00	Colorimetric 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	41	33	49	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	19	27	2.00	4.00	Tris buffer with P5P 25°C
	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
	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	60	51	69	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	60	51	69	4.50	9.00	Roche EPS Liquid 37°C
	U/l	69	59	79	5.00	10.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	84	72	96	6.00	12.00	pNP Maltotrioxide substrates 37°C
	U/l	83	70	96	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	67	57	77	5.00	10.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	80	68	92	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	81	69	93	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	80	68	92	6.00	12.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
	U/l	85	72	98	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	84	71	97	6.50	13.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	92	79	105	6.50	13.00	Abbott Architect IFCC Cal. 37°C
	U/l	76	64	88	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.22	1.00	1.44	0.11	0.22	Immunoturbidimetric
	mg/dl	122	100	144	11.00	22.00	
Apolipoprotein B	g/l	0.54	0.44	0.63	0.05	0.10	Immunoturbidimetric
	mg/dl	53.6	44.0	63.2	4.80	9.60	
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	52	42	62	5.00	10.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Colorimetric
	mmol/l	13.7	10.8	16.6	1.45	2.90	Ortho Vitros Microslide Systems
	mmol/l	12.4	9.86	14.9	1.27	2.54	Differential rate pH change

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.7	10.9	16.5	1.40	2.80	Enzymatic
Bile Acids	μmol/l	28.1	22.5	33.7	2.80	5.60	4th Generation Colorimetric
	μmol/l	25.2	20.2	30.2	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	μmol/l	19.8	15.6	24.0	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.913	1.41	0.12	0.25	
	μmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	μmol/l	20.3	16.1	24.5	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	μmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	μmol/l	14.6	11.5	17.7	1.55	3.10	Modified Jendrassik
	mg/dl	0.854	0.673	1.04	0.09	0.18	
	μmol/l	27.4	21.7	33.1	2.85	5.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	μmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	μmol/l	29.9	23.6	36.2	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.38	2.12	0.19	0.37	
	μmol/l	28.1	22.2	34.0	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	μmol/l	27.5	21.7	33.3	2.90	5.80	Nitrobenzenediazonium salt
	mg/dl	1.61	1.27	1.95	0.17	0.34	
μmol/l	27.4	21.7	33.1	2.85	5.70	Diazonium ion	
mg/dl	1.60	1.27	1.93	0.17	0.33		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	32.5	25.7	39.3	3.40	6.80	Oxidation to Biliverdin/Vanadate	
	mg/dl	1.90	1.50	2.30	0.20	0.40		
	µmol/l	34.3	27.1	41.5	3.60	7.20	Modified Jendrassik	
	mg/dl	2.01	1.59	2.43	0.21	0.42		
Calcium	mmol/l	2.18	1.97	2.39	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.74	7.90	9.58	0.42	0.84		
	mmol/l	2.24	2.02	2.46	0.11	0.22	Ortho Vitros Microslide Systems	
	mg/dl	8.98	8.10	9.86	0.44	0.88		
	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	2.20	1.98	2.42	0.11	0.22	Arsenazo III	
	mg/dl	8.82	7.94	9.70	0.44	0.88		
	mmol/l	2.20	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	0.97	0.88	1.07	0.05	0.10	Ionised calcium	
	mg/dl	3.90	3.51	4.29	0.20	0.39		
	mmol/l	99.5	91.5	108	4.00	8.00	Colorimetric	
	mmol/l	98.1	90.2	106	3.95	7.90	Ortho Vitros Microslide Systems	
	mmol/l	96.8	89.1	105	3.85	7.70	ISE indirect	
	mmol/l	97.9	90.1	106	3.90	7.80	ISE direct	
	Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Ortho Vitros Microslide Systems
		mg/dl	159	139	179	10.00	20.00	
mmol/l		4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase - Abell Kendall	
mg/dl		158	137	179	10.50	21.00		
mmol/l		4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS	
mg/dl		157	137	177	10.00	20.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5861	4689	7033	586.00	1172.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	190	156	224	17.00	34.00	CK-NAC serum start (DGKC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC serum start (DGKC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	197	162	232	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	209	171	247	19.00	38.00	Monothioglycerol 37°C
	U/l	131	107	155	12.00	24.00	Monothioglycerol 30°C
	U/l	89	73	105	8.00	16.00	Monothioglycerol 25°C
Copper	µmol/l	16.6	13.3	19.9	1.65	3.30	Atomic absorption
	µg/dl	106	84.6	127	10.70	21.40	
	µmol/l	15.6	12.5	18.7	1.55	3.10	Colorimetric
	µg/dl	99.2	79.5	119	9.85	19.70	
Cortisol	nmol/l	474	356	592	59.00	118.00	Roche Cobas E411
	µg/dl	17.1	12.8	21.4	2.15	4.30	
Creatinine	µmol/l	124	98.8	149	12.60	25.20	Alkaline picrate with deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	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	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	
	µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Vitros IDMS Traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
µmol/l	124	99.0	149	12.50	25.00	IDMS traceable	
mg/dl	1.40	1.12	1.68	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.92	1.54	2.30	0.19	0.38	Immunoturbidimetric
	ng/ml	1.50	1.20	1.80	0.15	0.30	
Folate	nmol/l	37.6	28.6	46.6	4.50	9.00	Roche Cobas 6000/8000
	ng/ml	16.6	12.6	20.6	2.00	4.00	
Free T4	pmol/l	17.5	13.1	21.9	2.20	4.40	Abbott Architect
	ng/dl	1.37	1.02	1.72	0.18	0.35	
	pg/ml	13.7	10.2	17.2	1.75	3.50	Abbott Architect
	pmol/l	19.8	14.9	24.7	2.45	4.90	
	ng/dl	1.54	1.16	1.92	0.19	0.38	Siemens Centaur XP/XPT/Classic
	pg/ml	15.4	11.6	19.2	1.90	3.80	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	19.9	14.9	24.9	2.50	5.00	Beckman Access
	ng/dl	1.55	1.16	1.94	0.20	0.39	
	pg/ml	15.5	11.6	19.4	1.95	3.90	Beckman Access
	pmol/l	19.9	14.9	24.9	2.50	5.00	Beckman Dxl800
	ng/dl	1.55	1.16	1.94	0.20	0.39	
	pg/ml	15.5	11.6	19.4	1.95	3.90	Beckman Dxl800
	pmol/l	24.2	18.2	30.2	3.00	6.00	Roche Elecsys
	ng/dl	1.89	1.42	2.36	0.24	0.47	
	pg/ml	18.9	14.2	23.6	2.35	4.70	Roche Elecsys
	pmol/l	23.4	17.5	29.3	2.95	5.90	Roche Cobas E411
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas E411
	pmol/l	23.4	17.5	29.3	2.95	5.90	Roche Cobas 6000/8000
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas 6000/8000
Gentamicin	pmol/l	21.9	16.4	27.4	2.75	5.50	Biomerieux Vidas FT4N Kit
	ng/dl	1.71	1.28	2.14	0.22	0.43	
	pg/ml	17.1	12.8	21.4	2.15	4.30	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.57	6.06	9.08	0.76	1.51	Immunoturbidimetric
	µg/ml	3.62	2.90	4.34	0.36	0.72	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	13	10	16	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.90	5.02	6.78	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	106	90.5	122	7.75	15.50	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Glucose dehydrogenase
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase	
mg/dl	108	91.9	124	8.05	16.10		
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Vitros Magnetic HDL
	mg/dl	57.1	48.6	65.6	4.25	8.50	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
mmol/l	1.44	1.22	1.66	0.11	0.22	HDL - Ultra	
mg/dl	55.6	47.1	64.1	4.25	8.50		
Immunoglobulin A	mmol/l	1.57	1.33	1.81	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	60.6	51.3	69.9	4.65	9.30	
Immunoglobulin A	g/l	1.77	1.33	2.21	0.22	0.44	Immunoturbidimetric
	mg/dl	177	133	221	22.00	44.00	
Immunoglobulin G	g/l	7.18	5.89	8.47	0.65	1.29	Immunoturbidimetric
	mg/dl	718	589	847	64.50	129.00	
Immunoglobulin M	g/l	0.73	0.59	0.88	0.07	0.15	Immunoturbidimetric
	mg/dl	73.3	58.6	88.0	7.35	14.70	
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	20.0	16.4	23.6	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.7	132	10.15	20.30	
	µmol/l	20.8	17.1	24.5	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	116	95.6	136	10.20	20.40	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LAP	U/l	18	15	21	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	190	162	218	14.00	28.00	L->P 37°C
	U/l	137	117	157	10.00	20.00	L->P 30°C
	U/l	96	82	110	7.00	14.00	L->P 25°C
	U/l	430	365	495	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	310	264	356	23.00	46.00	P->L Scandinavian & Dutch 30°C
	U/l	218	185	251	16.50	33.00	P->L Scandinavian & Dutch 25°C
	U/l	393	334	452	29.50	59.00	P->L German methods 37°C
	U/l	284	241	327	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	403	343	463	30.00	60.00	P->L SFBC 37°C
	U/l	291	248	334	21.50	43.00	P->L SFBC 30°C
	U/l	204	174	234	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	252	214	290	19.00	38.00	Ortho Vitros IFCC Traceable 37°C
	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C
	U/l	248	199	297	24.50	49.00	Ortho Vitros Microslide Systems 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.620	0.782	0.04	0.08	
	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		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Radox Colorimetric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.90	0.80	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.20	1.93	2.47	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Calmagite
	mg/dl	2.18	1.92	2.44	0.13	0.26	
	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	0.88	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic	
mg/dl	2.13	1.88	2.38	0.13	0.25		
NEFA	mmol/l	1.51	1.28	1.74	0.12	0.23	Colorimetric
Osmolality	mOsm/kg	296	237	355	29.50	59.00	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	11.6	9.23	14.0	1.19	2.37	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.22	3.60	4.84	0.31	0.62	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	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	3.97	3.65	4.29	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	3.99	3.67	4.31	0.16	0.32	Enzymatic
	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - direct
	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.97	4.77	7.17	0.60	1.20	
	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	
	g/dl	5.86	4.69	7.03	0.59	1.17	
PSA Total	ng/ml =	11.2	8.37	14.0	1.42	2.83	Siemens Centaur XP/XPT/Classic
	ng/ml =	11.2	8.41	14.0	1.40	2.79	Abbott Architect
	ng/ml =	14.2	10.7	17.7	1.75	3.50	Cobas E411
	ng/ml =	13.6	10.2	17.0	1.70	3.40	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	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Thyroid Stimulating Hormone	µU/ml =	1.01	0.81	1.21	0.10	0.20	Abbott Architect
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.33	1.07	1.59	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.37	1.09	1.65	0.14	0.28	Roche Elecsys
	µU/ml =	1.41	1.13	1.69	0.14	0.28	Roche Cobas E411
	µU/ml =	1.42	1.13	1.71	0.15	0.29	Roche Cobas 6000/8000
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	47.7	37.7	57.7	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	267	211	323	28.00	56.00	
	µmol/l	37.7	29.8	45.6	3.95	7.90	Removal of excess free iron
	µg/dl	211	167	255	22.00	44.00	
	µmol/l	40.2	31.7	48.7	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	225	177	273	24.00	48.00	
	µmol/l	47.6	37.6	57.6	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	45.2	35.7	54.7	4.75	9.50	Calculated from Transferrin
	µg/dl	253	200	306	26.50	53.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.93	1.45	2.41	0.24	0.48	Abbott Architect
	ng/ml	1.26	0.944	1.58	0.16	0.32	
	ng/dl	126	94.4	158	15.80	31.60	Abbott Architect



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.65	1.99	3.31	0.33	0.66	Siemens Centaur XP/XPT/Classic
	ng/ml	1.73	1.30	2.16	0.22	0.43	
	ng/dl	173	130	216	21.50	43.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.56	1.92	3.20	0.32	0.64	Roche Cobas E411
	ng/ml	1.67	1.25	2.09	0.21	0.42	
	ng/dl	167	125	209	21.00	42.00	Roche Cobas E411
	nmol/l	2.31	1.74	2.88	0.29	0.57	Roche Cobas 6000/8000
	ng/ml	1.50	1.13	1.87	0.19	0.37	
	ng/dl	150	113	187	18.50	37.00	Roche Cobas 6000/8000
Total T4	nmol/l	97.5	73.2	122	12.15	24.30	Abbott Architect
	µg/dl	7.61	5.71	9.51	0.95	1.90	
	ng/ml	76.1	57.1	95.1	9.50	19.00	Abbott Architect
	nmol/l	92.3	69.2	115	11.55	23.10	Siemens Centaur XP/XPT/Classic
	µg/dl	7.20	5.40	9.00	0.90	1.80	
	ng/ml	72.0	54.0	90.0	9.00	18.00	Siemens Centaur XP/XPT/Classic
	nmol/l	101	76.0	126	12.50	25.00	Roche Cobas E411
	µg/dl	7.88	5.93	9.83	0.98	1.95	
	ng/ml	78.8	59.3	98.3	9.75	19.50	Roche Cobas E411
	nmol/l	94.8	71.1	119	11.85	23.70	Roche Cobas 6000/8000
	µg/dl	7.39	5.55	9.23	0.92	1.84	
	ng/ml	73.9	55.5	92.3	9.20	18.40	Roche Cobas 6000/8000
	nmol/l	116	87.1	145	14.45	28.90	Microgenics DRI assay
	µg/dl	9.05	6.79	11.3	1.13	2.26	
	ng/ml	90.5	67.9	113	11.30	22.60	Microgenics DRI assay
nmol/l	106	79.6	132	13.20	26.40	Thermo Scientific - DRI	
µg/dl	8.27	6.21	10.3	1.03	2.06		
ng/ml	82.7	62.1	103	10.30	20.60	Thermo Scientific - DRI	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.84	1.47	2.21	0.19	0.37	Immunoturbidimetric
	mg/dl	184	147	221	18.50	37.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	78.5	109	7.65	15.30	
	mmol/l	1.06	0.89	1.23	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.5	109	7.65	15.30	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	90.3	76.2	104	7.05	14.10	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.0	107	7.50	15.00	
mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems	
mg/dl	110	92.0	128	9.00	18.00		
UIBC	µmol/l	19.2	15.8	22.6	1.70	3.40	Direct Colorimetric
	µg/dl	107	88.3	126	9.35	18.70	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Ortho Vitros Microslide Systems
	mg/dl	42.4	36.1	48.7	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	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease hypochlorite
	mg/dl	44.0	37.4	50.6	3.30	6.60	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	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	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.91	5.14	6.68	0.39	0.77	
mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	5.76	5.02	6.50	0.37	0.74		
Vitamin B12	pmol/l	400	320	480	40.00	80.00	Roche Cobas E411
	pg/ml	542	434	650	54.00	108.00	
Zinc	µmol/l	23.1	18.5	27.7	2.30	4.60	Atomic absorption
	µg/dl	151	121	181	15.00	30.00	
	µmol/l	21.9	17.5	26.3	2.20	4.40	Colorimetric with deproteinisation
	µg/dl	143	114	172	14.50	29.00	



MEAN OF ALL INSTRUMENTS (Elec.)			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)				
Lot No. 1489UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2024-05-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		67.3	60.6	74.0	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.3	4.0	6.6	0.64	1.27	% of total Protein (Beckman Capillary)
alpha-2-globulin		8.4	6.4	10.4	1.01	2.02	% of total Protein (Beckman Capillary)
beta-globulin		8.9	6.8	11.0	1.07	2.14	% of total Protein (Beckman Capillary)
gamma-globulin		10.1	7.7	12.5	1.21	2.42	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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	
Alkaline Phosphatase	U/l	246	209	283	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	192	163	221	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	157	134	180	11.50	23.00	Diethanolamine buffer DEA 25°C
	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	143	122	164	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	117	100	134	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	12	20	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.0	15.8	24.2	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.17	0.924	1.42	0.12	0.25	
	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	19.8	15.7	23.9	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	30.2	23.8	36.6	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.39	2.15	0.19	0.38	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	μmol/l	30.4	24.0	36.8	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	μmol/l	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Calcium	mmol/l	2.22	1.99	2.45	0.12	0.23	Arsenazo III
	mg/dl	8.90	7.98	9.82	0.46	0.92	
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	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	121	96.9	145	12.05	24.10	Creatinine PAP method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	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	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
LD (LDH)	U/l	409	348	470	30.50	61.00	P->L German methods 37°C
	U/l	295	251	339	22.00	44.00	P->L German methods 30°C
	U/l	207	176	238	15.50	31.00	P->L German methods 25°C
	U/l	405	344	466	30.50	61.00	P->L SFBC 37°C
	U/l	292	248	336	22.00	44.00	P->L SFBC 30°C
	U/l	205	174	236	15.50	31.00	P->L SFBC 25°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 37°C
	U/l	147	126	168	10.50	21.00	L->P IFCC 30°C
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	
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	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.5	107	7.25	14.50	
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	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	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.56	4.84	6.28	0.36	0.72	


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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	157	134	180	11.50	23.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	34	50	4.00	8.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	64	54	74	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	51	41	61	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	13.7	10.8	16.6	1.45	2.90	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	27.4	21.7	33.1	2.85	5.70	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.60	1.27	1.93	0.17	0.33	
Bilirubin, Unconjugated Vitros BU	µmol/l	15.6	12.3	18.9	1.65	3.30	BuBc Vitros Slide
	mg/dl	0.913	0.720	1.11	0.10	0.19	
Calcium	mmol/l	2.24	2.02	2.46	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.98	8.10	9.86	0.44	0.88	
Chloride	mmol/l	98.1	90.2	106	3.95	7.90	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	4.13	3.59	4.67	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	139	179	10.00	20.00	
Cholinesterase	U/l	5286	4229	6343	528.50	1057.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	183	150	216	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Vitros IDMS Traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	65	55	75	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.90	5.02	6.78	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	106	90.5	122	7.75	15.50	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Iron	µmol/l	20.8	17.1	24.5	1.85	3.70	Ortho Vitros Microslide Systems
	µg/dl	116	95.6	136	10.20	20.40	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	252	214	290	19.00	38.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	248	199	297	24.50	49.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.20	1.93	2.47	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	Ortho Vitros Microslide Systems
Protein Total	g/l	59.7	47.7	71.7	6.00	12.00	Ortho Vitros Microslide Systems
	g/dl	5.97	4.77	7.17	0.60	1.20	
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
TIBC	µmol/l	47.7	37.7	57.7	5.00	10.00	Ortho Vitros Microslide Systems
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	1.24	1.04	1.44	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	110	92.0	128	9.00	18.00	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Ortho Vitros Microslide Systems
	mg/dl	42.4	36.1	48.7	3.15	6.30	

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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.89	6.37	0.37	0.74	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Green
	g/dl	4.37	3.71	5.03	0.33	0.66	
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	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
Cholesterol	mmol/l	4.18	3.63	4.73	0.28	0.55	Cholesterol Oxidase - Abell Kendall
	mg/dl	161	140	182	10.50	21.00	
Creatinine	µmol/l	133	106	160	13.50	27.00	Creatinine PAP 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
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.92	5.03	6.81	0.45	0.89	Glucose oxidase
	mg/dl	107	90.6	123	8.20	16.40	

**PRESTIGE 24i**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	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	
Triglycerides	mmol/l	1.03	0.87	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.6	106	7.30	14.60	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
	g/l	40.1	34.1	46.1	3.00	6.00	Turbidimetric Assays
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	150	128	172	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	117	100	134	8.50	17.00	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	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	59	50	68	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	80	68	92	6.00	12.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	79	67	91	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.9	10.3	15.5	1.30	2.60	Colorimetric
	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.2	15.1	23.3	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Roche JG factored
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	19.3	15.3	23.3	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	28.8	22.7	34.9	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.30	2.02	0.18	0.36	
Calcium	µmol/l	27.9	22.1	33.7	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazonium ion
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Chloride	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	2.21	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	93.9	86.4	101	3.75	7.50	ISE indirect
Cholesterol	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	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholinesterase	U/l	5482	4386	6578	548.00	1096.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	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
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	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	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	132	105	159	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	138	111	165	13.50	27.00	IDMS traceable
	mg/dl	1.56	1.25	1.87	0.16	0.31	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	23.4	17.5	29.3	2.95	5.90	Roche Cobas 6000/8000
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas 6000/8000
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

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	10	14	1.00	2.00	Triethanolamine buffer 50 mmol 30°C
	U/l	10	8	12	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.03	5.13	6.93	0.45	0.90	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.56	1.32	1.80	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	60.2	51.0	69.4	4.60	9.20	
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	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	392	333	451	29.50	59.00	P->L German methods 37°C
	U/l	283	240	326	21.50	43.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	394	334	454	30.00	60.00	P->L SFBC 37°C
	U/l	284	241	327	21.50	43.00	P->L SFBC 30°C
	U/l	200	169	231	15.50	31.00	P->L SFBC 25°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	146	124	168	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.632	0.798	0.04	0.08	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.25	3.60	4.90	0.33	0.65	
	mmol/l	1.36	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	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.8	47.1	70.5	5.85	11.70	Biuret reaction end point
	g/dl	5.88	4.71	7.05	0.59	1.17	
PSA Total	ng/ml =	13.6	10.2	17.0	1.70	3.40	Roche Cobas 6000/8000
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.42	1.13	1.71	0.15	0.29	Roche Cobas 6000/8000
TIBC	µmol/l	38.7	30.6	46.8	4.05	8.10	FE+UIBC(saturation with iron)
	µg/dl	216	171	261	22.50	45.00	
	µmol/l	46.6	36.9	56.3	4.85	9.70	Calculated from Transferrin
	µg/dl	260	206	314	27.00	54.00	
Total T3	nmol/l	2.31	1.74	2.88	0.29	0.57	Roche Cobas 6000/8000
	ng/ml	1.50	1.13	1.87	0.19	0.37	
	ng/dl	150	113	187	18.50	37.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Total T4	nmol/l	94.8	71.1	119	11.85	23.70	Roche Cobas 6000/8000
	µg/dl	7.39	5.55	9.23	0.92	1.84	
	ng/ml	73.9	55.5	92.3	9.20	18.40	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.08	0.90	1.26	0.09	0.18	L/G Kinase EP. no correction
UIBC	mg/dl	95.6	79.9	111	7.85	15.70	
	µmol/l	18.6	15.3	21.9	1.65	3.30	Direct Colorimetric
Urea	µg/dl	104	85.5	123	9.25	18.50	
	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
Uric Acid (Urate)	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
Uric Acid (Urate)	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	5.71	4.96	6.46	0.38	0.75		

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.5	37.0	50.0	3.25	6.50	Bromocresol Green
	g/dl	4.35	3.70	5.00	0.33	0.65	
Alkaline Phosphatase	U/l	151	129	173	11.00	22.00	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
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	125	107	143	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	103	88	118	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 37°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 30°C
	U/l	14	11	17	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.2	9.65	14.8	1.28	2.55	Enzymatic
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazonium ion
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	99.1	91.2	107	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	
	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	158	138	178	10.00	20.00	
CK Total	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
Creatinine	µmol/l	124	99.6	148	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.40	1.13	1.67	0.14	0.27	
	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.95	5.06	6.84	0.45	0.89	Hexokinase
	mg/dl	107	91.2	123	7.90	15.80	
HDL - Cholesterol	mmol/l	1.57	1.33	1.81	0.12	0.24	Direct HDL Roche 4th Generation
	mg/dl	60.6	51.3	69.9	4.65	9.30	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Iron	µmol/l	21.0	17.2	24.8	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	96.1	138	10.45	20.90	
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	24	19	29	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.94	3.62	4.26	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	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
Urea	mmol/l	6.93	5.89	7.97	0.52	1.04	Urease kinetic
	mg/dl	41.6	35.4	47.8	3.10	6.20	
	mmol/l	6.93	5.89	7.97	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	4.99	6.51	0.38	0.76	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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 with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Green
	g/dl	4.31	3.67	4.95	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	146	124	168	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	114	97	131	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
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 Total	U/l	80	68	92	6.00	12.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	12.8	10.1	15.5	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	20.2	15.9	24.5	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.930	1.43	0.13	0.25	
	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	20.7	16.3	25.1	2.20	4.40	Roche JG factored
	mg/dl	1.21	0.954	1.47	0.13	0.26	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.30	2.02	0.18	0.36	
	µmol/l	28.3	22.4	34.2	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazonium ion
	mg/dl	1.63	1.29	1.97	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	2.22	2.00	2.44	0.11	0.22	NM-BAPTA
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	94.3	86.8	102	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	94	136	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	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	131	104	158	13.50	27.00	Enzymatic UV method
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.48	1.19	1.77	0.15	0.29	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	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	
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	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Glucose oxidase
	mg/dl	108	91.7	124	8.15	16.30	
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.8	51.0	68.6	4.40	8.80	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	392	334	450	29.00	58.00	P->L German methods 37°C
	U/l	283	241	325	21.00	42.00	P->L German methods 30°C
	U/l	199	169	229	15.00	30.00	P->L German methods 25°C
	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
	U/l	147	125	169	11.00	22.00	L->P IFCC 30°C
	U/l	103	88	118	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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	1.93	2.45	0.13	0.26	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.90	2.40	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	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
TIBC	μmol/l	41.0	32.4	49.6	4.30	8.60	FE+UIBC(saturation with iron)
	μg/dl	229	181	277	24.00	48.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
UIBC	μmol/l	20.3	16.7	23.9	1.80	3.60	Direct Colorimetric
	μg/dl	113	93.4	133	9.80	19.60	
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	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	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 c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
	g/l	42.9	36.4	49.4	3.25	6.50	Bromocresol Purple
	g/dl	4.29	3.64	4.94	0.33	0.65	
	g/l	42.8	36.4	49.2	3.20	6.40	Turbidimetric Assays
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	149	127	171	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	116	99	133	8.50	17.00	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	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	59	50	68	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	80	68	92	6.00	12.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 37°C
	U/l	22	17	27	2.50	5.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.12	0.889	1.35	0.12	0.23	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Roche JG factored
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	15.5	12.2	18.8	1.65	3.30	Oxidation to Biliverdin/Vanadate
	mg/dl	0.907	0.714	1.10	0.10	0.19	
Bilirubin Total	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazonium ion
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	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	95.5	87.9	103	3.80	7.60	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	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	5403	4322	6484	540.50	1081.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	187	153	221	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	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	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.54	1.31	1.77	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.4	50.6	68.2	4.40	8.80	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.6	129	9.70	19.40	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	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
Lithium	mmol/l	1.11	0.97	1.25	0.07	0.14	Spectrophotometric
	mg/dl	0.771	0.675	0.867	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	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	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	41.6	32.9	50.3	4.35	8.70	FE+UIBC(saturation with iron)
	μg/dl	233	184	282	24.50	49.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
UIBC	μmol/l	20.1	16.5	23.7	1.80	3.60	Direct Colorimetric
	μg/dl	112	92.2	132	9.90	19.80	
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	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	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.89	6.37	0.37	0.74	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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	
Alkaline Phosphatase	U/l	287	244	330	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bile Acids	µmol/l	25.2	20.2	30.2	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.959	1.46	0.13	0.25	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	34.6	27.4	41.8	3.60	7.20	Diazo with Sulphanilic Acid
	mg/dl	2.02	1.60	2.44	0.21	0.42	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.32	2.08	2.56	0.12	0.24	Arsenazo III
	mg/dl	9.30	8.34	10.3	0.48	0.96	
Chloride	mmol/l	94.7	87.1	102	3.80	7.60	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.47	3.89	5.05	0.29	0.58	Cholesterol Oxidase - Abell Kendall
	mg/dl	173	150	196	11.50	23.00	
CK Total	U/l	206	169	243	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	225	185	265	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	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	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.44	5.47	7.41	0.49	0.97	Hexokinase
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	6.28	5.33	7.23	0.48	0.95	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
Iron	µmol/l	20.8	17.1	24.5	1.85	3.70	Colorimetric without ppt.
	µg/dl	116	95.6	136	10.20	20.40	
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.5	11.1	15.9	1.20	2.40	
LD (LDH)	U/l	409	348	470	30.50	61.00	P->L German methods 37°C
	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	44	35	53	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Colorimetric
	mg/dl	0.708	0.624	0.792	0.04	0.08	
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	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	

RX SERIES®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot No. 1489UN Cat. No. HN1530 / HS2611							
Size 20 x 5ml / 5 x 5ml		Expiry 2024-05-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - direct
	mmol/l	3.99	3.67	4.31	0.16	0.32	Enzymatic
Protein Total	g/l	61.3	49.0	73.6	6.15	12.30	Biuret reaction end point
	g/dl	6.13	4.90	7.36	0.62	1.23	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	145	138	152	3.50	7.00	Enzymatic
TIBC	µmol/l	51.9	41.0	62.8	5.45	10.90	Direct Colorimetric
	µg/dl	290	229	351	30.50	61.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
Urea	mmol/l	7.99	6.79	9.19	0.60	1.20	Urease kinetic
	mg/dl	48.0	40.8	55.2	3.60	7.20	
	mmol/l	7.99	6.79	9.19	0.60	1.20	BUN
	mg/dl	22.4	19.0	25.8	1.70	3.40	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	

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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

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	
	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	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Amylase Total	U/l	83	71	95	6.00	12.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bile Acids	µmol/l	27.2	21.7	32.7	2.75	5.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	32.7	25.8	39.6	3.45	6.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.91	1.51	2.31	0.20	0.40	
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	2.20	1.98	2.42	0.11	0.22	Arsenazo III
mg/dl	8.82	7.94	9.70	0.44	0.88		
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE indirect
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	



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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	μmol/l	121	97.1	145	11.95	23.90	Enzymatic UV method
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	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	49	41	57	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.92	5.03	6.81	0.45	0.89	Glucose oxidase
	mg/dl	107	90.6	123	8.20	16.40	
HDL - Cholesterol	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct Clearance Method
	mg/dl	44.8	38.1	51.5	3.35	6.70	
Iron	μmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	μg/dl	109	89.4	129	9.80	19.60	
Lactate	mmol/l	1.45	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	399	339	459	30.00	60.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.661	0.839	0.04	0.09	
Magnesium	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	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	



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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.95	3.64	4.26	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction end point
	g/dl	5.67	4.54	6.80	0.57	1.13	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	μmol/l	46.7	36.9	56.5	4.90	9.80	Direct Colorimetric
	μg/dl	261	206	316	27.50	55.00	
	μmol/l	42.7	33.7	51.7	4.50	9.00	Calculated from Transferrin
	μg/dl	239	188	290	25.50	51.00	
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	
Urea	mmol/l	7.69	6.54	8.84	0.58	1.15	Urease kinetic
	mg/dl	46.2	39.3	53.1	3.45	6.90	
	mmol/l	7.69	6.54	8.84	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Purple
	g/dl	4.37	3.72	5.02	0.33	0.65	
Alkaline Phosphatase	U/l	165	140	190	12.50	25.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P NVKC 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	40	58	4.50	9.00	Tris buffer with P5P 37°C
	U/l	49	39	59	5.00	10.00	Tris buffer with P5P NVKC 37°C
	U/l	49	39	59	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.7	13.3	20.1	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Bilirubin Total	µmol/l	30.2	23.9	36.5	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.77	1.40	2.14	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	97.5	89.7	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.79	3.30	4.28	0.25	0.49	Cholesterol Oxidase - Abell Kendall
	mg/dl	146	127	165	9.50	19.00	
	mmol/l	3.81	3.31	4.31	0.25	0.50	Dimension-Siemens reagents
	mg/dl	147	128	166	9.50	19.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	137	109	165	14.00	28.00	Jaffe rate blanked
	mg/dl	1.55	1.23	1.87	0.16	0.32	
gamma-GT	U/l	62	53	71	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	65	55	75	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct HDL PEGME
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct Clearance Method
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
LD (LDH)	U/l	191	162	220	14.50	29.00	L->P IFCC 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	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.22	3.57	4.87	0.33	0.65	
	mmol/l	1.43	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	3.86	3.55	4.17	0.16	0.31	ISE method - indirect
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	

**SIEMENS DIMENSION EXL®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.00	0.84	1.16	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	88.5	74.4	103	7.05	14.10	
	mmol/l	0.99	0.83	1.15	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	87.8	73.7	102	7.05	14.10	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	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	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	

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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.2	36.7	49.7	3.25	6.50	Bromocresol Purple
	g/dl	4.32	3.67	4.97	0.33	0.65	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	Siemens Dimension AMP buffer 37°C
	U/l	168	143	193	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	38	58	5.00	10.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	14.4	11.4	17.4	1.50	3.00	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.842	0.667	1.02	0.09	0.18	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.80	3.30	4.30	0.25	0.50	Dimension-Siemens reagents
	mg/dl	147	127	167	10.00	20.00	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	
gamma-GT	U/l	62	53	71	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	


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

Lot No. 1489UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2024-05-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL PEGME
	mg/dl	55.2	46.7	63.7	4.25	8.50	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
LD (LDH)	U/l	196	167	225	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.85	0.75	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.82	2.34	0.13	0.26	
Phosphate Inorganic	mmol/l	1.36	1.15	1.57	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.22	3.57	4.87	0.33	0.65	
Potassium	mmol/l	3.86	3.55	4.17	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	0.99	0.83	1.15	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	87.7	73.7	102	7.00	14.00	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	